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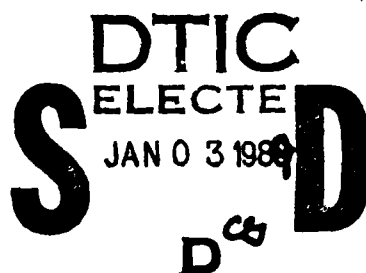
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Alternative Environments for Army Recruiting, 1987-2001

Volume 1

Wayne I. Boucher
Benton International, Inc.

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Manpower and Personnel Policy Research Group
Manpower and Personnel Research Laboratory



U.S. Army
Research Institute for the Behavioral and Social Sciences

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FOREWORD

The Manpower and Personnel Policy Research Group of the Army Research Institute for the Behavioral and Social Sciences conducts multidisciplinary research on recruiting issues of significance to the U.S. Army. Using state-of-the-art futures methodology, this report provides scenarios describing four distinct recruiting environments that will be useful when developing policy options affecting Army recruiting.

Conducting research to assist the Army in meeting its annual accession requirements is an essential part of ARI's Manpower and Personnel Policy Research Group, Manpower and Personnel Research Laboratory. This work was requested by Deputy Chief of Staff for Personnel (DCSPER) in April 1985 and was completed by Benton International under Contract DAAG60-86-13-0393. Results of this effort were briefed to Chief, Program Analysis and Evaluation, U.S. Army Recruiting Command, on 17 April 1987.

This report is designed to assist Army decisionmakers in developing the resources and skills for successful recruiting in the years ahead.

EDGAR M. JOHNSON
Technical Director

ACKNOWLEDGMENTS

It is a pleasure to acknowledge the contributions of a number of doctoral students and staff at the University of North Carolina who supported this project in areas such as the literature search, computer programming, data entry, cross-impact analysis, the writing of Scenario B, and various statistical analysis. These persons included: CPT Byron Bagby (U.S. Army); Lee May; Maria Clay (Director, Training and Development, UNC Memorial Hospital); Roger McLean (Education Counselor, U.S. Air Force); David Raney (Director, Learning Resources Laboratory, UNC Dental School); Dr. Robert McKinstry (Assistant Professor, UNC Dental School); Dr. Ceib Phillips (Research Associate Professor, UNC Dental School); Hope Bryan (UNC Department of Biostatistics); Terry Hutchens (UNC Department of Biostatistics) and Sherry Morrison (Director, Research and Evaluation, UNC Office of Student Affairs).

We are grateful as well for the guidance provided by Drs. Paul Gade, Curtis Gilroy, and Newell Kent Eaton of ARI; LTC Jerome Adams (retired), formerly at the U.S. Army Military Academy; Major Robert Colligan, then of the U.S. Army Recruiting Command (USAREC); and LTC Terry White of the U.S. Army Office of the Deputy Chief of Staff for Personnel (ODCSPER).

We especially wish to thank the dozens of persons--officers, enlisted men, and civilians from each of the USAREC Brigades, as well as from the Department of Defense and academia--who voluntarily served on the Delphi panel. It is customary to thank these individuals, of course, because the quality of a study like this depends crucially on their willingness to deal responsibly with questions that have no "right" answers and to share freely their experiences, convictions, hopes, and hunches. Our debt to the respondents in this Delphi is so great, however, that it is difficult to express adequately our gratitude for their contributions. The questionnaires were complex and demanding, and between the first and final rounds we asked the panelists to complete a special questionnaire on the motives of recruits. In most cases, the respondents gave far more generously of their time than we asked--or could have hoped. They met the challenge; their participation was extraordinary.

Wayne I. Boucher
James L. Morrison

ALTERNATIVE ENVIRONMENTS FOR ARMY RECRUITING, 1987-2001

VOLUME 1

EXECUTIVE SUMMARY

Requirement:

To improve Army recruitment policy analysis and planning by showing how futures research can be used to develop policy-relevant scenarios of alternative future environments. Environmental analysis is not new, nor is the use of the concepts and techniques of futures research for this purpose. What is new is the introduction of this approach into military planning. In effect, this report provides a case study, focused on Army recruiting, which shows not only how radically futures research differs from conventional approaches, but also how the results can provide a superior basis for identifying and evaluating future policy options.

Procedure:

The authors have applied advanced techniques of futures research to define four alternative environments for Army recruiting. These techniques include special versions of the literature search, polling, the Delphi technique, cross-impact analysis, and scenario-writing. To help ensure the widest possible use of this report, these methods and their rationale are often discussed at length, as are the concepts of "futures research" and the "most likely" future.

Findings:

The "most likely" future suggests that none of the major negative environmental discontinuities forecasted in this study will occur by the year 2000, although the course of developments in this period will almost certainly produce crises and confusion for those in the recruitment system who have not bothered to forecast the environment. Many problems, some of them already well known, will undercut USAREC's effectiveness. Nevertheless, USAREC will manage to achieve its recruitment mission. In the three alternative futures, various developments--most of them negative--severely challenge USAREC's ability to meet its mission at various points during the period of interest. In most cases, these developments are far beyond USAREC's direct control. Accordingly, the need is for careful environmental monitoring, occasional formal updates of the "most likely" scenario, and, where appropriate, the advance preparation of policies and plans to deal with these contingencies if they should actually begin to materialize.

Utilization of Findings:

This research has been presented to the U.S. Army Recruiting Command (USAREC) to enhance its ability to prepare for environmental changes which may lie ahead to the year 2001 in areas relevant to Army recruiting.

ALTERNATIVE ENVIRONMENTS FOR ARMY RECRUITING, 1987-2001

VOLUME 1

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1. INTRODUCTION

OBJECTIVES

The research reported in this document was designed to provide an understanding of possible external environments, or futures, for Army recruiting between now and the end of this century. Clearly, recruiters and the recruiting system do not operate in a vacuum. They are part of the Army, part of the defense establishment, part of the U.S. Government, part of the society, and, indeed, part of the global community. Developments in any of these contexts can have, and in fact have had, a significant influence on the Army's ability to achieve its recruiting mission.

These influences can range from the highly tangential to the direct and immediately forceful. The direct influences are easily identified--e.g., an unpopular war (or a popular one), announcement of a particularly terrible weapon system, a surge in patriotic sentiment, etc. The indirect influences are much more elusive, but can be quite important. For instance, a breakthrough in genetic engineering that provides more resilient crops may contribute to a lessening of malnutrition in some Third World countries. In turn, this may lead the political leadership in those countries to turn from military adventures and diminish their reliance on the advanced industrial countries, particularly the superpowers. In turn, this could temper superpower rivalry in the region, thereby increasing to some degree the American public's sense of international order and stability. This new sense of confidence, if accepted among young people, might then lower their perception of the risks of actually having to fight a war during an Army tour. Finally, this might ease somewhat the job of the recruiter in making certain enlistment sales. Interestingly, neither the recruits nor the recruiter may be aware of the development in genetic engineering that helped to produce this result.

The challenge to Army recruiting has been, and remains, to identify such possibilities as carefully and imaginatively as possible, preferably not item by item (as with the preceding examples concerning war or genetic engineering), but comprehensively and simultaneously, so that rich images of alternative external environments can be defined. Such images can then be used as a framework or general structure within which detailed policy planning can occur. Given a range of such images, specific policy options can be examined, not only for their intrinsic merits (i.e., their consistency and value vis-a-vis the recruitment system itself), but also for their strengths and weaknesses if one or another of the alternative external futures should actually begin to materialize.

The fundamental aim of this study was to provide such images of the future. Specifically, it sought to create a very detailed portrait of the "most likely" future and, against this backdrop, several briefer but nonetheless policy-relevant descriptions of alternatives. As will be explained later, the aim was not to predict the future--a task that is manifestly impossible. Rather, it was to provide increased understanding of the possibilities that may lie ahead, a sense of how developments might interact over time, and a foundation for thinking more broadly and perhaps more rigorously about changes that could or should be made in the Army recruiting system.

A secondary but very important aim of the study was to illustrate a process for developing the "most likely" future and its alternatives. The fact of the matter is that the military appears to be far behind the private sector in the use of the state-of-the-art tools for environmental forecasting. (There is even some reason to suppose that the military may even be behind some of this country's allies--e.g., France--and some of its adversaries--e.g., the Soviet Union--in this regard.) From time to time, the Army has taken this question seriously (Darracott et al., 1967; Mitchell et al., 1975; Bagnal, 1985), and some futures work is undertaken on a more or less sustained basis (e.g., at the Strategic Studies Institute of the U.S. Army War College). This study sought to show something of where the futures process is today; in some areas, it also attempted to advance the state of the art.

APPROACH

The approach taken to achieve these objectives is now commonly called "futures research" in the United States.

Table 1.1 presents the essence of futures research. Among the points it emphasizes are these: (1) the future cannot be predicted, but it can be forecasted probabilistically, taking explicit account of uncertainty; (2) forecasts are virtually certain to be useless or misleading if they do not sweep widely across possible future developments in such areas as demography, values and lifestyles, technology, economics, law and regulation, institutional change, etc.; (3) alternative futures (as well as the "most likely" future) are defined primarily by human judgment, creativity, and imagination; and (4) the aim of defining alternative futures is basically to try to determine how to create a better future than the one that would materialize if we merely kept doing essentially what we presently are doing. Other implications of Table 1.1 are discussed in Chapter 5 and elsewhere in this report.

Table 1.1

Futures Research: Definition and Approach

Futures research is a research strategy . . .
. . . that seeks to describe and evaluate important alternative images of the future . . .
. . . based upon a well-developed image of the "most likely" future . . .
. . . which is constructed by undertaking seven activities simultaneously:
1. Adopting a strategic time horizon.
2. Defining and forecasting key elements of the future:
• Crossing disciplinary, institutional, and functional lines.
• Melding objective and subjective considerations.
• Attending to hierarchical relationships.
3. Accounting for causal relationships among forecasted developments.
4. Dealing explicitly with uncertainty.
5. Melding exploratory and normative perspectives.
6. Focusing on policy choices.
7. Emphasizing process as much as product.
. . . while recognizing that:
1. All forecasted futures will be imperfect.
2. The only reasonable criteria for evaluating the results are soft.
3. The collective judgment of a group will usually be more useful than that of a solitary individual in developing the forecasts needed to construct futures that meet these criteria.
4. Creativity matters greatly.

To operationalize these concepts--i.e., to show how the philosophy of futures research can be reduced to practice--requires a model.

The model followed, though not used fully in the study (because of changes in the original work statement), is shown in Figure 1.1. Basically, what it says is that, individually or as a group, we reflect on our own experience, as well as information sources that we scan, to identify possible future concerns that may require attention. Any particular concern is typically ill-defined, at least when it first begins to be articulated. Through one process or another, the first step is to identify key component parts or aspects of the concern; here these components are called issues. At this stage, we have identified the names of the major parts of the problem. If, for example, the concern is possible futures for Army recruiting, issues might include economic growth, population dynamics, education and training, war and peace, etc.

The next step is to structure each issue by identifying its component parts in some policy-relevant way. In the diagram, the result of this structuring process is shown as a relevance tree--in effect, an outline of the specific topics that probably should be addressed. The overall structure that guided this study is presented in Appendix A. In general, the goal is to break down each top-level issue until, on the lowest level, we have assured ourselves that every important subject has been identified. At this point, the conceptual structure of the issue should be clear. The sum of these structures for all issues then provides the conceptual structure for the previously vague concern.

We must now make a decision about the level of generality on which we want to undertake our futures research. If time and funds are severely limited, or if all we require is a broad-brush overview of the issues, we can work from the highest level of the tree, as shown in the diagram. At the opposite extreme, we may decide to work from the lowest level, examining each sub-category in detail and later aggregating these results to derive the required answers on the highest level. This study proceeded at a fairly high level of generality.

In any case, the next step is develop a set of trends that measure change in the individual categories, along with a set of possible future events which, if they were to occur, might have a significant effect on these trends, or on each other. These trends and events should be chosen to reflect the actual complexity and multidimensionality of the category. Ordinarily, this means that the trends and events will describe a wide variety of social, technological, economic, and political factors of various sorts.

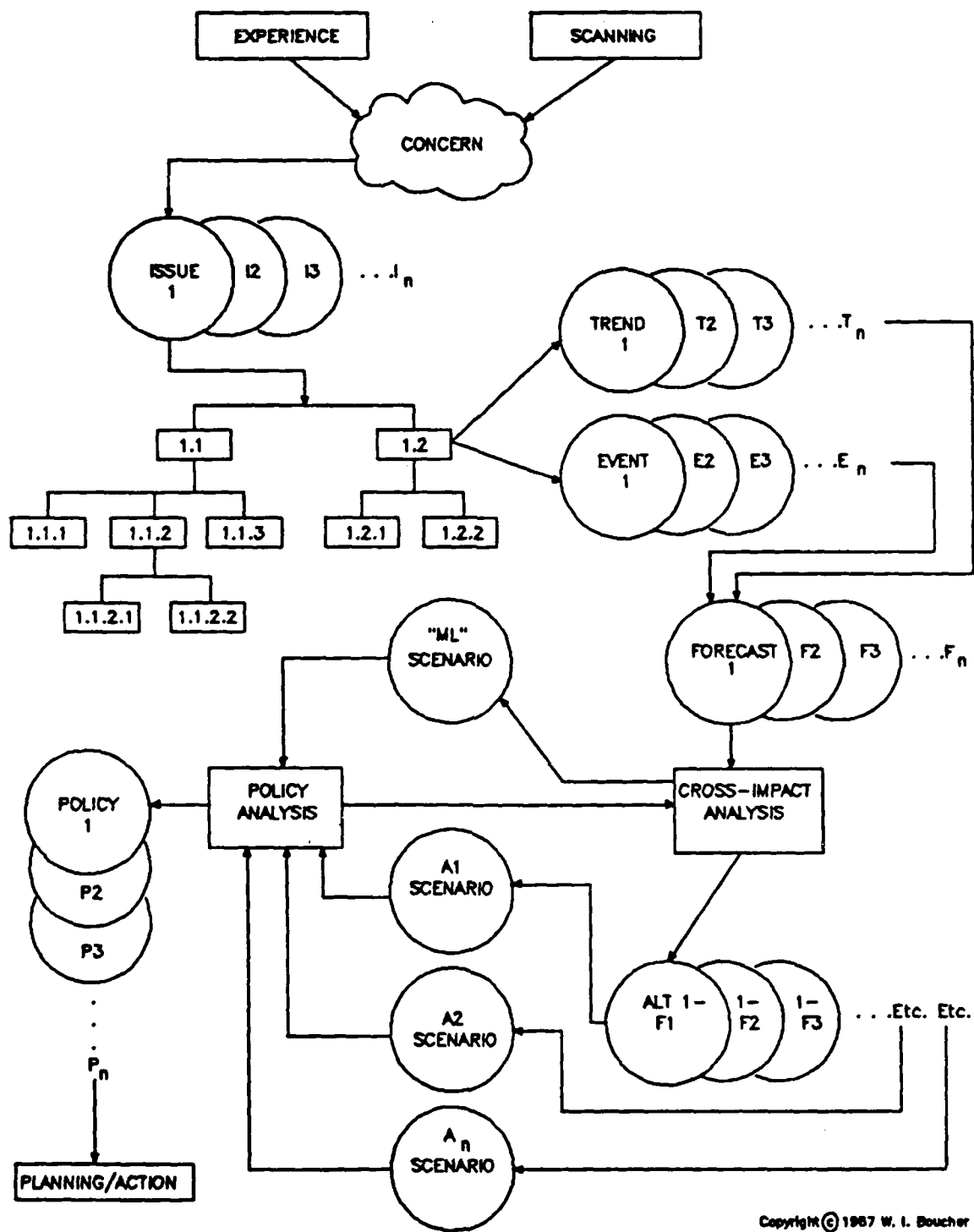
Having defined the trend and event sets, the next step is to forecast subjectively the items in each of these sets over the future period of strategic interest (e.g., the next 15 years). For the trends, the likely level over this period is projected, assuming no major discontinuities in the current evolution of the system. This is an exploratory forecast. It defines our expectation, not our preference. Similarly, the probability of each event over the period of interest is estimated, again on the same assumption. The results define the essence of the "most likely" future.

In this study, these forecasts were generated using an advanced version of the Delphi technique, a form of structured debate in which a group of informed individuals interacts anonymously via questionnaire (in this case, two rounds). The participants in this Delphi consisted primarily of officers, non-commissioned officers, and civilians associated with the Army recruiting process. Together, they forecasted some 200 trends and possible future events. Importantly, they also dealt at length with the rationale and implications of these forecasts.

Many forecasting studies stop at this point. In futures research, however, the aim is to define alternative futures, not just the "most likely" future. To this end, it is necessary to develop a model that will make it possible to show systematically the interrelationships of the individually forecasted trends and events. In the best futures research, this model is a cross-impact model. Once it has been created, it is possible to "decide" the occurrence (or non-occurrence) of particular forecasted events in particular sequences and combinations, and then to trace out the resulting impacts on the trends and the other events. Each such use of the model produces the outline of a specific future which, of course, is different from every other future, including the "most likely" one.

The next step is to weave together these results into a plausible narrative description of the future in question. This narrative is called a scenario. It represents a history of the future. In futures research, as in this study, it is conventional to create three to five such histories.

It is now possible to initiate the policy analysis. This step, while not a part of the final design of the present study, involves carefully reviewing all of the scenarios, looking for threats and opportunities and for actions that



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Figure 1.1. A Model for Applied Futures Research.

might be taken to avoid the one and capture the other. some detail.

Chapter 5 of this report discusses this process in

ORGANIZATION OF THIS REPORT

This report contains three volumes. Volume 1 presents the major results of the research and is divided into six chapters. Chapter 1 is the introduction. Chapter 2 highlights the major results from this project. It is intended to serve as an executive summary. Chapter 3 presents the "most likely" future scenario, after first exploring the concept of "most likely" in this context. As far as is known, this scenario represents the most advanced version of this kind of scenario yet prepared in futures research. It synthesizes all of the hundreds of forecasts elicited during the Delphi study. Chapter 4 presents three alternatives to the "most likely" future. The methods used to derive these alternatives are discussed, and the strengths and weaknesses of the results are considered. Chapter 5 discusses how the scenarios may be used for purposes of policy analysis--and, more generally, how the process used in this study may be implemented to help ensure that work to develop and refine useful images of the future may be continued beyond this limited effort. And Chapter 6 contains the references cited in the report.

Volume 2 presents a variety of graphs depicting patterns of possible future change. The graphs are separated into three major types as follows: Events (E), motives (M), and trends (T). In addition, the graphs representing trends are subdivided by scenario; for example, the trend graphs cited in "Scenario A: Assertive America" can be found in the "Trends" section of Volume 2 in the subsection with the same name as the scenario

Volume 3 contains Appendixes A through F. Appendix A describes the general conceptual structure used in this study and illustrates the results from the literature search undertaken early in the work based on this structure. Appendix B presents detailed results from a special analysis completed during this project to evaluate and forecast the significance of a large set of possible motives that recruits might have for enlisting in the Army. Although most of the findings on individual motives are incorporated in the "most likely" scenario, the discussion offered in this appendix should be of particular interest to those seriously concerned about the question of how possible shifts in motivations may affect Army recruitment. Appendix C provides a brief introduction to the nature of scenarios and scenario-writing. It argues that, contrary to the belief of many analysts and managers, there are a great many kinds of scenarios, and it explains where the scenarios in this report fall along the spectrum of possibilities. Appendix D addresses the issue of whether there is any correlation between objective and subjective descriptions of the background and outlook of individual Delphi respondents and their forecasting behavior. The analysis, which is exploratory, may serve as a further indication of the elusiveness of the answer. Appendix E describes and presents the cross-impact model used to generate the alternative futures. Finally, Appendix F provides a serial list of the events and trends forecasted in the Delphi study. Because all of these items are included in the "most likely" scenario, each is keyed to the page on which it is first discussed in this scenario.

2. SELECTED HIGHLIGHTS

INTRODUCTION

As indicated earlier, this study involved the use of a set of interlocking techniques of forecasting and analysis. A fairly simple relevance tree (see Appendix A) was developed to provide the overall conceptual structure. A literature search of hundreds of publications and reports was undertaken to achieve three purposes: to determine if useful forecasts were already available, to get a sense of the conventional wisdom regarding environmental factors that might have an effect on Army recruiting, and to identify specific trends and future events that might be worth forecasting originally in this study. Many additional trends and events were identified through brainstorming, and the entire set was screened down to a manageable size through six individual reviews of the candidate items (five reviews at USAREC, one at ARI).

The results served as the basis of an unusually complex questionnaire that became the Round 1 instrument for our Delphi study. Special software was developed to process the Round 1 (and Round 2) estimates on a mainframe. The Round 2 questionnaire was especially challenging in that, for the first time in the 37-year history of Delphi, to our knowledge, it incorporated not only the data from Round 1, but also a full-length narrative scenario that interpreted these findings. Hence, the respondents had an unprecedented opportunity to refine the rationale behind the forecasts, and to interpret the quantitative results in this context. Moreover, this scenario appears to have been the first of its kind to deal with both the forecasted trends and the forecasted events. In all other cases with which we are familiar, Delphi-based scenarios have been written solely around the trend forecasts. Events are ignored because, as is typical in such studies, the median Round 1 forecast is that none of the events will occur by the end of the period of interest. As will be seen, however, an event need not occur in order to have an impact. Hence, our decision was to incorporate the events in the Round 2 Delphi questionnaire.

The heavily annotated Round 2 questionnaires were then analyzed and the results used to rewrite the "most likely" scenario of environmental forces pertinent to Army recruiting. As explained at length in Appendix C, this scenario is quite different from the sort of scenarios common in today's military planning. To generate alternatives to this scenario, use was made of a systematic approach called cross-impact analysis. (See Appendix E for details on this technique.) Other scenarios were then written--again, of a special type--using the cross-impact results.

A poll, or questionnaire survey, was also conducted as part of this effort, using the Delphi panelists as respondents. As mentioned earlier, the subject of this survey was the current and likely future significance of a large set of motives that might be on the minds of non-prior service (NPS) youth as they make the recruitment decision.

Finally, a conventional essayist approach was adopted to examine the policy implications of the "most likely" future and to develop the policy analysis guidelines presented in Chapter 5.

Given this variety of techniques, and the mass of forecasts and evaluations they produced, it is very difficult to summarize the findings adequately. For this reason, we shall limit our attention here to the presentation of results that illustrate the data base generally and how it may be used.

THE LITERATURE SEARCH

The taxonomy which guided the literature review was broad, extending through eight categories of developments (demographic, social, technological, economic, political, environmental, military, and Army), over three categories of the external environment (international, national, and regional), and over the internal (Army) en-

vironment. Appendix A presents a synopsis of the literature we located during the search, which was completed around mid-1986. What follows are some interesting results from this review.

Demographic

In demographics, several major areas were explored: the "baby bust" in the Western World, immigration to the United States (legal and illegal), the increasing age of the U.S. population, the size of the pool of recruitment-age young people, the population mix by race and gender, etc.

The Kiplinger Washington Letter (May 24, 1985) notes that total births are up from the lows of the 1970's because so many "baby boomers" are having babies themselves. Baby boomers (21-39 years old) now make up one-third of the U.S. population. But in the 1990's the number of women of childbearing age will be down. In 1955-65, 42 million children were born; in 1972-82, 33 million children were born. Quester and Lockman (1984), however, suggest that the birth dearth may be overstated. Although the number of males aged 17-21 is declining, there were as many males in 1984 as there were in 1966, and, after 1993, the number will begin to grow again.

Many observers note that there will be increased immigration to the United States. Love (1985) says that legal immigration is expected to increase at a rate of 5% per year during 1985-90; the total number of illegal immigrants between this period may be as high as 20 to 30 million persons.

The demographic composition of the U.S. population will change dramatically in the coming decades (Love, 1985). The median age is increasing, minorities are increasing, and there are rapidly growing (and declining) populations by regions.

Social

Traditional values, including patriotism, appear to be on the upswing (*Oxford Analytical*, 1984; Broyles, 1986). The data on the quality of public schools is not as clear. The U.S. Department of Education says that the high-school-dropout rate has declined from 28.1% in 1981 to 25.9% in 1984 (*U.S. News and World Report*, 1985). But the Committee on Economic Development (1985) notes that nearly all Japanese students finish high school--and that they study and learn more than their American counterparts. The National Assessment of Educational Progress indicates that American students in 1984 were better readers than they were in 1971. But the Committee on Economic Development (1985) says that 13% of all 17 year olds still enrolled in school are functionally illiterate and 44% are marginally literate.

Overall, the Gallup Poll reports that 43% of the American public grades their local schools as of "A" or "B" caliber, the highest since 1975, but certainly not an overwhelming vote of confidence in these schools.

According to some sources, today's students are significantly less mature than their parents and grandparents were at the same age (Woodward and Kornaber, 1985). That is, a great many 18 year olds lack motivation, self-discipline, enthusiasm for learning, and a capacity for sustained attention.

Technological

In the realm of technological trends and events, we noted developments in many areas, including health, nutrition, computers, and telecommunications.

With respect to computers, Malik (1983) describes Japanese plans to build a fifth-generation computer which is expected to come on-line in the 1990's. Other writers discussed the falling size of computers (Worthy, 1983), increased use of computers (*Predicasts Forecasts*), and the impact of computers on our personal lives (Kroger, 1986). Particularly striking is the number of public school students with at least some exposure to computers. *Education Week* (1985) reported that in 1984, 85% of public schools used at least one microcomputer for instructional purposes--up sharply from the 18.2% reported as recently as 1981. *The Statistical Abstract of the U.S.* (1985, 1986) reports that the number of computers and computer terminals in public schools rose from 190,000 in 1982 to some 570,000 by 1985. However, on average, only a fraction of all students are actually using computers (e.g., in 1982-83 only 16% of elementary students and only 13% of secondary students received hands-on training). Nevertheless, the percentage of the above-average students who are getting intensive experience on microcomputers is 30% in elementary schools and 34% in secondary schools.

Slate and Popko (1986) indicate that the next 5 years hold unprecedented opportunities for the telecommunications industry. They say that the need for communications between computer facilities is creating increased demand for digitized telecommunications networks. They foresee electronic mail, electronic publishing, and video telephones becoming well-established in the next 5 years. Miller (1985) says that the solution to transmitting the mass of heterogeneous information which needs to be shared will ultimately be solved by the development of an integrated services digital network.

Economic

The spectre of economic collapse was the most significant issue reviewed in the area of economic trends and events. Moffit (1985), Harrington (1985), Forrester (1985), and others argue that current events and trends suggest that a "return to a great depression" is becoming more likely.

Other economic developments identified are the increasing rate of employment by women (Quinn, 1986), the rising Federal deficit (*New York Times*, 1986), a constant rate of unemployment (Mervosh, 1986), the declining value of the U.S. dollar (Garten, 1985; Zanker, 1986), the widening U.S. trade deficit (Hilkirk, 1986), etc.

Political

In the political arena, one of the more significant events discussed in the literature was the passage of the Gramm-Rudman-Hollings bill, designed to balance the Federal budget. The impact from that bill is yet to be felt, but will clearly be important as the deadline for a balanced budget--1991--grows nearer. The competition for Federal monies by the military and domestic agencies will be particularly keen.

In another area, Hodgkinson (1983) shows that increasing numbers of minority group members are being elected to public office, with 5,600 blacks and 3,100 hispanics elected in 1984. Success by minorities in the political arena will help to calm potentially dangerous situations in urban areas.

Environmental

The literature suggests that a major environmental event would be an energy crisis. Murray (1985) maintains that the United States is facing another round of energy shortages--certainly by the end of this century and possibly well before that. According to these sources, we are already seeing signs that led to the crisis of the 1970's. It is conservatively estimated that U.S. energy demand will be 20% to 25% higher by 2000 than it is today. The United States is currently using more natural gas than it produces.

Military

Many important events related to the military (and the Army, in particular) were identified in the scan. For example, in early 1986 the Reagan Administration proposed the elimination of the new GI Bill, an event which, if it occurred, was projected to cost the Army 10,600 high-school-graduate enlistees and 4,200 high-quality enlistees annually from the Army Reserve (*Army*, 1986). Spector (1984) reported that as of July 1984 five nations were known to possess nuclear weapons, and that another five were on the verge of having nuclear weapons capability. Kittle (1985) and many others maintain that the militarization of space is happening at a quiet but rapidly accelerating pace. Dale and Gilroy (1983) wrote that a military wage freeze resulting in a decline in military pay relative to civilian pay would cause enlistment rates to drop substantially. Goldberg et al. (1984) examined the relationship of unemployment to recruiting, concluding that a 1-point increase in the national unemployment rate increases Army enlistments by 4.6%. In addition, they examined the effect of bonuses on recruiting, concluding that bonuses tend to channel enlistees in occupations rather than increase the total supply of enlistees. Dertouzos (1984) examined the effect of recruiters on recruiting, concluding that future studies should focus on the impact of recruiter rewards.

A number of trends were also identified, e.g., the number of minority members who enlist, the number of "quality" youth available for recruitment, the effectiveness of advertising on recruitment, the educational level of enlisted personnel, shortfalls in recruitment, etc.

Discussion

The literature review was helpful in identifying some important trends and potential events which were finally included in this study. But some general comments may be worthwhile regarding the nature and utility of the literature per se for understanding future possibilities and developing policy. First, many writers attempt to predict "the" future; they ignore alternatives. Second, most analysts work primarily with trends, and primarily with objective trends (i.e., ones that can be quantified using available statistics). They tend to ignore subjective trends (i.e., trends that can only be estimated judgmentally and trends that describe matters of perception and belief). Moreover, they tend to ignore possible future events, the occurrence or non-occurrence of which might significantly influence the trend projections. In addition, most writers focus on a narrow set of trends, usually demographic and economic in nature. Only rarely will an author be found who considers the interrelationships of trends and events that specify personal and societal values, institutional changes, political developments, changes in international political-military relationships, and numerous other factors that clearly influence enlistment decisions.

It may not be surprising, therefore, to note that many of the forecasts in our Delphi anticipate a future different from the one depicted in the literature. As discussed in Chapter 5, an extremely important criterion for evaluating a futures study is the degree to which it is more helpful than other available sources in supporting today's efforts in planning and policymaking.

THE DELPHI FORECAST AND THE ALTERNATIVE FUTURE

The Delphi questionnaire asked the respondents to forecast the level of a large number of objective and subjective trends through the year 2000. It requested them to estimate the cumulative probability of a large number of possible future events between the present and the end of 2000. For many events which the respondents themselves judged to be critical to the outlook for Army recruiting, they were also asked to estimate the positive and negative impacts that these events would have if they occurred and to explain briefly the nature of these impacts.

Tables 2.1-2.4 highlight some of the results on the events. Table 2.1 lists the events judged to be the most probable by 2001. Note that only one event (E3103, "A cure for AIDS") was forecasted to happen by the end of this period. Note also that a vast majority of the events included in the Delphi are not on this list--i.e., they typically represent important but low-probability concerns.

Tables 2.2-2.4 review the events from the point of view of their likely impacts. Table 2.2 shows the events that pose the greatest "management challenge" to the Army recruiting system. This challenge is defined by the sum of the Delphi panel's quantitative estimate of the positive and negative impacts of the events if they actually happened. Since these positive and negative impacts were estimated individually, each on its own 0-10 scale, the greatest possible challenge would be represented by a score of 20. As will be noted, the top three events in this table score just under one-half that amount.

Tables 2.3 and 2.4 highlight the events in rank order by these impacts separately. The "net" score shows the positive impact minus the negative impact. Note that a fairly large number of these events have mixed effects for Army recruiting, as one might expect.

As suggested earlier, the final Delphi results, plus the impact statements and estimates, provided the basis for writing the "most likely" scenario presented in Chapter 3. A great many alternative futures were generated using the cross-impact approach and, of these, three of the more interesting are documented in the scenarios presented in Chapter 4.

Tables 2.5-2.10 compare these futures for a variety of key trends at three points in time, as follows:

Table 2.5 -- Environmental trends in 1990

Table 2.6 -- Army recruiting trends in 1990

Table 2.7 -- Environmental trends in 1995

Table 2.1

The 10 Most Likely Events by 2001

(Criterion: $\geq 40\%$)

Event number	Event description	Prob. at end of 2000
E3103	A cure for AIDS is developed.	100.0%
E7106	Conclusive evidence is made public establishing that a country led by a fanatical anti-Western head of state has acquired at least one deliverable nuclear weapon.	70.0
E7109	The number of nations known to possess nuclear weapons reaches at least 15.	62.5
E4201	The Federal Government achieves a balanced budget (Gramm-Rudman target date = 1991).	50.0
E5101	The Communist Party in a NATO country comes into power on the national level.	50.0
E6101	The Nation finds itself in an energy crisis at least as severe as the one in the mid-1970's.	50.0
E7102	Turkey or Greece withdraws from the military and civil arms of NATO.	50.0
E7107	A "terrorist state" (e.g., Syria, Lybia) initiates a program of indiscriminate, random attacks within the United States.	50.0
E7110	The United States is involved in an international confrontation at least as dangerous as the Cuban Missile Crisis in 1962.	50.0
E7205	The armed forces are required to eliminate enlistment bonus programs.	50.0
E8208	The Army drops its Army College Fund Program; no substitute is provided.	50.0

Table 2.2

The 12 Events Presenting the Greatest Challenge to Army Recruiting

(Scale: 0-20. Criterion: Total Impact > 7.5)

Event number	Event description	Total impact
E7107	A "terrorist state" (e.g., Syria, Lybia) initiates a program of indiscriminate, random attacks within the United States.	9.0
E7112	The United States is involved in a popular low-intensity conflict--and quickly wins.	9.0
E7115	The United States is involved in an unpopular low-intensity conflict--and slowly loses.	9.0
E4101	A worldwide depression begins (i.e., unemployment reaches 15%-20% in the advanced industrial nations).	8.5
E7118 +	A high-intensity non-nuclear military action breaks out in which the United States and U.S.S.R. are in direct combat.	8.5
E4202	Large, private corporations establish lucrative college student financial aid packages with follow-on employment obligations.	8.0
E5201	An anti-military President takes office.	8.0
E7110*	The United States is involved in an international confrontation at least as dangerous as the Cuban Missile Crisis in 1962.	8.0
E7113	The United States is involved in a popular low-intensity conflict--and slowly loses.	8.0
E7116	The United States is involved in a high-intensity non-nuclear conflict--and quickly wins.	8.0
E7117 +	The United States is involved in a high-intensity non-nuclear conflict--and slowly loses.	8.0
E8208	The Army drops its Army College Fund program; no substitute is provided.	8.0

+ Among the least likely by 2001.* Among the most likely by 2001.

NOTE: Excludes E7121 (All-out nuclear war).

Table 2.3

The 9 Events With the Greatest Positive Impact on Army Recruiting

(Scale: 0-10. Criterion ≥ 6.0)

Events number	Event description	Positive impact	Net impact
E4101	A worldwide depression begins (i.e., unemployment reaches 15%-20% in the advanced industrial nations).	8.0	7.5
E8212 ⁺	The Army becomes the service of first choice.	8.0	8.0
E7107*	A "terrorist state" (e.g., Syria, Libya) initiates a program of indiscriminate, random attacks within the United States.	7.0	5.0
E7112	The United States is involved in a popular low-intensity conflict--and quickly wins.	7.0	5.
E5106	A pro-Soviet Communist government takes over in Mexico.	6.0	4.5
E5203	Congress mandates at least 2 years of national service (either civilian or military) for all 18 year olds.	6.0	4.5
E8210	A program is enacted providing that Army College Fund and/or the New GI Bill educational benefits are transferred to family members after 10 years of continuous service.	6.0	6.0
E8209	The Army implements a 1-year tour option for the active component, plus a statutory USAR commitment.	6.0	6.0
E7116	The United States is involved in a high-intensity non-nuclear conflict--and quickly wins.	6.0	4.0

⁺ Among the least likely by 2001* Among the most likely by 2001

Table 2.4

The 14 Events With the Greatest Negative Impact on Army Recruiting

(Scale: 0-10. Criterion: ≥ 6.0)

Event Number	Event Description	Negative Impact	Net Impact
E4202	Large private corporations establish lucrative college student financial aid packages with follow-on employment.	8.0	-8.0
E5201	An anti-military President takes office.	8.0	-8.0
E7115	The United States is involved in an unpopular low-intensity conflict--and slowly loses.	8.0	-7.0
E8208 ^x	The Army drops its Army College Fund program; no substitute is provided.	8.0	-8.0
E7113	The United States is involved in a popular low-intensity conflict--and slowly loses.	7.0	-6.0
E7117 ⁺	The United States is involved in a high-intensity non-nuclear conflict--and slowly loses.	7.0	-6.0
E7120 ⁺	The United States is involved in a high-intensity conflict in which chemical or biological weapons are used.	7.0	-6.5
E7201 ⁺	U.S. print and broadcast media mount a sustained and extensive anti-military campaign.	7.0	-7.0
E7204	Congress imposes a military wage freeze.	7.0	-7.0
E7205 [*]	The armed forces are required to eliminate bonus programs.	7.0	-7.0
E7119 ⁺	The United States is involved in a high-intensity conflict in which tactical nuclear weapons are used.	6.5	-5.5
E7101	Massive demonstrations for arms control/arms reduction occur throughout the western world.	6.0	-6.0
E7108 ⁺	A U.S. Army officer in the field initiates a successful unauthorized launch of a nuclear weapon against the U.S.S.R. (United States and U.S.S.R. are not in conflict).	6.0	-6.0

⁺ Among the least likely by 2001^{*} Among the most likely by 2001

NOTE: Excludes E7121 (All-out nuclear war).

Table 2.8 -- Army recruiting trends in 1995

Table 2.9 -- Environmental trends in 2000

Table 2.10 -- Army recruiting trends in 2000

Tables 2.5-2.10 merely sample the data base, but they are well worth close examination. Note that on each table, the appropriate values for the individual trends in each scenario are given: "ML" identifies the "most likely" future; "A" designates Scenario A: Assertive America; "B" designates Scenario B: Compliant America; and "E" designates Scenario E: Chaotic World. Scenarios A, B, and E reflect the changes in the "most likely" future caused by the occurrence or non-occurrence of various subsets of the events forecasted in the Delphi.

The basic purpose of tables like these is to provide a snapshot of the emerging futures at convenient 5-year intervals. They are slice-of-time images and can be useful in challenging one's perceptions of how the world might look at these discrete moments of future time. Like any photograph, they cannot reveal the developments that produced the moment captured in the picture. Showing four quite different images of the same scene at the same time, however, makes it very difficult indeed for the observer to avoid asking the questions: "Is this possible? Is one image more plausible than another? Is one image more desirable than another?"

These tables also provide a means of detecting internal contradictions in the data base. As far as the authors could determine, there is, in fact, only one major contradiction (a surprisingly low number, if true, and a further indication of the quality of the Delphi panel). This concerns Items 7 and 8 on the even-numbered tables--i.e., the trend concerning recruiting expenditures per NPS Army recruit.

Item 7 represents a direct estimate of this trend by the Delphi respondents; Item 8 represents a computation of the same trend using earlier direct estimates. These values are radically different, thus suggesting that there is a significant error somewhere among the trends affected. Specifically, either Item 7 (T8405) is far too low or Items 1, 2, 3, and 6 contain a mis-estimate. Which is it? Finding and eliminating such flaws is to make good use of these tables.

Reflection on the static point values for 1990, 1995, and 2000 can thus be valuable in several ways. But it is far more rewarding to try to understand the dynamics of possible future change over time. A variety of graphs showing these patterns in all four futures are in the "All Scenarios" section of "Trends" in Volume 2.

Although patterns of causality are strongly implied in these graphs, these patterns are not explained here. It is nevertheless helpful to examine figures like these carefully, again considering the plausibility of the projections and looking for contradictions. There is a further use, however, and that is to obtain an impression of the gestalt of the four futures. Note, for example, that the three alternative projections of the first trend (T1209, "Families as a percentage of households") are all equal to or greater than that for the "most likely" future--i.e., the percentage is not anticipated to fall in any of the alternatives futures. Just the opposite is true for the next trend (T1211, "Percentage of single-parent families with children under 18"). In a variety of instances, however, the pattern is not quite so regular. See, for instance, T2222 ("Public confidence in the Army's ability to achieve its mission in combat"), where the values in Scenarios A, B, and E sweep above and fall below the "most likely" future in apparently unpredictable ways.

To understand future possibilities in greater depth requires the use of scenarios.

Scenarios are like histories of the future. They are integrating mechanisms--devices for organizing or synthesizing many separate forecasted developments. But scenarios go beyond histories. Because they provide a way of making forecasted events not only "happen," but happen in full view of their causes and consequences, they are also devices that can be used to ask specific "what if" questions and to examine strategic policy options. In these and other ways, scenarios serve as tools that force the user to think in the future tense, to be explicit about his own expectations and their rationale, and to probe his private model of how the world works. Unlike a history, which is good to the extent that it is both accurate and readable, a scenario is good to the extent that it is useful in achieving these purposes.

In Chapter 3, we present the "most likely" future.

Table 2.5

Aspects of the Recruiting Environment at the End of 1990

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario			
			ML	A	B	E
1. T1209.	Families as a percentage of households.	72.0	71.0	71.0	71.0	71.0
2. T1211.	Percentage of families with children under 18 that are headed by a single parent.	28.0	30.0	30.0	30.0	30.0
3. T2202.	Percentage of 17-21 year olds who are functionally or marginally illiterate.	15.0	15.0	15.0	15.0	15.0
4. T2203.	Percentage of youth that never finish high school.	25.0	25.0	25.0	25.0	25.0
5. T2205.	Percentage of college-age minority youth that enroll as college freshman.	18.0	18.5	19.0	19.0	19.0
6. T2209.	Percentage of adults that say they accept traditional values.	25.0	27.0	31.0	27.0	27.5
7. T2211.	Percentage of 17-21 year olds who are strongly patriotic.	50.0	50.0	53.0	54.0	56.0
8. T2216.	Percentage of the population that thinks the overall situation in the United States 5 years from now will be better than it is today.	49.0	50.0	47.0	49.0	52.0
9. T2220.	Level of public conviction that the strategic nuclear balance is stable (0-10).	5.0	5.0	5.0	3.7	3.8
10. T2222.	Level of public confidence in the ability of the Army to achieve its mission in combat (0-10).	7.0	7.0	7.0	7.0	5.2
11. T4201.	Percentage annual real growth in GNP.	3.0	3.0	3.0	3.0	3.0
12. T4702.	Annual rate of inflation.	3.5	4.5	4.5	4.5	4.5
13. T4206.	Percentage of married-couple families in which both spouses work.	65.0	60.0	61.0	61.0	60.0

Table 2.5 (continued)

Aspects of the Recruiting Environment at the End of 1990

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
14. T4207.	Percentage of college-graduates who are over-qualified for available jobs.	30.0	34.0	31.5	31.5	34.0
15. T4217.	Percentage of unemployment in the civilian labor force.	7.0	7.0	7.0	7.0	7.0
16. T4218.	Unemployment rate for 17-21 year olds.	17.0	15.0	15.0	15.0	15.0
17. ----	Ratio of 17-21-year-old unemployment to general unemployment (Item 16/Item 15).	2.4	2.1	2.1	2.1	2.1
18. T4223.	Median income of households aged 15-24 (1986 \$ thousands).	15.0	16.0	16.0	16.0	16.0
19. T4225.	Percentage of families below the poverty level.	12.0	12.0	12.0	12.0	12.0
20. T5201.	Level of congressional support for the military.	6.0	6.0	6.6	7.7	7.5
21. T7101.	Soviet military strength/capability in conventional land combat (0-10).	6.5	7.0	6.9	6.9	7.7
22. T7105.	Level of antagonism between Warsaw Pact and NATO forces (0-10).	5.0	5.0	5.0	7.0	8.0
23. T7106.	Level of antagonism between the United States and the U.S.S.R. (0-10).	5.0	5.0	5.0	6.9	9.5
24. T7111.	Level of antagonism between Nicaragua and its Central American neighbors.	6.0	7.0	7.0	6.0	7.3
25. T7201.	Number of incidents of international terrorism affecting U.S. citizens.	210	230	276	196	240
26. T7202.	Defense expenditures as a percentage of GNP.	6.8	6.5	6.5	5.7	6.5

Table 2.6

Aspects of the Army Recruiting System at the End of 1990

Item	Trend statement	Estimated year-end level, 1986	Estimated year-end level in scenario:			
			ML	A	B	E
1. T8401.	Size of the Army budget (1986 \$ billions).	77.5	80.0	80.0	73.2	72.2
2. T8402.	Army recruiting expenditures as a percentage of the Army budget.	1.0	1.2	1.3	1.3	1.3
3. -----	Army recruiting expenditures (Item 2 x Item 1) (1986 \$ millions).	775.0	960.0	1040.0	951.6	938.6
4. T8403.	Army advertising expenditures as a percentage of the Army recruiting budget.	13.0	10.0	10.0	11.0	6.0
5. -----	Army advertising expenditures (Item 4 x Item 3) (1986 \$ millions).	100.8	96.0	104.0	104.7	56.3
6. T8423.	Recruiting contract mission for the active component (000's).	135.0	136.0	136.0	133.7	140.7
7. T8405.	Recruiting expenditures per NPS Army recruit (1986 \$).	4000	4500	4500	4400	3300
8. -----	Recruiting expenditures per NPS Army recruit (Item 3/Item 6) (1986 \$).	5741	7059	7647	7117	6671
9. -----	Advertising expenditures per NPS Army recruit (Item 5/Item 6) (1986 \$).	747	706	765	783	538
10. -----	Non-advertising expenditures per NPS Army recruit (Item 8 - Item 9) (1986 \$).	4994	6353	6882	6334	6133
11. T8404.	Effectiveness of Army recruiting advertising (0-10).	6.0	6.0	6.0	3.8	1.7
12. T8419.	Effectiveness of the typical Army recruiter (0-10).	6.0	6.0	6.3	4.9	2.9
13. T8415.	Number of active Army recruiters (foxhole strength).	5140	5200	5200	5100	4200

Table 2.6 (continued)
Aspects of the Army Recruiting System at the End of 1990

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
14. -----	Average number of enlistees recruited per Army recruiter (Item 6/ Item 13).	26.3	26.2	26.6	26.2	33.5
15. -----	Costs of Army recruiting (other than advertising) per Army recruiter [(Item 3 - Item 5)/Item 13]. (1986 \$ thousands.)	131.2	166.2	180.0	166.1	205.5
16. T8424.	Level of competition from the private sector for high school graduates (0-10).	6.0	7.0	7.0	7.0	9.5
17. T8426.	Level of competition from the other services for high school graduates (0-10).	7.0	7.8	7.8	7.8	8.3
18. T8410.	National Guard personnel as a percentage of Active Army troops.	58.0	60.0	60.0	60.0	60.0
19. T8414.	Women as a percentage of the Active Army.	10.0	11.5	12.0	10.0	11.0
20. T8432.	Average AFQT score of Army recruits.	53.0	54.0	54.0	54.0	48.6
21. T8432.	Percentage of Army recruits who are educationally deficient.	10.0	9.6	9.6	9.6	11.0
22. -----	Number of educationally deficient recruits (Item 6 x Item 21) (thousands).	13.5	13.1	13.1	12.8	15.5
23. T8409.	Percentage of Army enlisted positions requiring computer literacy.	10.0	17.0	17.0	17.0	17.0
24. T8406.	E-1 basic pay as a percentage of civilian pay.	94.2	94.0	94.0	94.0	80.4
25. T8422.	Value of the Army's educational benefits as an inducement to enlist (0-10).	8.0	8.2	8.2	6.7	1.3
26. T8407.	Level of Army esprit de corps (0-10).	7.0	7.0	7.5	5.3	4.1

Table 2.7

Aspects of the Recruiting Environment at the End of 1995

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario			
			ML	A	B	E
1. T1209.	Families as a percentage of households.	72.0	72.0	84.0	72.0	87.0
2. T1211.	Percentage of families with children under 18 that are headed by a single parent.	28.0	31.0	25.0	31.0	19.0
3. T2202.	Percentage of 17-21 year olds who are functionally or marginally illiterate.	15.0	15.0	16.0	15.0	17.0
4. T2203.	Percentage of youth that never finish high school.	25.0	24.0	26.0	24.0	27.0
5. T2205.	Percentage of college-age minority youth that enroll as college freshman.	18.0	19.0	10.0	10.0	8.0
6. T2209.	Percentage of adults that say they accept traditional values.	25.0	28.0	52.6	32.2	53.1
7. T2211.	Percentage of 17-21 year olds who are strongly patriotic.	50.0	60.0	72.0	68.0	59.0
8. T2216.	Percentage of the population that thinks the overall situation in the United States 5 years from now will be better than it is today.	49.0	50.0	2.0	34.0	4.0
9. T2220.	Level of public conviction that the strategic nuclear balance is stable (0-10).	5.0	5.0	2.9	4.3	4.3
10. T2222.	Level of public confidence in the ability of the Army to achieve its mission in combat (0-10).	7.0	7.0	9.6	7.7	4.8
11. T4201.	Percentage annual real growth in GNP.	3.0	3.0	-9.0	3.0	-4.2
12. T4702.	Annual rate of inflation.	3.5	6.0	3.6	6.0	2.4
13. T4206.	Percentage of married-couple families in which both spouses work.	65.0	60.0	33.0	60.0	30.0

Table 2.7 (continued)

Aspects of the Recruiting Environment at the End of 1995

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
14. T4207.	Percentage of college-graduates who are over-qualified for available jobs.	30.0	37.5	40.8	34.0	62.4
15. T4217.	Percentage of unemployment in the civilian labor force.	7.0	7.0	17.3	7.0	16.2
16. T4218.	Unemployment rate for 17-21 year olds.	17.0	15.0	29.0	15.0	20.0
17. ----	Ratio of 17-21-year-old unemployment to general unemployment (Item 16/Item 15).	2.4	2.1	1.7	2.1	1.2
18. T4223.	Median income of households aged 15-24 (1986 \$ thousands).	15.0	17.0	14.0	17.0	15.0
19. T4225.	Percentage of families below the poverty level.	12.0	12.0	19.0	12.0	17.0
20. T5201.	Level of congressional support for the military.	6.0	6.0	6.1	8.8	5.6
21. T7101.	Soviet military strength/capability in conventional land combat (0-10).	6.5	7.0	7.7	7.0	7.7
22. T7105.	Level of antagonism between Warsaw Pact and NATO forces (0-10).	5.0	5.0	8.0	4.0	6.0
23. T7106.	Level of antagonism between the United States and the U.S.S.R. (0-10).	5.0	5.0	9.0	5.6	6.8
24. T7111.	Level of antagonism between Nicaragua and its Central American neighbors.	6.0	6.0	9.0	5.9	7.3
25. T7201.	Number of incidents of international terrorism affecting U.S. citizens.	210	170	215	189	200
26. T7202.	Defense expenditures as a percentage of GNP.	6.8	6.4	9.8	7.2	4.7

Table 2.8

Aspects of the Army Recruiting System at the End of 1995

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
1. T8401.	Size of the Army budget (1986 \$ billions).	77.5	80.0	79.3	84.7	72.5
2. T8402.	Army recruiting expenditures as a percentage of the Army budget.	1.0	1.3	0.7	1.3	0.1
3. -----	Army recruiting expenditures (Item 2 x Item 1) (1986 \$ millions).	775.0	1040.0	555.1	1101.1	72.5
4. T8403.	Army advertising expenditures as a percentage of the Army recruiting budget.	13.0	9.0	3.0	4.0	1.0
5. -----	Army advertising expenditures (Item 4 x Item 3) (1986 \$ millions).	100.8	93.6	16.7	44.0	0.7
6. T8423.	Recruiting contract mission for the active component (000's.)	135.0	134.0	149.7	136.8	162.2
7. T8405.	Recruiting expenditures per NPS Army recruit (1986 \$).	4000	5000	4200	4400	2900
8. -----	Recruiting expenditures per NPS Army recruit (Item 3/Item 6) (1986 \$).	5741	7761	3708	8049	447
9. -----	Advertising expenditures per NPS Army recruit (Item 5/Item 6) (1986 \$).	747	699	112	322	4
10. -----	Non-advertising expenditures per NPS Army recruit (Item 8 - Item 9) (1986 \$).	4994	7062	3596	7727	443
11. T8404.	Effectiveness of Army recruiting advertising (0-10).	6.0	6.0	2.3	4.6	0.8
12. T8419.	Effectiveness of the typical Army recruiter (0-10).	6.0	6.0	4.0	6.0	3.4
13. T8415.	Number of active Army recruiters (foxhole strength).	5140	5200	4400	4800	3100

Table 2.8 (continued)
Aspects of the Army Recruiting System at the End of 1995

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
14. -----	Average number of enlistees recruited per Army recruiter (Item 6/ Item 13).	26.3	25.8	34.0	28.5	52.3
15. -----	Costs of Army recruiting (other than advertising) per Army recruiter [(Item 3 - Item 5)/Item 13] (1986 \$ thousands.)	131.2	182.0	122.3	220.2	23.2
16. T8424.	Level of competition from the private sector for high school graduates (0-10).	6.0	7.0	3.6	8.7	2.6
17. T8426.	Level of competition from the other services for high school graduates (0-10).	7.0	8.0	5.3	9.5	3.3
18. T8410.	National Guard personnel as a percentage of Active Army troops.	58.0	62.0	50.0	62.0	56.0
19. T8414.	Women as a percentage of the Active Army.	10.0	13.0	9.0	13.0	10.0
20. T8432.	Average AFQT score of Army recruits.	53.0	55.0	57.7	55.0	43.3
21. T8432.	Percentage of Army recruits who are educationally deficient.	10.0	9.9	9.3	9.9	11.6
22. -----	Number of educationally deficient recruits (Item 6 x Item 21) (thousands).	13.5	13.3	13.9	13.5	18.8
23. T8409.	Percentage of Army enlisted positions requiring computer literacy.	10.0	25.0	23.0	25.0	23.0
24. T8406.	E-1 basic pay as a percentage of civilian pay.	94.2	94.0	84.6	94.0	81.9
25. T8422.	Value of the Army's educational benefits as an inducement to enlist (0-10).	8.0	8.0	10.0	8.6	2.4
26. T8407.	Level of Army esprit de corps (0-10).	7.0	7.0	7.3	7.4	3.5

Table 2.9

Aspects of the Recruiting Environment at the End of 2000

Item	Trend statement	Estimated year-end level, 1986	Estimated year-end level in scenario:			
			ML	A	B	E
1. T1209.	Families as a percentage of households.	72.0	71.0	73.0	78.0	75.0
2. T1211.	Percentage of families with children under 18 that are headed by a single parent.	28.0	32.0	26.0	30.0	32.0
3. T2202.	Percentage of 17-21 year olds who are functionally or marginally illiterate.	15.0	13.0	13.0	13.0	13.0
4. T2203.	Percentage of youth that never finish high school.	25.0	23.0	24.0	23.0	21.0
5. T2205.	Percentage of college-age minority youth that enroll as college freshman.	18.0	20.0	18.0	16.0	15.0
6. T2209.	Percentage of adults that say they accept traditional values.	25.0	28.0	46.4	42.3	54.2
7. T2211.	Percentage of 17-21 year olds who are strongly patriotic.	50.0	50.0	59.0	61.0	54.0
8. T2216.	Percentage of the population that thinks the overall situation in the United States 5 years from now will be better than it is today.	49.0	50.0	21.0	10.0	31.0
9. T2220.	Level of public conviction that the strategic nuclear balance is stable (0-10).	5.0	5.0	4.6	3.3	4.1
10. T2222.	Level of public confidence in the ability of the Army to achieve its mission in combat (0-10).	7.0	7.0	6.8	9.8	5.2
11. T4201.	Percentage annual real growth in GNP.	3.0	3.0	2.1	-2.1	3.9
12. T4702.	Annual rate of inflation.	3.5	5.0	4.3	8.3	7.5
13. T4206.	Percentage of married-couple families in which both spouses work.	65.0	65.0	58.0	50.0	67.0

Table 2.9 (continued)
Aspects of the Recruiting Environment at the End of 2000

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
14. T4207.	Percentage of college graduates who are over-qualified for available jobs.	30.0	37.0	37.9	34.1	32.6
15. T4217.	Percentage of unemployment in the civilian labor force.	7.0	7.0	9.0	12.1	5.2
16. T4218.	Unemployment rate for 17-21 olds.	17.0	16.0	19.0	23.0	1.0
17. -----	Ratio of 17-21-year-old unemployment to general unemployment (Item 16/Item 15).	2.4	2.3	2.1	1.9	0.2
18. T4223.	Median income of households aged 15-24 (1986 \$ thousands).	15.0	18.0	17.0	17.0	20.0
19. T4225.	Percentage of families below the poverty level.	12.0	12.0	14.0	16.0	12.0
20. T5201.	Level of congressional support for the military.	6.0	5.0	4.8	6.8	5.7
21. T7101.	Soviet military strength/capability in conventional land combat (0-10).	6.5	7.0	8.2	7.3	7.0
22. T7105.	Level of antagonism between Warsaw Pact and NATO forces (0-10).	5.0	5.0	6.0	6.0	5.0
23. T7106.	Level of antagonism between the United States and the U.S.S.R. (0-10).	5.0	4.0	6.1	5.6	5.1
24. T7111.	Level of antagonism between Nicaragua and its Central American neighbors.	6.0	6.0	7.0	7.0	5.3
25. T7201.	Number of incidents of international terrorism affecting U.S. citizens.	210	150	182	181	160
26. T7202.	Defense expenditures as a percentage of GNP.	6.8	6.0	5.7	8.7	5.7

Table 2.10

Aspects of the Army Recruiting System at the End of 2000

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
1. T8401.	Size of the Army budget (1986 \$ billions).	77.5	80.0	82.3	88.0	94.0
2. T8402.	Army recruiting expenditures as a percentage of the Army budget.	1.0	1.3	1.2	0.9	0.4
3. -----	Army recruiting expenditures (Item 2 x Item 1) (1986 \$ millions).	775.0	1040.0	987.6	792.0	376.0
4. T8403.	Army advertising expenditures as a percentage of the Army recruiting budget.	13.0	7.0	6.0	2.0	1.0
5. -----	Army advertising expenditures (Item 4 x Item 3) (1986 \$ millions).	100.8	72.8	59.3	15.8	3.8
6. T8423.	Recruiting contract mission for the active component (000's.)	135.0	134.0	144.2	160.3	154.5
7. T8405.	Recruiting expenditures per NPS Army recruit (1986 \$).	4000	5100	4700	4900	3500
8. -----	Recruiting expenditures per NPS Army recruit (Item 3/Item 6) (1986 \$).	5741	7761	6849	4941	2434
9. -----	Advertising expenditures per NPS Army recruit (Item 5/Item 6) (1986 \$).	747	543	411	99	25
10. -----	Non-advertising expenditures per NPS Army recruit (Item 8 - Item 9) (1986 \$).	4994	7218	6438	4842	2409
11. T8404.	Effectiveness of Army recruiting advertising (0-10).	6.0	6.0	4.7	5.0	3.4
12. T8419.	Effectiveness of the typical Army recruiter (0-10).	6.0	7.0	8.0	6.1	5.3
13. T8415.	Number of active Army recruiters (foxhole strength).	5140	5100	4700	4800	3600

Table 2.10 (continued)
Aspects of the Army Recruiting System at the End of 2000

Item	Trend statement	Estimated yearend level, 1986	Estimated yearend level in scenario:			
			ML	A	B	E
14. -----	Average number of enlistees recruited per Army recruiter (Item 6/ Item 13).	26.3	26.3	30.7	33.4	42.9
15. -----	Costs of Army recruiting (other than advertising) per Army recruiter [(Item 3 - Item 5)/Item 13]. (1986 \$ thousands.)	131.2	189.6	197.5	161.7	103.4
16. T8424.	Level of competition from the private sector for high school graduates (0-10).	6.0	7.0	6.7	7.5	9.2
17. T8426.	Level of competition from the other services for high school graduates (0-10).	7.0	8.0	8.7	8.5	6.1
18. T8410.	National Guard personnel as a percentage of Active Army troops.	58.0	65.0	65.0	55.0	56.0
19. T8414.	Women as a percentage of the Active Army.	10.0	15.0	14.0	12.0	12.0
20. T8432.	Average AFQT score of Army recruits.	53.0	56.0	56.5	57.4	40.8
21. T8432.	Percentage of Army recruits who are educationally deficient.	10.0	10.0	9.8	9.9	13.4
22. -----	Number of educationally deficient recruits (Item 6 x Item 21) (thousands).	13.5	13.4	14.1	15.9	21.0
23. T8409.	Percentage of Army enlisted positions requiring computer literacy.	10.0	30.0	31.0	29.0	31.0
24. T8406.	E-1 basic pay as a percentage of civilian pay.	94.2	94.0	92.4	89.3	84.6
25. T8422.	Value of the Army's educational benefits as an inducement to enlist (0-10).	8.0	7.8	9.6	8.0	1.7
26. T8407.	Level of Army esprit de corps (0-10).	7.0	7.0	6.2	9.7	6.9

3. THE "MOST LIKELY" FUTURE

INTRODUCTION

This chapter characterizes and then presents the "most likely" scenario. It also briefly comments on the implications of this future for Army recruiting.

What Is the Purpose of the "Most Likely" Future?

Operationally, the "most likely" scenario is the key to successful futures research. This is so for several reasons. First, this scenario integrates and rationalizes all of the discrete consensus forecasts and evaluations obtained during the forecasting part of a futures study--in this case, the Delphi effort. It is one thing to have forecasted hundreds of trends and events. It is another and far different thing to make sense of such a mass of data. Assuming that the underlying forecasts are internally consistent and otherwise acceptable, the only means available in futures research to provide this synthesis in a way that is comprehensive, coherent, and entirely explicit is by preparing the "most likely" scenario.

Second, as noted elsewhere in this report, the "most likely" scenario is essential to the generation of alternative futures. To put it precisely: In futures research, all alternative futures are alternatives to the "most likely" future. (See Appendix C for additional details.) If the latter is flawed--or, worse yet, does not exist--then the alternatives are not simply difficult to specify, but cannot be understood properly or used well. (Indeed, the user would have every reason to wonder why these alternatives should even be taken seriously.)

Moreover, in this report, it will be noted that the scenarios depicting the alternative futures are much shorter in length than the "most likely" scenario, mainly because they focus on a subset of the forecasted events--i.e., just those which have been decided to "happen." (It is precisely the occurrence of these future events which makes these futures different from each other and from the "most likely" future.) The fact that the alternatives are developed less fully than the "most likely" scenario is not unusual, but it tends to hide a critical assumption: The best description of the developments not discussed in the alternatives will often be rather like the description already presented in the "most likely" scenario.

Thus, the touchstone for creating and for understanding the alternative futures must be the "most likely" scenario.

Finally, turning from theory to practice, the "most likely" scenario represents, if done well, the one future that is indispensable to decisionmakers. This image provides the basis for evaluating the need for change. If no alternative seems better than this image, there is clearly no present need to do anything different. If, however, the "most likely" future is not acceptable, then action is required either to change this future or, as is often the case, to do a better job of preparing to endure or prevail in that future if it comes to pass.

This may seem obvious. After all, the notion of a "most likely" future, or "most likely" scenario, is commonplace in long-range forecasting and planning. In fact, however, apart from the points made above, the concept of such a future is complex and puzzling, and is rarely considered carefully.

What Is the "Most Likely" Future?

It is generally thought, for example, that this future is somehow significantly more probable than its alternatives. Practically speaking, however, its probability is zero. That is, the "most likely" scenario is virtually certain not to represent accurately the future that actually will materialize.

Theoretically, of course, this future may have a probability that is higher than that of other possible futures and thus may, in that sense, be "more likely" than they are. But the fact of the matter is that the probability of any scenario is essentially nil, and hence the comparison of probability levels is merely academic.

This point warrants emphasis and some elaboration, since in military forecasting and planning one frequently encounters seemingly authoritative assessments of the probability of various scenarios. All such assessments are wrong.

One way of explaining why is to note that a scenario is a model. Like all models, it is merely a representation of reality, and, as such, it must be simpler by far than what it presumes to represent. In principle, of course, given a sufficient basis in past or current experience, a model can be highly representative or accurate, whatever its level of generality. However, in futures research a scenario is not a model of objective historical or present reality (since the future does not exist), but, at best, is an informed and thoughtful description of a specific possibility, stemming ultimately from assumptions derived from an uncertain mixture of personal experience, imagination, and intuition.

Time will always show, therefore, that particular developments and relationships that could and should have been included were overlooked. Time will always show that the interpretation or emphasis given to some things that were included was imperfect. And time will always show that the actual future was shaped in part by the developments that no one could have foreseen when the scenario was written. To believe otherwise is to believe that it is possible to predict the future.

Paradoxically, the fact that all futures are highly improbable because they are necessarily incomplete or biased cannot be overcome by constructing futures that are richer in detail. In fact, the more detailed a scenario, the more unlikely it is. The reason is that there is an infinite number of futures, any one of which embraces an extraordinarily large number of events that occur in a precise sequence. One may try, of course, to define all of these events in advance and then specify their sequence of occurrence, but it should be clear that this sort of effort would be foolish. To miss just one event or to have the sequence wrong in just one instance is to have a future that will not materialize. That is, its probability will prove to be zero, even if it was "right" in general.

Thus, the concept of the "most likely" future is very problematical. (For this reason, we have consistently put the phrase in quotation marks throughout this report.) Yet out of all possible futures, it seems almost absurd to deny that there is some future state of affairs that can be said to be "most likely." Intuitively, everyone seems to know what this future is. In some sense, it appears to represent a "reasonable" continuation of various past and current trends. The policy analyst, Herman Kahn, called it the "surprise-free" future, in which things are anticipated to happen more or less as we expect them to happen—and nothing happens that we would consider to be a surprise. On this view, the "most likely" future is that future we most expect, even if we do not know quite what to expect. If we were to experience this future, the shock of recognition would be mild; it would be rather like the discovery that what we speak is prose.

Accordingly, rigorous definition of the "most likely" future is elusive. But perhaps the notion can at least be characterized somewhat more precisely by thinking of the "most likely" future, not as a single future, but as the summary description of a small constellation of futures at the very peak of plausibility in the distribution of all imaginable futures—a constellation that gradually expands over time to incorporate increasingly larger differences from today, though never the radically different or wildly implausible. As such, it is a composite of the set of close alternatives that appear to represent the plausible continuations of today's relevant forces for change. But it is definitely not a simple extrapolation of these forces, which should be obvious from the fact that each alternative in the constellation is different from the others. In the aggregate, however, these differences, most of which are trivial, simply cancel each other out, in much the same way that an average cancels out the minor differences in a set of close numerical estimates. In short, the "most likely" future may be thought of as an expression of the central tendency of the constellation of highly plausible futures. Colloquially, the constellation itself is what is called the ballpark.

In the Delphi conducted as part of this study, each participant was asked to forecast a large number of trends and events, assuming his own personal expectation regarding the "most likely" future. Individual estimates of this sort provide precisely the basis needed to distill the "most likely" future in the above sense. As we have suggested, this future can be represented by finding a summary measure of these individual estimates. Because all of the forecast estimates in the Delphi were quantitative, this is easily accomplished. To minimize the influence of extreme personal views of the "most likely" future, we have simply used the median response from the group, both for the trends and the events.

In the following pages, we present a scenario that weaves together these median results into what appears to be a plausible and self-consistent whole. Graphs presented the "Most Likely Future" section of "Trends" in Volume 2 depict the final Delphi forecasts. Note that while the medians are assumed to describe the future that actually occurred, there is sometimes a large band of dissensus or uncertainty around the medians, which is shown by curves that depict the upper and lower quartiles in the Delphi estimates—i.e., the middle 50% of the estimates. A prudent manager would want to take these curves into account, because from his point of view today, the "most likely" future is defined not only by the median, but also by the uncertainty surrounding it. If the band defined by these quartiles cannot be reduced—say, by further research—then the executive's job will surely require managing both the uncertainty and the median. He may wish to "bet" on the median, but he must be prepared for the almost certain eventuality that future reality will often materialize somewhere else in the distribution of forecasts.

This scenario was completed in January-February 1987.

Technical Report

**"Most Likely" Scenario: Army Recruiting Environment,
1987-2001**

Benton International, Inc.



**U.S. Army
Research Institute for the Behavioral and Social Sciences**

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"MOST LIKELY SCENARIO": ARMY RECRUITING ENVIRONMENT, 1987-2001**CONTENTS**

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1. INTRODUCTION AND OVERVIEW

This report surveys the sometimes turbulent history of developments that affected Army recruiting over the last 15 years. As such, it chronicles the interplay between external forces, Army recruiters, the Army recruiting system, and the motives of young people who joined the Army--or who might have. Compared to other periods of American history, these 15 years seemed to resemble most closely the years from 1948 to 1963 (though without a war) or, perhaps more accurately, 1877 through 1892. Though important changes occurred, and the management of change was more difficult than in the early 1980's, the relevant underlying trends proved to be remarkably stable. Shifts in direction occurred occasionally, of course, but these shifts were never abrupt or unforeseeable.

No doubt we are still too close to many of these developments to see them in entirely proper perspective. Later historians may well show that the emphasis we place on some of them is wrong, and these historians will also be better positioned to identify forces for change which we have overlooked completely.

Nevertheless, we believe that the following portrait is correct in its essentials, given the data and documentation available to us today (i.e., in January 2001). Coupled with our own direct experience of the evolving situation during the last 15 years, what these sources--and the following narrative--indicate may be summarized broadly as follows:

1. For top management in USAREC and DCSPER, as well as for recruiters in the field, the enduring reality was that there were no simple answers. This observation may seem platitudinous--particularly since it was the bedrock conclusion of a highly popular book in the early 1980's on management, *In Search of Excellence*. The fact of the matter, however, is that recruiting success in the last 15 years meant avoiding pat formulas while keeping to the basics and augmenting them with new concepts. It meant continuing to use the tested and successful techniques of the early and mid-1980's, as well as dealing imaginatively and flexibly with a full range of new factors in the external environment. And it meant being creative and more responsive when it came to making chan-

ges in the recruiting system itself.

2. The external factors that posed the greatest difficulties (and opportunities) for both Army recruiters and the management of the Army recruiting system did not appear one by one, in neat little packages. Rather, they appeared simultaneously and continuously, and they spanned the possibilities from demographics to value change, from economic developments to technological innovation, from legal and regulatory considerations to vital issues of war and peace.
3. The internal factors were equally diverse, running the gamut from shifts in DOD budgets to procedural changes that were sought but sometimes not implemented to improve the recruiting system.
4. Perhaps most surprising and challenging is that many developments that observers in the 1980's thought rather likely did not occur. As indicated earlier, the last 15 years were unusually placid, at least when compared to certain predictions made early in the 1980's. Nevertheless, the fact that some events of apparently high probability did not occur had important effects on the behavior of the various players. Moreover, because the cumulative probability of many other seemingly important future events crept up throughout this period, just as anticipated, these developments were always in the background, and could, of course, occur at almost any time. Their presence also affected behavior.
5. Over this period, USAREC met its overall mission objectives. This was accomplished without major policy changes. But it was not easy, particularly because the outcome depended significantly on the course of environmental factors over which USAREC had essentially no control.
6. In the end, sensitivity to these outside factors on the part of recruiters and managers, a high level of effectiveness among Army recruiters, and major developments in the design and execution of Army advertising programs appear to have been the fundamental reasons for USAREC's success during the last 15 years.

2. GENERAL ECONOMIC CONDITIONS

The possibility of another Great Crash, with massive unemployment and suffering worldwide (E4101), began to look real in 1988, as international trade imbalances and problems in servicing foreign debts soared, and various countries experienced serious food shortages because of bad harvests. The period between 1988 and 1992 or 1993 was particularly dangerous, as the chances of this disaster's occurrence at some point during this interval rose fairly rapidly. As people became increasingly aware of the seriousness of the threat, thanks to a steady stream of broadcasts and publications on the subject by doomsayers, as well as by well-known authorities such as Professor Galbraith, they sought security. Army recruitment benefited to a certain degree because of these fears.

After the election of 1992, however, new trade and tariff agreements and new lending conditions were put in place that began to bring the risk of a global depression under control, and since then the overall probability of a collapse has increased only slightly.

Throughout this period, the United States enjoyed a steady 3% annual real growth in Gross National Product (GNP) (T4201). Accordingly, GNP is 50% higher today (in real terms) than it was at the end of 1986. As we shall see later (p. 6), employment in the manufacturing sector had its ups and downs (but tended to continue its decline), while agriculture fell only slightly, and the service sector expanded to fill the voids. This shift was important both domestically and internationally. Indeed, employment in the service industries accounted for more than 70% of jobs even 15 years ago, and trade in services contributed a substantial surplus to the U.S. balance of payments--in fact, several times more than was indicated by official Government statistics. Of particular interest was the steady growth of the "information economy," a dramatic indication of the Nation's continued movement into the high-technology, knowledge-based society that some experts had forecasted as early as the 1960's.

But all was not entirely well with the economy. Of fundamental importance was the fact that cheap energy in the mid-1980's broke some of the good habits painfully adopted in the mid-1970's: conservation, substitution, exploration, and experimentation to develop alternatives to oil. Oil imports to the United States grew to more than 40% of consumption, a level of dependence that had not been seen for many years. The result was that the danger of a severe energy crisis grew (E6101). For geopolitical reasons, including a greater Soviet presence

in the Middle East, the period of greatest threat was from around 1991 through 1995, which of course contributed to heightened uncertainties about the health of the international economy (and fears about a possible depression). Again, because the desire for economic security was an important motive for enlistees (M38), these uncertainties tended to favor Army recruiting.

Moreover, the chances of a major war among the oil-producing countries in the Mediterranean OPEC countries grew during the same interval (see p. 21), contributing to concerns about a possible energy crisis and, clearly, the risk of a possible U.S. involvement--a possibility that had a mixed impact on Army recruiting.

Worse yet was the steady rise in the rate of inflation (T4202), which reached a high of 6% by the end of 1995. This was nothing like the 13.5% of 1980, but it still was almost double the level in 1986 and it had important repercussions on interest rates, the stock market, capital investment, housing starts, unemployment, etc.

The growth of inflation was a critical issue in the elections of 1996. The Administration that took office in 1997 was pledged to repeat the accomplishments of President Reagan and the Federal Reserve Board in the early 1980's. The means used were familiar in character (e.g., budget cuts), but there were twists, such as deep cuts in proposed defense spending. And new taxes were imposed. Inflation began to fall, though very slowly. Today, at the beginning of 2001, we are running at a 5% annual rate.

Dealing with inflation has been problematical over the years, however. While Government spending grew somewhat less slowly than GNP in the late 1980's and early 1990's, and pressures to balance the budget increased, the fact is that this period witnessed no balanced budget and a steady growth in deficit spending in the years up to the election of 1996. The Administration that took office in 1997 found itself saddled with the highest total Federal debt in U.S. history (\$2.8 trillion) (T4203), and with absolutely no way to reduce it significantly. It had pledged that if the Government ran a surplus, these funds would be used to retire the debt. But a balanced budget was unattainable (E4201), despite the Administration's increasing willingness to cut back on its own programs and a gradual growth in the needed cooperation and compromise in the Congress. In the end, the demands of powerful constituencies prevailed to keep the budget out of balance. (See p. 12.)

On balance, these developments made it increasingly difficult for ordinary citizens to understand and cope with the uncertainties inherent in the economic system. One interesting measure of this fact is that the underground economy (T4204) continued to grow in size throughout this period. At the end of 1986, it was estimated to be worth \$388 billion. This figure is now estimated to be nearly \$500 billion (in 1986 dollars). Part of the explanation may be a continuing absence of important successful governmental actions against organized crime, particularly the illegal drug market, which alone accounted for somewhere between 25% and 30% of the \$500 billion. Perhaps more important,

however, is that bewilderment about the economy, coupled with resentment toward new taxes (and the failed promises of the tax reform in 1986), has led more people to join this subterranean economy, especially through the system of bartering.

The growth in the underground economy had very minor but nonetheless negative consequences for Army recruiting, since it siphoned off a small number of 17-21 year olds who found life there more lucrative and perhaps less demanding than the Army job they might otherwise have chosen.

3. JOBS

To the surprise of many economists, the percentage of the population that is in the labor force continued to rise through 1995 (T4216). The participation rate in 1970 was 60.4%; in 1980, it was 63.8; in 1984, 64.4%. By 1987, it had reached 65.0%, and it grew slowly to reach 67.0% at the end of 1995. Since then it has fallen one-half point.

In this case, small changes have large effects. The baby boomers, it seems, have been forced to struggle up a career ladder on which the highest rungs remained occupied by workers who chose later retirement. Constant uncertainties about the future of the Social Security system, coupled with advances in health care that meant increased vigor at older ages, reinforced the trend toward later retirement. Of course, this trend itself was legitimized when in 1986 Congress passed legislation prohibiting mandatory retirement by age 70.

At the same time, the rate of unemployment averaged a constant 7% throughout the last 15 years (T4217), becoming almost a permanent norm--and a continuing national disgrace. The actual percentage of jobless workers was, of course, higher than this, since the Government's statistics still do not include those who have given up looking for a job. This points to the existence of an apparently enduring underclass. Some persons in this group who might have sought to escape this situation by joining the service found it more and more difficult to do so. Poor schools, poor diet, high exposure to opportunities for criminal activity, and other factors combined to lower their chances to qualify. Many came to prefer to remain on welfare, while liberals pressed for guaranteed income programs. However, no important reforms were made in the Nation's welfare systems during this period.

The unemployment rate for 17-21 year olds in the civilian labor force stayed relatively high throughout the last 15 years (T4218). It actually fell from 17% at the end of 1986 to 15% 5 years later, thanks primarily to labor demands from the service industries, and then it held for 5 years until the pressures of higher inflation began pushing it up again. Even at 15%, however, joblessness within this age category was strongly positive for Army recruiting, since it did move some job seekers or those without other means of support to seek employment in the military. For these individuals, the desire to get a job proved to be an enlistment motive of consistently high importance throughout this period (M13).

From a national perspective, matters were far worse for hispanics and blacks in the 17-21 age group.

Hispanic youth suffered a 23% unemployment rate at the beginning of the period, which rose to 25% over the next 5 years and then held at this level, unaffected by developments in the economy (T4219). One reason is that both legal and illegal immigration by persons in this age group, especially in the Southwestern States, rose throughout the last 15 years (see p. 27). As it happened, jobs that might otherwise have been taken by native-born residents were thereby lost to highly ambitious newcomers, including, in many cases, illegal immigrants.

From the Army's perspective, this level of joblessness among young hispanics appeared to be beneficial, at least initially, because it produced new pressures for some of them to enlist. Of course, the Army needed to publicize more heavily the opportunity it provided to qualified hispanics and other minorities.

The same dreary employment situation proved to be true for blacks in the 17-21-year-old bracket (T4220)--but with a vengeance. Thirty percent unemployment faced them at the beginning of 1987, and it rose to 35%. For many, an Army tour was still the way out. But many who tried to enlist were rejected for low ASVAB scores. Since the rejection rate tended to rise with the growth in the unemployment level, Army recruiting costs per actual enlistment rose in this environment.

These different unemployment dynamics for different ethnic/cultural groups of young people raised public concerns about two issues. The first was the possibility of over-representation of hispanics and blacks in the military. The news media evidenced a minor interest in this problem. The Congress, however, launched inquiries, based on a long-standing concern about minority composition. No one expected that the total Army would ever represent a true cross-section of the American population of military age--something that may have occurred only during the mobilizations of World War II (WWII) and, to a lesser extent, World War I (WWI). As it turned out over the last 15 years, the percentage of blacks in the Army held constant at the 1986 level of about 28%; Asian-Americans increased very slightly to reach 2.5% of the total by 2001; hispanics rose from less than 5% to reach 7.0% by 2001; and the percentage of whites fell accordingly, reaching 62.5% by 2001. (See p. 33.) From the point of view of public policy, these shifts were not seen as radical or intolerable.

The second issue concerned the impact of a shifting racial balance on the overall quality of the Army. Maintaining quality proved to be particularly difficult during the years of greatest shortage of 17-21 year olds. Some

critics attacked aptitude tests for having a cultural bias that excluded "a fair share" of this minority group or that. (See p. 31.) On the other hand, the academic achievement level of minorities tended to continue to improve throughout these years, which, in principle, would have kept constant the percentage of high achievers among enlistees. But universities and the private sector increased their efforts to capture the best of the best in the minorities, which complicated the problem for recruiters, particularly in the Army. The Army fought to maintain its standards, and, as we shall see later (pp. 30-31), succeeded rather well.

Householders in this age group who held a job—whatever their ethnic background—barely managed to maintain the income level typical of the group in earlier years. Their median income, which was about \$13,400 in 1983, crept up at the disappointing rate of only \$214 per year (in 1986 dollars) to reach \$18,000 today (T4223). This represented an annual percentage increase of less than 1.5% per year, not even one-half of the rate of growth in GNP. In large part, the explanation was that these young people—motivated but often ill-schooled—were forced to take low-paying jobs in the service sector.

Low income for this age group made it easier for the Army to keep up with civilian pay schedules. (See p. 28.) Indeed, it made Army life look more attractive to many persons at or below the median. Of course, those individuals who were, in fact, ill-schooled were not accepted by the Army. Those who did meet Army quality goals found a ready employer. But the sale was complicated because, in many instances, just meeting the Army's standards meant that the individual was also qualified for higher paying civilian jobs. The really high achievers in this group were far less inclined to want an Army career.

The service sector (and the military) proved to offer more job opportunities to young people as major structural changes continued to take place in the national economy. For instance, blue collar jobs became more scarce as the industrial/manufacturing sector either exported jobs to Third World countries or relied increasingly on automation, particularly robotics. In 1985, about 13,000 robots operated in American factories (as compared with more than 40,000 in Japan). By 1990, the number had exceeded 50,000 in the United States. As the chairman of General Motors put it in 1985, "Every time the cost of labor goes up one dollar an hour, a thousand more robots become economical." Similarly, a senior officer at GE noted in the same year that "American industry faces three choices: automate, emigrate, or evaporate." As it did some of each over the

last 15 years, the percentage of the civilian labor force employed in industry (T4221) declined by three points (15%), from 20% in 1986 to 17% today.

A substantial number of new jobs were created in the information economy. The percentage of "information workers" in the civilian labor force—i.e., workers whose primary job is to produce, process, or transmit economically valuable data or information (T4209)—grew steadily over the past 30 years. In 1970, it was about 45%; in 1980, about 50%. By the end of 1985, it had reached 55%, and it has now grown to 64%, a 16% rise in just 14 years. (Incidentally, it should be noted that industrial workers and information workers collectively account for 81% of the civilian labor force today. This means, of course, that agriculture and all other occupations are represented by the remaining 19%.)

This historically phenomenal transformation of the U.S. economy has had far-reaching implications, many of direct importance to the Army, as indicated throughout these pages. It is worth emphasizing that two job-related motives affecting the enlistment decision held at a constant level of importance during this period. The desire to join the Army to get trained in a skill that would help the individual later get a good civilian job (M10) was considered seriously by some 60% of candidates and proved decisive to about 40%. A less important motive, i.e., to improve skills one already has (M26), also held its own.

Considering the growth in automation, it is not surprising in retrospect to see that the percentage of new jobs (including entry-level jobs) requiring the ability to use a computer (T4222) grew significantly over the entire period, especially in the 10-year period from 1986 to 1996. By the end of 1986, a full 25% of new jobs were in this category; a decade later, 38% were, and today 40% are. Altogether, the increase from 1986 to today was an astonishing 60%—almost four times faster than the growth in the percentage of information workers in the civilian labor force.

Because there was a comparable growth in the number of Army positions requiring computer literacy, competition with the private sector and the other services for high school graduates possessing these skills (or able to learn them) grew increasingly intense. As we shall see later (p. 31), the needs of the private sector and the Army were often quite different, even though the phrase "computer literacy" appeared to make them look the same. After all, sighting through an automated sight could be classified as involving such skills. Nevertheless, there was a genuine overlap in needs for more sophisticated abilities, and this common need did produce real competition for qualified young people.

Younger females found more opportunity in this environment. Most secretaries were still women, for example, but they operated word processors and other sophisticated computer-based equipment, not typewriters, and thus could claim greater recognition and reward. But women who prepared themselves adequately in high school and college (and many did) were able to move into positions traditionally held by males. By the end of 1995, the percentage of females entering such jobs (T4208) reached 70%. The military provided some opportunities along these lines, though of all the services, the Army was least able to do so.

The percentage of college graduates who proved to be over-qualified for the jobs available to them at the time of graduation (T4207) was large in 1986 and rose over the following 15 years. Societally, although some of these graduates went on to become great entrepreneurs in other fields, this situation was a disappointment and a cause of minor political agitation. But it could have been foreseen well in advance: too many college students graduated in disciplines that soon became overpopulated (computer science became an important case when automated programming was commercialized); some professions (e.g., pharmacology or industrial design) were overtaken by astonishing advances in computer software, especially expert systems; some of the

guild-like professions tended toward saturation (e.g., law and medicine) or succeeded in beginning to put themselves out of business through major technological advances (e.g., dentistry); openings in other areas (such as teaching in fields other than engineering or business in college or math and science in high school) became more and more difficult to find, as professors decided to retire later; still other openings were closed because of the level of foreign competition; etc.

The abundance of college graduates who could not find jobs in their chosen field, though only a relatively small number of them were potential Army recruits, was strongly positive for Army recruiting efforts. In particular, it increased the market for OCS and technical enlisted skills. As in earlier years, USAREC--its commanders and recruiters--never quite hit upon first-rate approaches for recruiting the best technical specialists and officers from this college pool. But fortunately, most of the enlistees from this pool approached the Army, rather than waiting to be approached. While quotas continued to be met in this way, there was little appreciation of the opportunity costs of such a weak strategy. In reality, as will be seen later (p. 29), there actually was a high level of competition during this period for many college graduates. Unwittingly, therefore, the Army was settling for less than the best.

4. LIFESTYLES AND BASIC VALUES

Recall the national sense of pride, purpose, and faith in the future that characterized America in 1985-86, culminating perhaps in the flamboyance of the 100th anniversary celebration for the Statue of Liberty. Public opinion polls taken then indicated that 47% of the adult population believed that the overall situation in the United States would be better 5 years hence than it was then. This faith was not misplaced; the situation in 1990 was indeed better for more people.

Since 1985, this poll has been repeated continually, and it has consistently shown a high level of optimism among an even higher percentage of the population (T2216). This reflects a climate of opinion that has favored the wider acceptance of traditional values and the reversal of some trends that appeared to be threatening them.

For example, it was thought by some in the mid-1980's that the middle class ("the backbone of America") was fading in size and importance. More precisely, a number of liberal economists at that time were persuaded that the trends were clearly pointing toward a future in which the rich got richer, the poor got poorer, and the middle class got smaller and smaller, with many baby boomers turning out to be "young urban failures" and swelling the lower class. In fact, the middle class did fall from 55% of the population to 46% from 1978 to 1983, and it declined a few more percentage points in the years immediately following. As it happened, however, the prophecies of doom failed to materialize. Indeed, the middle class held its own from 1986 to today at a constant 42%-44% of the population (T4224).

For Army recruiting, this meant potentially a reliable market of highly desirable recruits that grew as the overall population grew. The reality was somewhat more complex, however. For one thing, the number of 17-21 year olds in the middle class families tended to fall as a percentage of all 17-21 year olds. Moreover, the growth in I-IIIAs tended to occur within upper-income families, not in the middle class.

As inflation was brought under control in the early 1980's, the percentage of married-couple families with two incomes peaked at 65% at the end of 1986 and then began to fall (T4206). By the end of 1990 it reached 60%, where it held through 1995. (This drop was accounted for principally by families in the upper income brackets, and was motivated in part by various changes in the tax laws. Although some wives worked for reasons other than to increase the family income, the fact is that many in the middle class and among the less well-to-do still

had to have two incomes to maintain their standard of living.) As prices rose over the last 5 years, however, wives returned to the labor force. Today, the situation is the same as it was in 1986.

This increase in women in the labor force was accounted for principally by women in their late 30's or early 40's, or older. The percentage of women of childbearing age in the labor force essentially flattened (at 75%) by the end of 1990, after a rapid rise from 40% in 1955 (T4205). This level of participation during the years of family-building was generally positive for the persons involved, since it increased their standard of living. But it also was a source of personal and family difficulty as adjustments had to be made constantly regarding the sharing of family responsibilities, the fate of latch-key children, etc. Furthermore, it kept alive a number of societal issues from the 1970's and 1980's (such as women's rights) and raised others (such as the extent to which some jobs were being closed off to youth because women would take them at lower pay).

These problems were also faced by married Army enlistees. Indeed, they were often more serious for Army families because Army personnel tended to marry earlier and have children earlier than their civilian counterparts, and thus had a particularly great need for two incomes. Single parents in the military had an especially difficult time coping.

High levels of labor force participation led an increasing number of married women to postpone having children until after age 30 (T1213). From one point of view, this decision can be said to have had no effect on Army recruiting between 1986 and today, since all of the persons recruited during that period had been born before 1986. Nevertheless, it was an important indicator of the sense of family values, stability, financial possibilities, and priorities during the years in which those recruits achieved maturity. Indeed, some of those recruits grew up with children from these families and thereby had the chance to experience their values in action.

One way of understanding what these values were is to note that T1213 rose from 24% at the end of 1986 to 27% today. This level is precisely the same as the level in 1960, and reflects an important turnaround from the mid-1970's, when it fell to 16%.

From another point of view, the decision to postpone having children was immediately beneficial to Army recruiting, since it enabled some of these women to join the Army.

The flip side of these developments was a slight decline in births to mothers of 19 or younger as a percentage of all births (T1212). Throughout the past 15 years, this level was again essentially the same as the level of 1960 (i.e., 14%), and it contrasted sharply with a high in 1975 (19%). Fear of AIDS almost certainly contributed to maintain this relatively stable level.

The public's level of tolerance of different lifestyles, behaviors, values, and the like remained constant at the level defined in 1986, except during the period from 1991 through 1995, when it rose very slightly (T2210). (This increase was apparently a reflection of the public's willingness to tolerate the behavior of more minority cultures and the adoption of more affluent lifestyles by working women and their families.) The change in Administrations in 1996 brought things back to the 1986 norm. Thus, throughout these 15 years, the "lifestyle issues" were little different from those debated during the Reagan years: abortion, pornography, drugs, gay rights, divorce, welfare, feminism, prayer in schools, etc. In the media, in the marketplace, and at home, the public accepted only so much, and then spoke out with disdain, if not horror, often demanding political action to correct excesses.

In many ways, the threat of AIDS was a recurring symbol in the debates on lifestyle norms. As in the early 1980's, some persons saw AIDS as God's revenge on morally corrupt individuals, while others saw it merely a fatal disease "of our times," like measles or polio in earlier periods. Although a cure for AIDS was discovered (E3103) in 1992, it was years before testing was completed and the drug was licensed for prescription by all doctors.

By the mid-1990's, some 70,000 Americans had died of AIDS, and the toll grew (though more slowly) in the years that followed. These grim statistics complicated many social processes—including Army recruitment. Some young people rejected the Army specifically out of fear of exposure to AIDS. In fact, however, because the Army continued to use AIDS screening to cull out actual carriers, the Army provided a higher level of personal reassurance than did the corporate world, where employees were generally not screened. On the other hand, since millions of Americans carried AIDS, the rejection of carriers by the Army eliminated recruits who might have been accepted in earlier times, thus increasing the number of persons that had to be found, tested, and recruited to meet mission requirements.

The chances that AIDS might become a fatal pandemic, sweeping North America, Europe, and Asia, killing millions, remained low. However, the fear of plagues and other epidemics that might do the same (e.g., a new

and particularly virulent influenza) rose modestly over this period, particularly in the early years (E6102). Public health specialists, research physicians, and biologists took these risks seriously—after all, the probability of such a calamity, while very modest, was real throughout the entire period from 1986 to 2001—and implemented new crisis prevention plans and procedures against the possibilities. These developments were followed closely by experts on biological warfare. Apart from fears about AIDS, the public, however, took little interest in these developments.

From time to time polls were taken in which adult Americans were asked if they personally accepted traditional values in areas such as marriage, family, sex, woman's role, self-reliance, savings, and long-term gratification of needs. In 1986, 25% said they did. By 1996, this number reached 28%, where it has remained (T2209). This was no doubt one of the legacies of the Reagan years, and it was importantly influenced by many types of institutions, including fundamentalist television ministries, and a school system that underwent major reform during this period (see pp. 13.). The upward shift in this trend was more significant than the mere percentages might suggest. For one thing, each percentage point represented almost 2 million people, including a surprisingly large number of young persons, generally the offspring of no-longer-young, no-longer-upwardly-mobile urban professionals. Army recruiting benefited from this development.

One extremely important development of the past 15 years was that the long-term decline in the ratio of families to households was halted. The shift in values was surely a cause. Over the entire period, families as a percentage of households wavered between 71% and 72%—i.e., the level of 1985 (T1209). In 1960, the figure was 85%; in 1970, 81%; and in 1980, 74%. Basically, what this 20-year decline meant was that the growth in households far outpaced the growth in families, thanks to three major forces: high levels of divorce, elderly persons outliving their spouses, and younger people living on their own and postponing (or forgoing) marriage. Over these 15 years, however, many younger people either returned to the nest (for economic reasons) or settled down and married earlier than their counterparts in the 70's and early 80's. Fear of AIDS played a role in the decision of many young people to find a mate more quickly and to settle down "for life."

The divorce rate remained high, as is indicated, in part, by the percentage of families with children under 18 headed by a single parent (T1211). By the end of 1970, 13% of families fell in this category; by 1981, 22%; by 1985, 26%; and the number continued inching its way

up, so that today it stands at 32%—almost one family in three. This helps explain why so many women of childbearing age are in the labor force. (As the Congressional Research Service argued in 1986, the divorce rate has "the strongest erosive effect on the middle class.") It also helps to explain why some children tend to be more self-disciplined and responsible than one might otherwise expect, and also why there are so many others who run in gangs, do poorly in school, and lack respect for mainstream social institutions.

The percentage of families living at or below the poverty level stayed constant at 12% throughout the last 15 years (T4225). From 1960 to 1970 it had fallen from 18.1% to 10.1%. In 1979, it reached 9.6%. In 1980, it started to rise again (10.3%); by 1983 it had hit 15%. The commitment to supply-side economic theory produced few significant "trickle-down" effects for these families. The tax reform of 1986 helped somewhat, by ending the Federal tax obligation for persons in this group, but this modest gain was offset by other economic factors. The change of Administrations in 1996 did not help. Again, it appeared that America was producing something of a permanent underclass, often intergenerational in families.

A number of observers believed that, sooner or later, the poor would take to the streets, and in fact the chances that major riots might once again sweep the Nation were one in five over the last 15 years (E2201). To these observers the threat was real, and "this time," they concluded, "the target won't be the ghettos or the barrios. This time it will be the middle or upper class communities closest at hand, including those of minorities making the greatest upward strides." The possibility of interracial conflicts among minorities was very real: blacks vs. hispanics, both vs. Asians and Middle Eastern small businessmen, etc. The probability increased as respect among the poor for law, order, and authority (which was already at a low level) declined. This meant a lowering of the prestige of many institutions, including the military. Nevertheless, many of the best qualified of the poor still looked to the military as a means of escaping poverty. In fact, the percentage of recruits who viewed an Army tour as a way of earning money to help the family at home remained constant throughout this period (M32).

Equally disturbing was that the percentage of children under 16 living in families below the poverty level rose throughout this period from 23% at the end of 1986 (vs. 20% in 1985 and 15% in 1970) to 25% by 1996—where it still holds today (T4226). The shocking reality is that since 1995, a full one-quarter of all American children under 16 have lived in poverty, and

they have been and are being shaped by the experiences and values of such a life. This will no doubt have serious consequences for all of our institutions, including the Army, in the 21st century, at least to the extent that the pool of qualified recruits is smaller than it was in earlier times.

On the other hand, the more widespread acceptance of traditional values, the fear of AIDS, and the influence of other factors (e.g., abortion) have combined to produce a decline in the number of 13 year olds who are children of unwed mothers (T1210). In 1965, the number was 155,000; in 1975, it was 240,000; in 1985, it was 394,000. Since 1986, it has fallen slowly but steadily, so that in 2000 it was about 360,000. This reduction over the past 15 years relative to the preceding 20 years is perhaps an encouraging sign. But the absolute numbers have appalled many social observers, since they represent well over 10% of all births. The children in this group are often living in poverty.

Given the various intense pressures that young people have to deal with in our society, the shift toward traditional values may help to explain the rise from 1987 to 1991 in the level of emotional maturity of male 16 year olds—e.g., their ability to set goals, postpone gratification, take responsibility for others, etc. (T2212). Since 1991, the measured level has stood at 5.0, which means a level equivalent to that of their parents when they were of the same age. Several motives for Army enlistment may be worth noting in this context, particularly M7 ("to get time to figure out what I really want to do"), M23 ("to learn what Army life is all about"), and M30 ("to put some discipline in my life"). Surprisingly, all three were decisive as often as they were in 1986. Only M30 was considered seriously by a larger percentage of recruits in this period than in 1986, which seems reasonable in light of the trend.

A measure of emotional maturity is the suicide rate, which began a slow rise among the U.S. population as a whole in 1968. For males aged 15-24, the number of suicides reached a high of 21.8 per 100,000 persons in 1977—about four times higher than the rate for the same group in the Netherlands or three times higher than in the United Kingdom, but one-third less than for Switzerland or Austria. Since 1977, the rate has fluctuated between 19.7 and 20.2. For the last 15 years, it has held constant at 20.0 (T1214), despite a 1986 concern among experts on youth suicide that the rate might rise for a time around 1991. On the other hand, the Secretary of the U.S. Department of Health and Human Services had announced in 1986 a goal for 1990 of reducing the youth suicide rate by about 10%. This goal was not achieved. We should note that, as in the past, far fewer

suicides occurred among 15-19 year olds than among 20-24 year olds. In fact, suicides among the 15-19 year olds fell from 1986 through 1995, except perhaps among the economically deprived, as the level of emotional maturity (T2212) increased.

The declared political affiliation of young people was remarkably constant during the last 15 years. To be more precise, the percentage of 17-21 year olds who considered themselves to be Republicans held flat at 30% (T2208), a significant gain from the 18% of 1980. Since the percentage who aligned themselves with the Democrats declined in the early years of this period, fringe or brand new political parties were able to attract more support. The Libertarians, for one, grew in size. But for young people, the largest party by far was NOTA ("None of the Above"). In the election of 1996, however, there was a surge of votes toward the liberal candidate, particularly by poor youth who thought that he would restore programs cut by President Reagan and his successor.

The high level of conservatism indicated by these figures was confirmed in public opinion polls asking 17-21 year olds about their level of patriotism. Over the last 15 years, a full 50% of these persons consistently identified themselves as "strongly" or "very strongly" patriotic (T2211)--a figure that actually increased to 60% between 1991 and the election of 1996, peaking when the United States finally took aggressive military action that seems to have caused a steady decline in the number of international terrorist incidents affecting Americans (discussed later on p. 25).

For Army recruiting, the return to traditional values and the high levels of patriotism and conservatism among young people were not as important as one might have expected, perhaps because these shifts were not vigorously and distinctively targeted in Army recruiting campaigns. For example, it would appear that, by themselves, self-expressed patriotic sentiments have usually had little to do with propensity to enlist. The highest accession volume in the all-volunteer era came in 1974-75, when Vietnam issues were still very much on the minds of young people. We note further that over the last 15 years the degree to which enlistments were influenced by a desire to serve one's country (M2) did not change.

More important, perhaps, was the fact that the compatibility of the values of NPS recruits with the values of

the Army increased in the early years of the period and remained at the same moderately high level from 1991 to today (T8438). The enlistment sale, while it remained challenging, was thus often easier for recruiters. Downstream retention rates also improved. In this environment, it was not surprising that the decisiveness of a variety of recruitment motives for enlistees increased over the 1986 level: to belong to a group and achieve identity (M20), to find adventure and excitement (M22), to use and work with exotic technologies (M24), to get into OCS or West Point (M41), etc.

It should be noted that the elderly became increasingly influential over this period, as they grew in number and placed greater demands on society for human services. As indicated earlier (p. 5), many of the elderly remained on the job well past age 65, which meant that they retained institutional power. Moreover, even the retired elderly had a considerable voice, socially and politically, through now powerful groups like the American Association for Retired Persons (AARP). AARP began seriously to organize itself as a "political education" group in 1986, when it launched a campaign called "AARP/VOTE," noting that it already had 22 million members and that there were then another 40 million people who were 50 or over. "That's 62 million votes," said AARP, "More than enough to achieve our goals."

Next to the National Association of Realtors, the American Medical Association, and the National Rifle Association, AARP was by far the most influential lobby on the national level by 1996. For various reasons, therefore, the political clout of those over 65 was high (T5202). Their vote was decisive in the election of 1996, and the Administration that entered office in 1997 did not forget its debt. One consequence of importance to the military is that, despite the elderly's traditional support for the military, growth in defense budgets was held down (in real terms) to provide funds for new and expanded programs to benefit this group--i.e., a better Social Security system, more employment opportunities for older people, quality health care, affordable housing, safe streets, a clean environment, etc. Higher defense spending was not on the elderly's agenda, but an end to huge Federal deficits was.

Today, some 13% of the population is 65 or older. By themselves they constitute a bloc of 35 million voters.

5. EDUCATION AND TRAINING

The world of 1986-2000 was a world in which an increasing premium was placed on educational attainment. A college degree was not essential to success, although a B.A. or B.S. was commonly considered a bare minimum for more and more entry-level jobs. What mattered was having a marketable specialty—an area of expertise in which the individual had a willingness to continue learning, both formally and informally.

The "underclass" spoken of earlier (p. 5) was defined not just in economic terms, but also in terms of ignorance and illiteracy. For young people, a high school diploma was almost necessary to escape being trapped in this underclass, but it was not, of course, sufficient.

Driving this situation was a phenomenal increase throughout the world in scientific and technical knowledge (T3101), which was growing at the astonishing rate of 13% per year in 1986, but actually reached 19% per year in 2000. Since each year's growth was more or less from the prior year's base, this meant that in the past 15 years what was known in just these subject areas increased by a factor of more than 9!

Because of the growth in knowledge, failures by the United States to keep pace in some areas, and the availability of new (and less expensive) ways to disseminate information, as well as the development of new learning methods, pressures mounted to reform the school system. Legislators, educators, and parents (including some, but hardly a sufficient number of parents in poor families) joined in efforts to produce the needed changes.

Substantial investments were made in education over the past 15 years—for higher teacher salaries, for new plant and equipment (including computer and telecommunications technologies), and for innovative programs to restructure the system, measure the competency of teachers and potential graduates, and revamp curricula and texts.

In light of the mediocre state of affairs in education in the early 1980's, progress was great initially. From 1990 to 1995, improvements were more difficult to implement, in part because of lack of new funds, in part because of opposition from the teachers' unions, and in part because of external factors, like the continued deterioration of the inner cities, the rapidly changing demographics in some of them, etc. It took the change of Administration in 1996 to push the quality of the public school system to new highs (T2201).

Conventional measures confirmed these advances. For example, polls revealed that parents' expectations about the schooling of their children were increasingly being satisfied. Moreover, test scores (e.g., the SAT) rose, though slowly. Nevertheless, while progress was gratifying in these terms, little attention was paid to questions about the effects of the educational enterprise on the actual belief systems of graduates. (A study published in 1986, for instance, showed that between 20% and 40% of college undergraduates in California, Texas, and Connecticut said they believed in creationism, the lost city of Atlantis, Big Foot, the contemporary existence on earth of dinosaurs and human beings, and other "pseudo-scientific" propositions. A recent attempt to replicate this study indicated that the percentages had fallen only slightly.) Fortunately, whether or not one believed that extraterrestrial aliens were actually on earth seems to have had no important effect on the career prospects of high school students who also appeared to be leaving the system better trained in basic skills.

For Army recruiting, better schools provided a greater challenge. Perhaps most important, the resources required to recruit quality soldiers increased (see pp. 27 and 33). This happened simply because, all other things being equal, better-educated youth found themselves with more opportunities. Hence, competition to attract them increased; the complexity of the Army sale increased.

The changes in the school system were mirrored in the growth in achievement of high school graduates in learning high-tech skills (T2206). Factors such as continued substance abuse by teenagers and the increase in the number of single-parent households worked against this development. But the schools placed great emphasis on vo-tech preparation, as well as on hard science as a career field and on the need to be prepared in mathematics and computer usage.

The latter is reflected in statistics on the percentage of high school graduates who have had at least some direct, hands-on training on microcomputers (T3201). In 1982-1983, the figure was 13%. By the end of 1986, it was 20%, and it grew to about 38% in 1990 and then soared to 60% in 1995. Between 1996 and 2001, when the fifth-generation computer became commercially available and began to change radically the meaning of the term "microcomputer," the figure jumped from 60% to 80%.

This development was potentially positive for Army recruiting. In reality, its most significant effect was that it increased the difficulty of the recruitment sale, not only because of increased competition from the private sector and the other services for young people with these skills, but also because, in most specialties, the Army did not require the level of capability in this area that the schools were providing, and hence it could not offer enlistees a major opportunity to build on that foundation. Indeed, the lack of technical training in most Army skills resulted in a certain loss of overall computer competence in the Army because some recruits with computer experience did not get to use it, thereby becoming more and more rusty and out of date.

Incidentally, in this period of scientific discovery, one long-awaited breakthrough did not materialize: the commercial availability of biological technologies that would improve short-term memory and facilitate rapid learning (E3102). This possibility was of interest to the military because it was anticipated that training time might be reduced, more complicated subjects might be taught, combat effectiveness might increase (e.g., better short-term memory of maps), etc. Major pharmaceutical firms continue to invest substantial R&D funds in the search for such a product, focusing particularly on amino acids involved in the formation of neurotransmitters. The likelihood is low, however, that we shall see effective drugs of this sort before the middle of the 21st century, if then.

In the midst of the many positive developments affecting the educational system, most of the old problems remained. High-school-dropout rates (T2203) fell slightly (from 25% in 1985 through 1990 to 23% today), a development that correlated, in part, with the drop in teenage pregnancies. This decline was important in fact and symbolically, but the reality is that, for the 23%, unemployment is high and the future is far from bright.

Similarly, while the percentage of hispanics aged 17-21 who are fluent in English rose from 70% by 1987 to 75% today (T2207), the fact remains that 25% are still unable to participate fully in American society. Cuts in bilingual education programs, coupled with radical developments like the 1986 decision by California voters to mandate English as the only official language in the State, increased pressures to improve the spread of English-language fluency. Gains within the hispanic population continued to be offset to some extent by increased immigration from Central and South America (p. 27). Nevertheless, the overall increase in the trend toward competence in English among hispanics was noteworthy, and it created more recruiting opportunities.

According to the Department of Labor in 1986, high schools were then graduating somewhere between 750,000 and 1 million students a year who were functionally illiterate. And, indeed, the real "intellectual underclass" of the last 15 years comprised those who were not only ignorant but also illiterate. Among 17-21 year olds, the percentage locked in functional or marginal illiteracy held at 15% through 1995 and only then did it fall slightly (to 13%) (T2202). As with the downward trend in high school dropouts, which this trend paralleled, the decline was welcomed, but it was far below expectations in the mid-1980's.

Television remained Americans' most important medium for news and entertainment. But the improvements in the school system helped make children (and their parents) more discerning; the general growth in the strength of traditional values also redirected some energies. Commercial TV itself was largely insensitive to these changes, cynically pandering as always to a very low denominator. Despite warnings of future disaster if they continued this practice, TV programmers ignored the value shift, the rise in patriotism, the higher level of optimism about the future, the improvements in the quality of education, and, importantly, the wider availability of alternatives to conventional network TV. The public responded by cutting back on its viewing of broadcasts (VCR's and rental movies helped). With parental guidance, children themselves became more selective in their viewing habits, despite the sudden availability in the late 1980's of toys that could interact with television programs. Local stations and cable companies became more important players in the market, providing additional options.

The upshot of these developments was mixed. Opinion polls indicated that the percentage of the public that thought children were better off with TV than without it (T2219) flattened at 60% throughout the last 15 years (from a high of 76% in 1970).

Television advertising had to become much more effective in this environment—a fact that had crucial implications for Army recruiting. (See p. 27.)

Impressive though the gains were in enhancing the quality of the school system, private employers remained heavily involved as educators and trainers of entry-level employees. In 1985, total corporate expenditures on these programs (as well as for employee tuition at colleges, in-house seminars and workshops, and retraining of workers faced with job obsolescence) reached \$21 billion, an amount equal to just under 10% of expenditures by all public and private schools (on every level) in the United States. This figure rose from \$22 billion in 1986 to \$31.5 billion (1986 dollars) today

(T2215). Thus, the total corporate tab for these purposes over the last 15 years was \$408 billion, a reflection of the fact that not only were schools still failing to do the required preparation, but also that a substantial proportion of jobs (some place the figure at 75%) required some additional training beyond the high school level.

Given this expense, it is not surprising that corporations competed intensely for the top high school and college graduates. (See pp. 29-30 for additional details.)

Large private corporations did not, however, resort to offering lucrative college student financial aid packages tied to follow-on employment obligations (E4202). The probability of such an occurrence increased steadily over the last 15 years, thanks in part to the continued existence and attractiveness of the GI Bill and the Army College Fund. In recent years, we have even seen a coalition of prominent universities lobbying industry with such a concept in order to stimulate higher enrollments to their mutual benefit. This was particularly true in areas of scientific and technological knowledge in which the United States was perceived to be falling behind the Europeans, Soviets, or Asians. But such programs were not implemented. Some pilots were attempted, however, but these were directed only at the highest-ranked high school graduates and at college students with an already proven record of accomplishment. Similarly, there was the more limited INROADS program, a corporate program from the 1980's through which minority students received a paid summer inter-

nship and a guaranteed job offer upon graduation if their grade point averaged at least 3.0. Successes in ventures like these contributed importantly, of course, to the rise in the probability of widespread adoption of such programs by corporations.

The level of competition faced by the military for capable young people was intensified because the percentage of high school graduates who entered college soon after graduation (e.g., in the following fall) increased steadily over the last 15 years (T2204), continuing a tradition from the 1930's in which an increasing percentage of each college-age cohort sought some form of post-secondary education. Many students were, of course, well aware of the need to get on with college. For instance, a 1986 estimate by the Bureau of Labor Statistics indicated that some 20% of available jobs in 1995 would require at least 4 years of college (up from about 16% in 1984), and that a large number of other jobs would require at least some college. It is worth noting that third-tier colleges were particularly aggressive in recruiting precisely those high school graduates for whom the Army was a viable alternative.

Aggravating the problem for Army recruiting was a steady increase in the percentage of NPS minority youth who went directly from high school to college, a percentage that rose from 18% by 1987 to 20% today (T2205). Asian-Americans and hispanics contributed disproportionately to this increase, in part because colleges were especially active in trying to attract young people in these groups.

6. WAR AND PEACE

In some respects, the world became a much more dangerous place during the last 15 years. The risks of war increased in some areas and remained rather high in others; terrorism was prevalent; and political instability increased. Fortunately, the United States managed to avoid a hot war of any type in this period.

The number of nations known to have deliverable nuclear weapons reached eight (the United States, the U.S.S.R., China, France, the United Kingdom, Israel, South Africa, and India), despite considerable fears from the 1960's through the mid-1980's that the number might actually reach 15-30 by the 21st century. Since 1995, however, the probability that other nations might join the club has risen dramatically (E7109), thanks to several pressures: accelerated R&D in the Third World (funded, in part, by terrorist states), intensified espionage by these countries, the growth in the number of operational nuclear power plants, and continued unwillingness by some countries to adhere to the Non-Proliferation Treaty.

Instability in Europe added to the general level of concern. For instance, extremely poor economic performance by the U.S.S.R. and its allies, plus increasingly open agitation by students and labor organizations like Solidarity, has raised for the first time since 1968 the possibility that an Eastern European nation might now gain military and economic independence from the U.S.S.R. without incurring a Soviet attack (E5103).

Cracks in the Soviet empire, increasing internal economic woes, the Gorbachev "openness" policy initiated in 1986-87, and a continuing strong Free World alliance actually raised the question of whether the Communist Party in the U.S.S.R. could be toppled from power by a massive popular uprising against the Soviet system (E5102). This eventuality is remote, of course, but it is today a possibility, despite Soviet efforts to modernize their economy and improve agriculture, whereas as late as 1990-91 it was almost unthinkable in any realistic scenario.

Soviet internal retrenchment and the failure of East and West to achieve any fundamentally important agreement on strategic arms control or arms reduction over the last 15 years assured that the level of antagonism between NATO and the Warsaw Pact remained at the 1986 level throughout this period (T7105). What we saw then is what we have seen since. This is not to say that nothing relevant has happened in this arena. The mid-1980's, for example, witnessed the NATO-Warsaw Pact agreement on advance notifica-

tions of the movements of conventional forces. There was also the summit in Reykjavik and, subsequently, the hastily drafted but well-received agreement to limit nuclear missiles in Europe, a pact that was ratified during the final year of the Reagan administration. More recently, there have been the summits in Copenhagen, Vienna, and Stockholm, all of them centered on strategic nuclear weapons. But each side appears to have entered every arms negotiation with essentially the same set of six principles in mind, a set which has the curious property that if both parties agree on them, progress must necessarily be halting, if not impossible. As articulated by the Director of the U.S. Arms Control and Disarmament Agency in late 1986, these principles were: (1) be patient; (2) bargain from strength; (3) measure seriousness by substance, not negotiability; (4) remember that arms control is not the only factor in the superpower relationship and cannot be insulated from the others; (5) insist on compliance; and (6) recognize that "hope lies with the defensive option."

In Western Europe, the situation was not without political shocks and strains that affected the military situation. Between 1986 and 2001, for example, it was an even-money bet that the Communist Party in one of the NATO countries would come into power on the national level (E5101), thereby raising profound questions about the security of NATO plans and the success of possible NATO operations. This event did not happen, though it still might. In informed circles, the betting was that Italy or Greece would be the most likely to install a Communist government.

The spectre also rose that Turkey or Greece would withdraw from both the military and civil arms of NATO, thereby further testing the endurance of the alliance (E7102). Greece seemed to be the more likely of the two, for any of a variety of possible reasons, including imagined favoritism of the United States toward Turkey; dissatisfaction with the West because of actions it might take to penalize Greece for inadequate efforts to halt hijacking; problems among communities on Cypress that could lead NATO countries to steps that the Greeks would interpret as providing unjustified international support for the Turkish minority; pressures from Arab terrorists; Soviet support for withdrawal (perhaps coupled with an offer to make up any lost NATO income); etc. There was even speculation that the Turks might be drawn into an Arab war and that Greece would rather withdraw from NATO than honor its NATO commitments to Turkey. In any case, the

probability that either Greece or Turkey would leave NATO was real throughout the period.

There was very little chance, of course, that the United States would leave NATO. But under budget pressures at home, as well as a continuing shift in priorities that emphasized the Pacific Basin over the European theater, old debates revived about the merits of cutting our Regular Army commitment to NATO. It was argued that the Reserves should represent the total U.S. commitment to NATO. It was argued that REFORGER could be conducted with USAR units, and that prepositioned armor could be assigned to USAR, while more active Army forces could be assigned to light infantry divisions. Thus, USAR presence could increase. Today, however, the probability of such a major policy shift remains low (E7104).

Nevertheless, even such a remote possibility had to be taken seriously by the parties that might be affected. Toward the end of the 20th century it occurred to more than one leader on each side that the unification of West and East Germany offered a promise, however slim, of reducing East-West antagonism. From West Germany's point of view, if the United States were to reduce its NATO presence substantially, the choices were two: "go nuclear" or "go neutral," the latter preferably through reunification. The United States saw some wisdom in the second possibility. The Soviets saw little, but privately they wondered about steps that could be taken to guarantee Polish loyalty, in which case the military buffer they had would be maintained even if East Germany itself was somehow wrenched from Soviet control and "went neutral." Despite private and public discussion, however, the possibility of reunification remained very low as we entered the 21st century (E5104).

As for the level of antagonism directly between the United States and the U.S.S.R., it held for 10 years at the 1986 level, but then dropped (T7106). This highly positive development, which had favorable consequences for Army recruiting, took place for several reasons.

One is that the chances of the United States abandoning the Strategic Defense Initiative (SDI) rose substantially after the election of 1988 and then after the transfer of power between old and new Administrations in 1997 (E7207). These changes occurred, first, because of severe technical problems in hardware and software development (virtually all of which had been clearly identified within 1 or 2 years after President Reagan's March 1983 "Star Wars" speech) and then because of budgetary, strategic, and political concerns. The liberal administration elected in 1996 echoed the views of former Secretary of State Dean Rusk, who said in 1986 that "spreading the arms race into outer space is politi-

cally inflammatory, militarily futile, economically absurd, and aesthetically repulsive; otherwise, it's a good idea." This view has prevailed since 1997, but SDI has not yet been cancelled because it has been transformed into strictly a research program; there are no plans (or prospects) at this point for deployment.

Moreover, the United States observed a rise in the level of Soviet military strength in conventional land combat (T7101). Meeting this challenge could only be accomplished, in a tight budgetary environment, by diverting funds from strategic programs like SDI, just as many experts, like former Secretary of Defense McNamara, had argued in the mid-1980's.

Shifting funds in this way made sense to the American leadership because the level of Soviet power projection in the Third World remained constant at the rather high 1985-86 level over the entire 15 years (T7102).

But there was another reason for a reduction in the level of antagonism between the United States and the U.S.S.R.—i.e., the actual stability of the strategic nuclear balance held at a rather high level throughout this period (T7103). To a very well-informed observer, deterrence—i.e., MAD—was in little danger of collapsing. In view of this fact, post-Reagan Administrations began to question the need for SDI, especially when it was clear that the funds could be devoted to other important military and non-military purposes.

The perception of the stability of the strategic nuclear balance by the nomenclatura (i.e., the ruling elite) in the U.S.S.R. was, however, quite different. Through 1991, they saw the balance as it actually was. From 1991 through 1995, as the United States pursued SDI and as domestic and international political unrest and changes like those already discussed unfolded, the Soviets increasingly came to believe that deterrence was in doubt—or could be doubted (T7104). Extreme hawks within the regime surfaced from time to time to argue the case for a Soviet first strike (i.e., "use 'em or lose 'em"). Ordinary hawks warned about the growing U.S. first-strike capability, which could be used with some impunity if SDI were ever deployed. The leadership rejected both positions, having long since recognized that neither they nor the Americans would ever have a reason to launch a full-scale nuclear war. Rather, their fears that the balance of terror was not holding were occasioned by two factors: a deeper understanding of the risks of accidents, and good intelligence about the prospects that additional nations might soon be joining the nuclear club. The beneficial side of these perceptions is that they led the Soviets to seek out ways to reduce the tensions in their bilateral relationship with the United States. Notice that after the Soviets came to believe that the

nuclear balance was in some jeopardy, the level of antagonism between the United States and the U.S.S.R. fell (T7106).

Soviet perceptions about the risks in its relationship with the United States were underscored, of course, by the failure of these nations to achieve any important strategic arms control agreements in the 1980's and 1990's. The fundamental explanation was suggested earlier (pp. 17-18). But the possibility of taking one of the simpler steps in this direction--i.e., a verifiable freeze on nuclear weapons production and deployment--rose sharply in Congress after President Reagan left office. His somewhat less conservative successor was not particularly willing to support the new momentum, however, and it was not until the election of a new Administration in 1996 that halting efforts on such a treaty were resumed (E5107). Today, we are still far away from this agreement, but the commitment on each side to continue exploring the possibilities seems to be growing.

Unfortunately, the U.S. public was not strongly convinced of the stability of the strategic nuclear balance. Indeed, the public's level of conviction on this point today is that the level of stability is touch-and-go, and has not changed in any respect since 1986 (T2220). The explanation is simply that the public is less aware of the facts than responsible analysts and decisionmakers are, or does not believe the information presented by Government spokesmen or the media. In any event, the practical consequences of this widespread misperception have been serious--affecting personal choices (including decisions on enlistment), political action, optimism about the future, etc.

For instance, young people continued to live under considerable fear of possible nuclear destruction. Polls revealed that the percentage of high school seniors who believed that a nuclear war would occur in their lifetime hovered between 40% and 43% throughout this period (vs. 38% in 1984) (T2217). Most of these young people learned to "live with the bomb," just as their parents and grandparents had. Others became vocal protesters, as in the mid-1960's. The remainder, like their counterparts in earlier periods, found little point in learning the lessons of history or in striving seriously to achieve long-term goals. This minority lived for and in the present--e.g., one job was as good as another, drugs and extreme forms of rock were fine.

Young people of the same age in the Soviet Union had far less access to the same sorts of information about the nuclear reality, but as many as 15%-17% of these high school seniors also believed that they would witness, if not directly experience, a nuclear war (T2218). This contrasted strongly with the 12% who held that opinion

in 1984, and helped contribute to the beginnings of serious dissent to the policies of the regime.

The will of the American public to support the military defense establishment and its operations remained at the rather high 1986 level throughout this period (T2224). The conflicting demands of various interest groups, coupled with frequent attempts to define and re-define a defense policy "fit for the 21st century," ensured that defense budgets would be sharply debated throughout this period, as indeed they were, particularly in the last decade. Priorities in defense spending sometimes shifted radically, but the public appeared to accept the major compromises and policy adjustments. Issues surrounding nuclear weapons continued to capture greatest popular attention. In the end, however, it seemed that Americans were generally willing to go along with the position taken by the political leadership, insisting mainly that maximum efficiency be wrung out of the use of available resources.

Nevertheless, the constant high burden of defense expenditures, the lack of progress on arms control, the geopolitical developments reviewed earlier, and some of the attitudinal changes in the population (young and old)--all combined to raise the possibility that an "anti-military" President might be elected during this period. The media provided the phrase "anti-military" and used it quite ambiguously to refer to candidates who were ultra-liberal, or who wanted deep cuts in defense spending (not just in the rate of growth in spending), or who sought the total elimination of nuclear weapons, or who morally opposed any use of military force, or who argued that "the Cold War was over and should be forgotten as an aberration of the past," or who evidenced a profound lack of confidence in either the advice or ability of the professional military. Eventually, the concept was so confused that everyone thought that he knew what it meant. Candidates stuck with this label ran in the elections of 1988, 1992, and 1996 (though not on the tickets of the major parties). Such candidates also sought the Democratic nomination (unsuccessfully). Nevertheless, despite these failures, the "super-dove" message was heard nationally in all of these elections and, over this period, there was some chance that someone of this sort might capture the presidency (E5201).

The "military"--"anti-military" debate inspired by the various candidates and their supporters, coupled with reasons offered during this period by those who wanted the Reserve component to be our total commitment to NATO, had the effect of bringing into serious question the need to continue stationing troops overseas, particularly in Europe, as indicated earlier (p. 18). Following the election of 1996, the possibility of ordering a

large number of forces home from foreign soil increased substantially (E7103). Interestingly, the probability rose in part because of a growing feeling of indifference felt by many Americans toward the decades-old conflicts that put us in Korea--and Europe--in the first place.

It seemed that debates about strategic deterrence, the growing possibility of an "anti-military" President, and the evolution of other issues discussed earlier might capture the fancy of the print and broadcast media in the years from 1986 through 1990. Fears rose that these media might launch a sustained and extensive campaign on the side of the "anti-military" spokesmen. In reality, however, the press once again proved incapable of probing a serious subject not marred by obvious calamity (e.g., without a war or a weapons accident), and this fact, along with the new competitiveness among the media, meant that the probability of a widespread campaign of the sort faded after 1995 (E7201).

More important in influencing public opinion on defense issues than any initiatives by the press were the steady labors of world peace organizations, including their efforts to organize mass political demonstrations.

The influence of the world peace organizations on public opinion remained at a moderately low level for most of the period, then rose slightly over the years from 1995 through 2000 as the Soviet stance changed and the new U.S. President took charge (T2223). This low level should not be misunderstood, however, since the main targets of these organizations' efforts were always the present and future opinion leaders in the countries where they operated. When one of these organizations won a Nobel Peace Prize in 1985, their stature increased significantly, and they have continuously become more effective in getting out their message.

Potential high-quality recruits sometimes rejected military service under this influence. Additionally, pressures to organize mass demonstrations for arms control were effective in reaching the public, including these young people, although orchestrated international demonstrations throughout the West never materialized (E7101).

This complex array of developments, including especially the modest improvement in the United States-Soviet relationship after 1996, eventually led to a slight decline in the level of Congressional support for the military (T5201). Indeed, the more remarkable fact may have been that Congressional support was as high as it was from 1987 to 1996. This pattern actually reflected a temporary halt in a long-term decline from earlier years. For example, in all but 2 years from 1970 through 1986, the National Security Voting Index compiled by the American Security Council (a "pro-defense" organiza-

tion) showed a steady drop in the number of members of the House of Representatives who scored 50% or more in voting for "pro-defense" legislation. In 1986, 126 Representatives and nine Senators actually scored a zero.

The election of 1996 made a resumption of this shift downward almost inevitable, given not only the contenders' understanding of the changes in public sentiment, but also the election of more Congressmen without prior military service.

Accordingly, defense expenditures fell slightly as a percentage of GNP (T7202). Of course, because GNP was growing at a steady 3% per year, the defense budget actually increased in real terms. But the message was plain: Defense expenditures warranted a smaller and smaller share of the national pie.

Beginning about 1989, the intense peacetime competition for possible recruits, the cost of recruiting, occasional failures by one service or another to meet its recruiting mission, and other factors began to call into doubt the continued viability of an all-volunteer military. The probability of a draft for the Active Army (E7202) and for the Reserve component (E7203) was always present thereafter. Bills were introduced in Congress to this effect, particularly during 1991-96, when legislators seemed to favor a Reserve draft, but got nowhere. In the prevailing environment, a conclusive case for a draft could not be made.

But it should be noted that the chances of a draft of either component (i.e., Active or Reserve) reached almost 50% between the years 1987 and 2001. Incidentally, these chances were pushed upward by the public discussion of the concept of requiring all young people to devote 2 years to national service (see p. 28). Today, given the right combination of circumstances, the decision to retain the all-volunteer system could easily become a toss-up.

Public debate about national military strategy, or about the possibility of re-instituting the draft did not reflect a lack of public confidence in the ability of the military (T2221) or the Army in particular (T2222) to achieve its mission if war should occur. Indeed, the level of confidence in both remained high throughout the entire past 15 years. Clearly, the Nation had put aside the lingering cynicism and disillusionment inspired by the Vietnam war.

This sustained high confidence helps to explain the high level of patriotism among young people, noted earlier (p. 12). Actually, the psychological mechanism at work here was self-reinforcement: Knowledge of the high level of combat capability increased patriotism, and

high patriotism increased combat capability, in part by drawing into the services more strongly motivated enlistees. In this sense, the level of public confidence in the military was quite positive for Army recruiting.

One important reason why the Army's credibility remained high, thereby helping recruiting, was that the level of modernization of the Army's primary mobility and firepower weapon systems also remained high over the last 15 years (T8408), despite budgetary pressures.

Perhaps more important, however, was that the Army's esprit de corps was also very high throughout the entire period (T8407). This level was maintained, in the first instance, because quality recruiting continued; i.e., standards were not lowered. In addition, military compensation (pay and benefits) were not far below comparable civilian levels, promotion slowdowns and PCS freezes were taken more or less in stride, and traditional Army values were consistently emphasized by the Army, including a focus that fell primarily on people, rather than hardware. These factors, coupled with others like the new manning system introduced by the Army in the mid-1980's, accomplished successfully the very difficult job of sustaining high morale in a peacetime Army, despite increased bureaucratic and administrative burdens.

* * *

The level of antagonism between the United States and China remained low but constant throughout the last 15 years (T7107).

Although there was no possibility of a mutual defense pact between these countries during the Reagan years, the idea surfaced and gathered modest support thereafter. However, given the rapprochement between the U.S.S.R. and the United States in recent years, most observers now appear to believe that such a treaty will remain unlikely (E7105).

The hottest spot in the world over the last 15 years was the Middle East. The level of antagonism between Israel and the Middle Eastern states was always quite high, but became particularly intense in the years from 1995 through 1998 (T7108). Skillful diplomatic efforts by the new Administration elected in 1996, including the President's success in bringing the antagonists together for discussions at a series of Camp David sessions, helped avoid open hostilities. Thereafter, the situation returned to its normal point of near boiling. Little progress was made in the 1980's and 1990's on the Palestine question.

Far more serious, however, was the level of antagonism among the Middle Eastern states other than Israel (T7114). The bloody Iraq-Iran war ended in a fragile stand-off in 1987, with sporadic low-level hostilities thereafter. These countries have yet to sign a formal peace treaty. Egypt, which continually strengthened its ties to the United States, came perilously close to a war with Syria and Libya. Saudi Arabia was under intense pressure from radical fundamentalists in countries like Iran. Shooting continued in the ruins of Lebanon.

The United States was largely incapable of influencing the course of these events in the late 1980's and early 1990's. This was the lingering consequence of the ill-starred Iran/Contra Affair of 1986-87, which destroyed the credibility of many Reagan and post-Reagan officials in the United States (and their counterparts the Middle East). Middle Eastern distrust of the United States was especially deep and difficult to dispel because of U.S. duplicity in 1986 in simultaneously providing weapons to Iran and military intelligence to Iraq. In fact, for all practical purposes, restoration of United States influence had to wait until the election of 1996, when the new Administration was able to proceed, in conjunction with Egypt, to seek tacit and unannounced agreements among the feuding Middle Eastern states that helped avert all-out war in these conflicts. Although the region remains deeply divided today, one benefit of these interventions is that the possibility of a new energy crisis (see p. 3) was avoided.

The level of antagonism between North and South Korea rose during the Olympics in 1988, but increased to a dangerous point in 1991 when Kim Il-sung, the North Korean dictator, died and his pro-conflict son, Kim Jong-il, assumed power. The situation cooled slowly (T7110). Not only did the United States have to make clear its intention to remain in South Korea, and fight if necessary, but it had to signal this commitment by threatening to mobilize certain highly specialized USAR units. With unusually strong help from the UN's Security Council, the United States managed to avoid both mobilization (E8205) and a conflict.

It should be noted that the probability of mobilizing these Reserve units was real throughout this period, both before and after the Korean episode, thanks principally to the threat of possible war in Central America and the fear of foreign terrorism on U.S. soil.

The troubles in Latin America remained grave throughout this period. Most perplexing to the United States were the deepening social and economic difficulties of Mexico. High birth rates, astonishing poverty, illiteracy, riots, low oil exports, widespread political corruption—all fed on each other to raise the chances of a

revolution. From 1988 through 1992, the Cubans and the Nicaraguans fed these flames (with financial and political help from the Soviet Union). From 1996 through 2000, they were fanned by the inability of the Mexican government and the private sector to achieve their 1986 goal of creating some 15 million jobs by the end of the century. As a result, the probability grew that a pro-Soviet Communist government might take over (E5106).

War between Nicaragua and other nations in Central America was successfully avoided over the last 15 years. The Iran/Contra affair of 1986-1987 had sounded the death knell of further U.S. military aid to the Contras. But support from other countries, as well as from private individuals, helped the Contras to linger on for a time. The danger peaked in 1990, when the Sandinistas successfully pushed the last of the Contras into Costa Rica and El Salvador and considered hot pursuit. But private commitments made by President Reagan's successor persuaded the regime to desist, and the situation settled into an angry standoff (T7111). This outcome met with the approval of most Americans.

In South America, the possibility of conflict was fairly low from 1987 through 1990, but has risen in the last 10 years (T7117). The major reasons were essentially the same as those that influenced developments in Central America, including high birth rates, the election of leftist governments unfriendly to their neighbors, border disputes, continuous economic upheaval (compounded by continuing high foreign debts and radical income differences between the rich and the poor), and, to a minor extent, Soviet power projection. The situation in South America was more complicated, however, because of the growing danger, particularly in the last 5 years, that one or more of the countries on this continent would soon join the nuclear club. The United States continues to watch the situation closely.

India remained between enemies. On one side, its relations with China simmered, though without serious risk of war (T7116). Neither country sought to bring its differences with the other to the point of hostilities. Long-term controversies regarding borders and trade issues remained, but China's continuing post-Mao shift toward pragmatism in foreign affairs and a freer domestic economy helped favor diplomatic initiatives to address these concerns.

India's tensions with Pakistan, however, grew (T7109). This occurred more or less simultaneously with the Soviet withdrawal of its military forces from Afghanistan, beginning in 1986. The Russian presence in Afghanistan had moderated the conflicts between these countries, but the old disputes began to surface once

again—despite the fact that Pakistan was well aware that India had a small but deliverable arsenal of nuclear weapons. Most observers today believe that war between these countries is unlikely until Pakistan has its own nuclear capability, which may, of course, happen at almost any time in the early years of the 21st century.

Relations between China and Taiwan (T7112) became less tense in the years just before Hong Kong was peacefully absorbed into China. Not only did the people on Taiwan have the opportunity to see that China honored its commitments with the United Kingdom in this transfer of control, thus keeping Hong Kong alive as a major Chinese trade outlet, but they also saw that after the take-over the Hong Kong economy was permitted a remarkably high level of freedom from central management. These factors, plus the recent death of Chiang Kai-shek's son and the succession of a more moderate regime to power, have brightened the prospects of a China-Taiwan solution. Indeed, unofficial speculation in the last few months suggests that Taiwan has given diplomatic signs that it may even be prepared to negotiate the sovereignty of control over its military forces in exchange for a reunification agreement that mirrors the Hong Kong settlement.

The level of antagonism between the U.S.S.R. and China remained as dangerously high over the last 15 years as it was in 1986 (T7115). As we saw earlier (p. 18), the Soviets relaxed tensions with the United States over the last 5 years, but they were unable to find a way to do the same with the Chinese.

This was not because an effort to restore full economic and diplomatic ties was not made. Indeed, highly secret talks to this end were undertaken from time to time over the entire period, beginning with the so-called Gorbachev Initiative of 1987. As Premier Deng had indicated frequently (including a remarkable interview with *60 Minutes* in September 1986), the problem was continued Soviet assistance to the Vietnamese. Deng's position was that "if that would end, there would be no barrier to negotiations." The Gorbachev Initiative involved a commitment to cut this assistance by a fixed minimum percentage in future years. (The constant state of tension, however, explains, in part, why the level of antagonism between China and the United States remained constant during these years. The Chinese were playing the other sides against each other.) In any event, the Soviets and the Chinese slowly made progress in their negotiations. By the end of the 20th century, the outlook was quite encouraging for success in the 21st (E5105).

Today, United States analysts are divided about whether such a reconciliation might eventually lead to

general war or general peace. The dominant view, however, is that the Soviet Union and China are very unlikely to fight as allies against another nation.

South Africa remained in turmoil throughout most of the last 15 years, although the risks of war with other African nations began to diminish after 1991, when, under extraordinarily intense domestic and international pressures, the ruling Nationalists agreed to the creation of a Black Chamber in the Parliament, thus signaling the first authentic move toward full political rights for blacks. Regional antagonisms remain high, however (T7113).

The reluctance of the Soviet Union to involve itself directly in the South African situation except by providing some weapons and training to the military wing of the African National Congress (and affiliated organizations) greatly affected an already low level of popular American sentiment for any sort of direct U.S. combat involvement. A slight increase in the probability of this event occurred during the turmoil that surrounded the South African government's efforts to implement the Black Chamber and define its constitutional powers in a public referendum. But the continued ability of the Afrikaners to stay in full control of their military helped keep the dangers of war low. Accordingly, the possibility of a direct U.S. combat role in South Africa was very modest over this period (E7111).

* * *

This summary of developments in hot spots around the world over the last 15 years should not be misunderstood. Although war was avoided in each of these areas, the risk of war was often high. This point was not lost on most perceptive young people in the United States. They recognized, for example, that the complexity and uncertainties of international relationships were such that there was a real chance that the United States could find itself in a shooting war at almost any time.

In fact, it was an even-money bet that between the end of 1986 and the end of 2000 the United States would be involved in an international confrontation at least as dangerous as the Cuban Missile Crisis of 1962 (E7110). This could have been precipitated by Communist action (e.g., massive Soviet aid in Central America), U.S. action (e.g., a powerful U.S. strike on a terrorist state friendly to the U.S.S.R.), escalation of a regional war (e.g., in the Middle East or in South Africa), a technological failure, or the madness of someone with the power to bring the world to the brink.

The probability of an all-out nuclear exchange between the United States and the U.S.S.R. was very low throughout this period (E7121). That it was greater than zero indicated neither a weakening of deterrence nor a misreading of the political developments discussed earlier. Almost entirely it reflected the increasing risk of a technological failure with fast and irreversible consequences that could engulf the world.

The probability was equally low that a U.S. officer in the field might in peacetime initiate a successful unauthorized launch of a nuclear weapon against the U.S.S.R. (E7108). This grim possibility illustrated the risks of unbearable stress and irrationality that could precipitate a major superpower crisis. Continued study of this possibility over the last 15 years, however, led to several significant improvements in existing controls, which were already substantial. As important in keeping the probability low was the success achieved by the U.S.S.R. and the United States to reduce the number of intermediate-range nuclear missiles in Europe (see p. 17).

Somewhat higher was the probability of a high-intensity non-nuclear conflict in which the U.S.S.R. and the United States were in direct combat (E7118). Obviously, this could have happened--but did not--at any of several places in the world, including Europe, Turkey, Iran, Pakistan, etc. Curiously, the probability was slightly higher in the first and last 5-year periods of the last 15 years. The first slight rise probably reflected the usual period of challenge to the new President. The second rise is explained in part in the same way, but it is interesting to note that the probability of war was manifested just as tensions between the Soviet Union and the United States were falling. Some analysts referred to this phenomenon as the "peace risk"--i.e., the chances that the United States and the U.S.S.R. might be inadvertently drawn into direct conflict during a time of lower direct tensions because of the actions of lesser states.

Young people were generally more sensitive to these possibilities than many of their elders believed, and they weighed the various risks of war carefully as they thought about their future--and as some of them thought about a possible tour (or career) in the Army. Enlistments tended to vary, in part, because of how these 17-21 year olds assessed the probabilities of conflict between the United States and particular sets or combinations of antagonists. Very low probability assessments drew "sunshine patriots" to the Army. Moderate or high probabilities involving what appeared to be vital U.S. interests drew another breed. Moderate or high probabilities of another Vietnam repelled recruits of all

political, economic, and ethnic backgrounds, except of course for those who believed in their country, "right or wrong."

According to the best recent historical analyses, the following four charts show the cumulative probabilities that the United States would become involved in various types of low-intensity conflict at some point between 1987 and 2001:

- Type 1. A popular war that the United States would quickly win (E7112).
- Type 2. A popular war that the United States would slowly lose (E7113).
- Type 3. An unpopular war that the United States would quickly win (E7114).
- Type 4. An unpopular war that the United States would slowly lose (E7115).

None of these wars actually occurred, of course, but it is clear that all of them had at least a moderately high chance of occurring. Note that:

- Type 1 (E7112), which reached a cumulative probability of 40% by 2001, but was most likely in the years prior to 1991, would have had the greatest positive impact on Army recruiting--both during and after the conflict.
- Type 4 (E7115), which had a 20% chance of occurrence between 1987 and 2001, but had a very small chance of occurring in any particular year, would have had the greatest negative effect on recruiting.

The historians who prepared these charts were also asked to identify "plausible antagonists" for the United States in each case. They reached no sharp consensus, but their answers provide an interesting footnote on the potential conflicts of the last 15 years. Listed below, for each type of war, are the possible antagonists; in parenthesis after each country's name is shown the percentage of the historians who identified the country.

Type 1. A popular war that the United States would quickly win (E7112):

- Libya (38%)
- Nicaragua (19%)
- Mexico (10%)
- Iran (10%)
- South Africa (10%)
- Other (13%)

Type 2. A popular war that the United States would slowly lose (E7113):

- Middle East (61%), including specific mentions of Iran (17%) and Lebanon (6%).

- North Korea (11%)
- Mexico (11%)
- South Africa (11%)
- Other (6%)

Type 3. An unpopular war that the United States would quickly win (E7114):

- Nicaragua (47%)
- South Africa (11%)
- Other (42%), including individual mentions of a remarkable range of countries, from Pakistan/India to Mexico, from Syria to Korea, from Canada to China.

Type 4. An unpopular war that the United States would slowly lose (E7115):

- Central America (47%), including specific mentions of Nicaragua (32%).
- South America (21%), with no countries named.
- China (11%)
- Other (21%), including individual mentions of Southern Africa, Southeast Asia, the U.S.S.R., and South Korea.

The array of possibilities in these lists, as well as the fact that some countries appear on more than one list, indicates both the complexity of the military-political situation over the last 15 years and the limitations we have even today, with 20/20 hindsight, in understanding U.S. military capabilities and the level of public support that might have existed in those years had conflict erupted. It is hardly surprising, therefore, that potential recruits during this period were often confused about the prospects for low-intensity conflicts.

The following four graphs show how the same historians recently estimated the cumulative probability of various types of high-intensity wars over the last 15 years involving the United States. All but the first would have been very strongly negative for Army recruiting.

- Type A. A non-nuclear war which the United States quickly wins (E7116). This war, which had a 20% probability of occurring at any time between 1987 and 2001, had a fairly small and roughly equal chance of occurring in any particular year.
- Type B. A non-nuclear war which the United States loses slowly (E7117). This war had odds of 1 out of 10 between 1987 and 2001, but was most likely in the early years of the period.

- Type C. A war involving use of tactical nuclear weapons (E7119). The probability here was virtually the same as with Type B.
- Type D. A war involving use of chemical or biological weapons (E7120). The probability of this conflict was identical to that for Type C.

Not only did the United States avoid a hot war over the last 15 years, but it also successfully resisted pressures from some quarters to wage economic warfare to achieve its objectives. Notably, the Nation consistently rejected the possibility of using food as a weapon against food-importing countries (E4102). This is not to say that advocates of such a policy were not influential. Indeed, over the period of interest there was one chance in four that the policy would be implemented at some time before the end of the year 2000. That threat alone appeared to help make actual implementation unnecessary.

Famine and starvation remained real throughout the period (as suggested on p. 3), causing tens of thousands of deaths and intense suffering among the survivors. Occasional wars between Third World countries exacerbated this problem. International relief activities, like those for Ethiopia and other Sub-Saharan countries in 1985-86, became somewhat more effective, particularly once the Second World countries participated, to the extent possible, with the West. Moreover, these international efforts also helped promote better relations among the contributors. For instance, they spurred cooperative efforts by the U.S.S.R. and the United States, with some participation by West Germany and other Western European nations, to develop a genetically engineered means of providing abundant, inexpensive crops. Soviet cooperation was precipitated by constant food shortages in that country. Their research work with the United States actually came to be a major reason for improvements in the United States-Soviet relationship—and it appears to have been a factor in the continued strain in the Soviet-Chinese relationship. In any event, success in the research itself still appears to be far off (E3101).

The most visibly destructive political acts that affected the United States during the last 15 years were terrorist activities—whether state-sponsored or initiated by independent radical groups. The number of international terrorist incidents affecting Americans reached a peak of about 230 in 1990, when the fury of the United States was released simultaneously on two Middle Eastern countries. The enduring effect of this action was to cut the number of such attacks on Americans year after year, so that today it has fallen to about 150 (roughly 25% less than the number in 1985) (T7201).

A further effect was to reduce substantially the odds that one of the terrorist states attacked in 1990 would launch a program of indiscriminate, random attacks within the United States. The danger of such attacks rose rapidly after the bombing of Libya in 1986, but it dwindled to a very low level after 1990. As far as one could tell, the decision to seek revenge was never made, though according to the experts its cumulative probability reached 50% by 2001 (E7107). But one could not be sure, since "domestic" terrorists typically escaped or could not be positively identified as working for one group vs. another.

Public fears of terrorism were profound because the threat was real. The conventional analysis of the mid-1980's was that terrorists "are interested not in mass destruction, but in mass disruption." However, that analysis was flawed. A recent report showed, for example, that the chances of a terrorist attack on a U.S. nuclear power plant that could produce a massive release of radiation were real throughout this period (E7206), both because of inadequate plant safeguards and because of the level of fanaticism within some of the terrorist groups. This conclusion was particularly frightening to many when it was recalled that the probability of a Three Mile Island or a Chernobyl was vastly under 1%.

Although increasingly sophisticated steps were taken over the years to prevent a calamity like this, serious consideration was given from about 1988 to 1992 to the possibility of assigning to the Army the mission of security of major public utilities and other essential facilities. There were rough precedents for this idea. For instance, in the early 1980's the President authorized limited use of the military in drug enforcement and control. Today, this idea has been virtually abandoned (E8201), to the Army's great satisfaction, since it would probably have been negative both for Army morale and for Army recruiting. Various high-tech monitoring and control systems are presently the preferred safeguard, along with the use of elite semi-military (but private) security forces hired by such organizations.

In this regard, it is worth mentioning that the movement toward privatization gathered momentum over the last 15 years. Private security forces became much more common, and the better ones became strong competitors to military recruiters.

As mentioned earlier (p. 17), the number of nations known to have nuclear weapons now stands at eight. In the context of this discussion of terrorism, however, we should add that we appear to be coming close to the day when conclusive evidence will be made public establishing that a country led by a fanatical anti-Western

head of state has acquired at least one deliverable nuclear weapon (E7106). Rumors have circulated for years that this might already be the case. For decades, of course, there have been repeated threats that a nuclear bomb would be detonated in a U.S. city if certain demands were not met. Some of these threats were taken very seriously by the authorities. The spectre now is arising that a terrorist state might actually be able to hold a city hostage.

The possibility of national riots by the poor was discussed toward the beginning of this document (p. 11). One could also imagine riots caused by terrorist threats--or riots following an attack on a nuclear power plant or the detonation of a nuclear device in one of our cities. Beginning in about 1989, a role for the Army in riot control was contemplated by some members of Congress. But the arguments against this proposal were substantial and persuasive--e.g., the National Guard has always had this job--and today it remains highly unlikely of ever being implemented, unless, of course, such riots occurred and became a major threat to national security (E8204).

The unsettled and sometimes precarious situation internationally over the last 15 years had mixed effects on Army recruiting, as we have seen.

One significant though little noticed consequence of the fact that the United States was not involved in a shooting war during this period was that there was a steady decline in the percentage of the male population with military service (T7203) and in the percentage of males with combat experience (T7204). The implication for Army recruiting was that there were increasingly fewer role models for young people. The main impact of these trends on Army recruiting will, of course, be felt in the 21st century.

It should be noted, however, that, for new recruits, the motive of joining the Army to follow in a family tradition became decisive more frequently over this period (M19). In contrast, the motive of imitating a role model, such as a favorite teacher or a famous soldier, merely held its traditionally low level of importance (M36).

7. ARMY RECRUITING: A RETROSPECTIVE FROM 2001

As we have seen, many countervailing forces affected USAREC's ability to achieve its mission over the past 15 years. But the story is still far from complete, for we must also review certain other demographic factors, internal Army considerations that affected USAREC, and the performance of both USAREC and its recruiters.

A fundamental concern throughout the period was that the Army's budget plateaued in 1990 at \$80 billion (in 1986 dollars), from a previous high of \$77.5 billion in FY86 (T8401). For reasons mentioned earlier (see p. 20), this meant that the Army's share of DOD expenditures fell during this period, thus complicating greatly its ability to maintain and modernize, recruit and train.

In this stressful management environment, USAREC was not only successful in holding onto its 1986 share of the Army budget (about 1% of the total), but also of increasing it to 1.3% by 1993, where it has been maintained ever since (T8402). This result is explained principally by the Army's recognition of the many serious recruiting problems that had to be overcome and the need to have quality soldiers for its modernization program.

Beginning in 1991, however, Army advertising expenditures fell precipitously as a percentage of the recruiting budget. Today they are at 7% of the recruiting budget, versus about 13% at the end of 1986 (T8403).

This shift reflects several influences. First, a determination to avoid cutting the number of recruiters. (As we shall see later, on p. 31, this effort was successful.) Second, the need to free some resources to support development of new electronic capabilities to support the recruitment process better. Third, substantial changes that were made possible (or were required) in the advertising itself. As suggested earlier when speaking about television (p. 14), such changes were essential. Despite the fact that joint service advertising was increasingly mandated (which benefited the Army significantly to the extent that it could increase its inputs to content), the Army's advertising agency was able to sustain a fairly high level of effectiveness over the entire 15-year period (T8404), even though funding was cut by nearly one-half. This was accomplished through spots of varying length, ads tailored to specific recruiting missions (not just the high-quality recruits), the use of new motifs (not just computer-related jobs, ACF, etc., but also more sophisticated issues, like quality of life in the Army), and many other innovations. Experimentation was encouraged out of necessity and because rates were

lower at TV networks, thanks to loss of viewers. Moreover, marginally productive media were eliminated.

The Army's recruiting contract mission reached a peak of 136,000 in 1990, mainly because of more selective re-enlistment, on the one hand, and the Soviet's moves to upgrade its land combat capabilities, on the other (see p. 18). This, of course, explains the growth in USAREC's budget during the same period. Beginning in 1991, however, the mission began to fall, so that in 1995 it reached 134,000 (the 1985 level), where it has remained ever since (T8423).

The mission increase around 1990 came at the worst possible time demographically. Males aged 17-21 as a percentage of the population fell to a low of 4% at the beginning of 1991. The trend began to rise thereafter, and today stands at 6% (T1201).

The number of legal immigrants aged 17-21, which was estimated at 292,000 in 1980, held at 300,000 per year throughout the period (T1206), thus providing a rather large pool from which Army recruiting could draw. As we saw earlier, however, a large proportion of the hispanic component of this group was not fluent in English (p. 14).

The number of illegal immigrants aged 17-21, estimated at about 44,000 in 1980, rose from a low of 40,000 in 1986 to 80,000 in 2000 (T1207).

Given this seemingly unstoppable flow of illegals (of whom the 17-21 year olds were only a small part), the Federal Government considered various steps that might be taken. One proposal relevant to Army recruiting was noteworthy.

Public fears that the country might be "overrun" by Latin Americans, inspired largely by the attempted border crossings of people fleeing the turmoil in Central America and the poverty and social chaos in Mexico, led to suggestions in Congress and among certain other opinion leaders to use the Army to patrol the Mexican border (E8202). This idea surfaced repeatedly over the past 15 years, and during this period it actually had a one-in-three chance of being implemented. Two forces worked against it, however: intense opposition by hispanic representatives and marked strengthening of the U.S. border patrol. Today, it seems implausible that a proposal of this sort could pass Congress, at least not without a first-class crisis like Mexican repudiation of its foreign debt.

Among 17-21-year-old Americans, the number of "prime market" high school graduates (i.e., persons both qualified and available) fell from 1.8 million in 1980 to 1.4 million in 1986, then reached a low 1.2 million from 1990 through 1995. Since then, the number has slowly climbed to last year's 1.3 million (T1208). These small changes produced difficulties for recruiters in the Army and the other services.

These difficulties were, however, only a minor factor in the political debate that began in 1989 regarding the merits of requiring at least 2 years of national service (civilian or military) for all 18 year olds (E5203). More important considerations were the continued Federal deficits during a time when the Nation's infrastructure was increasingly falling into disrepair, youth unemployment was high, the threat of a general depression was rising, demands by the elderly for social services were growing, and the conservatives in power increasingly felt that "some people in our country are not pulling their weight." Popularity of the idea grew rapidly. Indeed, it may be that the major reason why it lost favor and was not enacted into law by the end of the century was that in 1995 former Senator Kennedy pointed out on *Meet the Media* that the entire concept originated in the New Deal. Various counter proposals were offered, without success. Perhaps the most important was that Federal student aid be granted only in exchange for Federal military or civilian service.

According to some observers, the very discussion of these proposals hurt Army recruiting, since some of the best potential recruits sat out the debate in the belief that, if the draft or something like it were coming back, civilian service would be preferable. Others argued, however, that retention of the ACF/GI Bill remained a draw toward the less popular services. They also pointed out that when there was a draft, the Army got more and better recruits.

Concern about these and other youth attitudes, as well as about job competition from the civilian sector for young people, led the Congress to defy Gramm-Rudman and similar later legislation to approve budget appropriations that kept E-1 pay at a constant high percentage of comparable civilian pay, as measured by the Employment Cost Index (T8406). Thus, this percentage held at 94% throughout the last 15 years. Benefits were intended to make up the difference.

Lurking behind this apparently satisfactory pattern, however, were several dangers that did not actually materialize but nonetheless had a negative impact on Army recruiting.

For instance, there was the mounting risk that military wages would be frozen (E7204)--a particularly serious

threat from 1987 through 1996-1997 as budgetary pressures increased, the possibility of a global depression increased, inflation began to rise, etc. Had a freeze occurred, the consequences would have been profound. Of course, many soldiers knew that having any paycheck was a lot better than having none, and they recognized that they would probably have nowhere to go if jobs became scarce on the outside. These individuals would not necessarily be happy in the military, but they would not leave. On the other hand, dissatisfaction because of a pay freeze would have caused others to leave the service, thus increasing the recruiting mission, while the Army's difficulties in competing with the civilian sector would almost certainly have forced the Army to recruit from the lower group of available poor, thus lowering the quality of personnel. Fortunately, the freeze was not enacted and the truth of these arguments was not tested. Nevertheless, it seems clear in retrospect that some potential recruits, sensing the danger of a freeze, pursued civilian employment more aggressively than they might have otherwise, thus heightening the level of competition facing the Army.

Despite the fact that the Army was occasionally unsuccessful in meeting its quality and quantity numbers or to fill all MOSs at targeted quality levels, the probability of a further danger increased sharply in the years from 1988 through 1995. This was the risk of legislation requiring the armed forces to eliminate enlistment bonus programs (E7205). Conservatives who backed this idea argued that this was a modest price that the military should be willing to pay in a tight fiscal environment in order to keep the GI Bill (and the ACF). Moreover, they argued that such a move would not only attract the most patriotic and self-sacrificing elements in the 17-21 age group, but also increase unit cohesion.

Opponents argued that the incentives are precisely what brings the recruits in. They argued that if the Army, for example, worked hard and well, it could develop attitudes of patriotism and self-sacrifice. But these attitudes would follow, not precede, the enlistment decision in most cases. In any event, they said expressed patriotic sentiments are inversely correlated to the TSC of recruits, and self-sacrifice is unlikely to have significant appeal to recruits in a peacetime environment. Additionally, the opponents pointed out that the idea would undercut the ability of recruiters to distribute quality across all requirements in a truly voluntary environment. Enlistees would have to be "force fit" to Army requirements, thus producing a loss of many quality enlistments. In the end, the quality of Army personnel would fall, and personnel costs would increase because of higher training costs and lower retention rates. As we

move into the 21st century, the proposition's chances of enactment are very slight.

On the benefits side, it was also clear throughout most of the last 15 years that the Army's educational programs were extraordinarily important as an inducement to enlist (T8422). To put it more broadly: It has been clear throughout most of the last 15 years that quality recruiting goals have been met by offering ways for bright young people to prepare for long-term occupational success by acquiring marketable skills, money for post-high-school education or training, and work habits attractive to civilian employers. This reality is reflected in the growing or continued high level of importance of several traditionally central motives in the enlistment decision (M8, M9, and M10).

Another minor possibility over the last 15 years was that Army ROTC programs would be dropped by a large percentage of participating universities (E8211). However, the causes that might have made this likely—e.g., an anti-military campaign by the media, an unpopular shooting war—did not materialize, as we have seen.

In an effort to ensure that its educational benefits would be used (and hence not taken away), the Army worked over the past 15 years to link these benefits to pre-enrollment at institutions of higher learning (E7209). Although there appeared to be obvious benefits in doing so, the Army did not come close to achieving this objective. Perhaps the most important reason is that, despite the substantial financial impact of ACF/GI Bill grants on college and university budgets, the Army did not succeed in persuading secondary schools and colleges to see their common interests with the military and to agree to implement counselling and educational programs, beginning in high school, to help students plan their military service and higher education. Making this argument proved to be difficult as long as college administrators, in particular, believed that any shortfall in normal day enrollments could readily be met by increasing night-school and adult education enrollments.

As part of this debate, efforts by some liberals and conservatives in Congress to scuttle the Army College Fund (and to provide no substitute) were viewed very seriously, not only by USAREC but also by many young people. Liberals attacked the ACF and every other significant proposal to increase the size of the military budget (and, as we have seen, were rather successful in the case of the Army). Conservatives also supported cuts in budgetary growth, opposing the ACF, while pointing to high unemployment rates and advocating a reinstatement of the draft. Members of both groups ar-

gued that no one really knew how well ACF worked as an enlistment incentive. "If we knew," they said, "we might at least be able to cut back on the program (to everyone's satisfaction). After all, it's quite possible that we are paying for too many who would have enlisted for other reasons." The threat to the ACF was extraordinarily serious in the immediate post-Reagan years, and since the 1996 change of administrations, it has once again risen (E8208).

In this environment, chances were clearly slim that Congress would enact a program permitting Army College Fund and/or New GI Bill educational benefits to be transferred to a soldier's family members after 10 years of continuous service. Though it was generally recognized by analysts that such a program would be substantially cheaper overall because it would reduce recruiting costs by increasing retention and deferring ACF withdrawals, this proposition had only a trivial chance of becoming law in any of the last 15 years (E8210).

As we have indicated often in the preceding pages, many developments conspired during this period to increase the intensity of competition between the Army and both its sister services and the private sector. Changes in the economy, in technology, in personal, family, and societal values, in education, in the geopolitical situation, and elsewhere made the Army challenge to recruit quality soldiers extremely difficult.

Competition for high school graduates reached and sustained a high level from private enterprise (T8424) and a still higher level from the other services (T8426). Because the Army recruiting budget held essentially constant throughout the period (see p. 66), pressures to meet the contract mission were exceptionally intense.

To the extent that success was in the hands of USAREC, the key to success was the high level of commitment by recruiters, new directions in Army advertising, improvements in market research, and certain management changes.

It should be emphasized that these factors remained the key even toward the end of the 20th century, as the pool of 17-21 year olds began to increase. A major reason, of course, was that the military and economic systems of the United States had continued their massive transformation toward the "information society," in which a very special premium had to be placed on filling increasing numbers of entry-level positions with well-educated, often computer-literate personnel.

This can be seen especially clearly in the growth of intensity of competition between the Army and the civilian sector for college graduates (T8425). Although, as indicated earlier (p. 6), there was a surfeit of college

graduates in some disciplines, the question was always finding and attracting the best in the right disciplines. This problem was not made easier because of USAREC's relatively low level of interest in a college recruitment program.

The issue was also manifested in the competition with the other services for college graduates (T8427), though here with less intensity because the Air Force and Navy were already perceived by most potential recruits in college as being high-tech organizations.

To make matters more complicated, the Army was, in a sense, competing against itself throughout this period. Because USAREC's contract mission never fell below the 1985 level (see p. 27), and the mandated size of the active Army remained at about 780,000, the continuous growth in the ratio of National Guard forces to active Army forces (T8410) meant that both sides had to run particularly hard to achieve their missions. Paid drill strength of the National Guard represented about 58% of the size of the active Army by 1987; by 2001, it had increased to 65%, and is clearly still growing. Many recommendations were made to transfer all recruiting responsibility to USAREC. The probability of such a development between 1987 and 2001 was actually very high (E8450), but in the end, several key Governors blocked implementation.

To ease matters, serious consideration was given over the last 15 years to several new tour options. One involved a total obligation of 8 years (RA and USAR), with the individual free to select the balance between active and reserve service, given some minimum required active duty period. Another involved only a 1-year-tour option for the active component (coupled with a statutory USAR commitment). This possibility received serious attention, and fears that the other services might institute a 2-year option, congressional pressures to reinstate the draft, the cumulative increased manpower requirements of the Reserves—all contributed to the steady rise in the probability of this policy change (E8209).

The 1-year tour would have had some serious negative consequences, of course: rotation problems overseas, disruptions to the training base, administrative burdens in assigning the right personnel to the right jobs, likely problems in meeting manpower needs in wartime, etc. Its benefits as a means of addressing the fears mentioned above were also fairly obvious, except perhaps in one situation: that of recruiting females.

As suggested earlier, certain societal and economic factors swung toward favoring female recruitment during the past 15 years. And as we shall see later (p. 33), females did in fact increase as a percentage of the

Army. This increase followed naturally from the influence of those factors. It followed also from the stability and later growth of the pool of 17-21 year olds as a percentage of the population (T1202). In retrospect, however, one wonders if a 1-year tour would not have proven attractive to other females.

In view of all of the considerations discussed so far in this report—some powerful, some weak; some working against Army recruiting, some working for it—it is perhaps not surprising to note that their net impact was that the propensity of males to enlist held constant at a "so-so" level throughout the last 15 years (T8428). From today's vantage point, however, it is clear that this measure blurs far more than it reveals. It correlates with nothing, including actual enlistments, and some observers today feel that the use of this indicator over the last 15 years tended only to foster a dangerous complacency among some policymakers.

The same appears to be true for the measure of the propensity of females to enlist in the Army (T8429).

Incidentally, the possibility that all restrictions would be lifted on the duty assignments of women in the Army (E8203) remained remote over the last 15 years. The cumulative probability rose little by little during this period, as the United States continued to avoid a hot war, as a last-gasp effort was made to enact the Equal Rights Amendment, and as the concept of job equality spread through the society. But the turn toward more traditional values, the immense power of the conservatives in Congress, the opposition of the elderly, and the absence of a powerful proponent of the idea, such as a female President or Vice President, virtually ensured that the idea would not be accepted.

Thanks in part to the modest decline in the dropout rate (see p. 14) and, more important, the value shift among many of the better high school graduates, the improvements in Army advertising, and sustained recruiter effectiveness, the Army was able to maintain a high percentage of enlistees who were high school graduates (T8434). Indeed, by 2001, the percentage had inched up to 93% (vs. 80% in 1980 and 91% in 1985).

The median age of NPS Army recruits, which had risen from 18.8 years in 1974 to 19.7 years in 1982, held at that level through 1990. Thereafter, it leveled off at an even 20 years (T8430), largely because the cohort was aging and because tools and techniques were developed that enabled recruiters to improve their effectiveness in telephone prospecting. Looking backward, it appears that the higher maturity level of those entering the Army has been decisive in keeping the attrition rate from rising above the level in the mid-1980's.

Paralleling the change in median age was a slight upward shift in the percentage of NPS recruits over 21. The level was 23.5% at the end of 1986. It rose to 25% by 1991, and it has held at that level until today (T8431).

The improvements in the school system (see pp. 13), coupled with greater family and societal emphasis on the value of education, helped ensure a larger population of higher quality troops in the Army. Accordingly, there was a rise in the average AFQT score of Army recruits over the last 15 years. In 1980, the average was 45.9; by 1996 it had risen to 55.0, where it stands today (T8432). This was a considerable achievement for USAREC, given the extraordinarily challenging recruiting environment during this period. Moreover, it helped raise the retention rate of senior NCO's and officers because their soldiers were not only of higher quality but caused fewer problems.

Indeed, a measure of this achievement is that, since 1995, the average Army AFQT score has been equal to that for the other services (T7205). One explanation, perhaps, was the introduction in 1995 of a mandatory national academic ability test for graduating high school seniors.

Even more impressive is that the Army managed to attract recruits in the TSC I, II, and IIIA categories whose average AFQT score rose from 63 in 1986 to 66 in 1995, where it held (T8433).

At the opposite extreme, however, the percentage of Army recruits who were deficient in basic educational skills held at about 10% throughout this period (T8435). In a way, this constancy seemed to mirror the essentially unchanging size of society's "intellectual underclass" (see p. 14).

All things considered, USAREC was quite successful in keeping up with the Army's transition into the information society, which included the introduction of electronic weapons (i.e., weapons which destroy through electronic impulse rather than blast), the introduction of digital communications systems to the squad level (e.g., a position locating reporting system), the increased use of computers in administration and supply control, etc. The percentage of Army enlisted jobs requiring what the Army called "computer literacy" in these and other application areas rose from 10% in 1986 to 30% today (T8409). USAREC met the need more than adequately. The percentage of Army recruits who were "computer literate" was exactly 10% in 1986 and is exactly 30% today--and USAREC actually produced a slight surplus of such talent between 1990 and 1996 (T8436).

These data, however, are somewhat misleading, for the term "computer literate" has not meant the same thing in the Army as it meant in the civilian sector, as suggested earlier (p. 6). The fact is that, even today, the vast majority of Army jobs are not high-tech jobs requiring computer skills. Most people are still in the 11-12-13 series--i.e., not high-tech except for a few pieces of equipment that themselves have little relation to civilian high-tech. Indeed, the need for comparable skills actually fell during this period, as operating systems became more user-friendly. Thus, as society as a whole increased its level of technical competence via the use of computers, the Army was not able to keep pace at the same rate. The long-term implications of this situation are not clear.

In any event, the Army's accomplishment in meeting its own requirements was significant. But it required an increase in the number of recruiters who were themselves computer literate (i.e., beyond the ability just to use JOIN), which in turn meant higher training costs for recruiters. It also meant that the length of time for AIT had to rise in the high-tech MOSs. The trade-off was that the attraction of using these sophisticated technologies produced relatively more 4-year enlistments than would otherwise have been achieved.

Although the razzle-dazzle of high-tech rarely blinded Army recruitment to the fact that the combat arms soldiers, especially the infantry, required troops that can slog through mud, dig a foxhole, and shoot a rifle, the growing proportion of computer-related slots put a premium on the search for better ways to measure ability and match ability to jobs. Unfortunately, efforts to develop an accurate and unbiased (i.e., culture-free) measure of the potential of Army recruits were not successful, despite some progress over the past 15 years. By the end of the year 2000, the chances of finding such a tool were still low (E8206), and the outlook does not favor any dramatic breakthroughs. The stumbling block, apparently, is the difficulty of developing a test that depends not on the individual's level of educational attainment, but on his or her ability to learn and recall information.

Slightly greater progress was achieved in efforts to develop an effective and unbiased (i.e., culture-free) system for matching the abilities of Army recruits with Army requirements (E8207). Though such a development would obviously have provided USAREC with an excellent recruiting tool and would have enabled recruiters to recruit more effectively in specific markets, a surprisingly major barrier to the creation of such a system was apparently the Army's inability to describe ac-

curately its needs with specific reference to the skills needed to meet them.

USAREC was fortunate over the last 15 years in one particularly important respect: The foxhole strength in the number of regular Army recruiters tended to rise and fall with changes in the contract recruiting mission (see p. 27). Thus, the number of recruiters at yearend 1986 was 5,140. By 1991, it reached 5,200, where it held through 1995. It then dropped slowly to today's level of 5,100 (T8415). Because the number of recruiters correlates directly with the production of recruits, maintaining this pattern in a more competitive environment was essential to USAREC's success throughout this period, given the size of its contract mission.

This is not to say, of course, that efforts were not made in Congress to impose a ceiling on the number of military recruiters. These efforts--inspired by budgetary pressures, the desire of some Members to reinstate the draft, etc.--were most intense between 1987 and about 1992. Since the election of 1992, however, little has been heard of this proposal (E7208).

One vital reason why a lid was not imposed on the number of recruiters is that, at least in the Army, the effectiveness of the typical recruiter was maintained at a

consistently high level over the last 15 years--and, indeed, actually rose from 1996 through 2000, thanks in part to the absence of war in earlier years and the recent decline in the level of antagonism between the U.S.S.R. and the United States (T8419). Other factors internal to the management of USAREC also played a major role, of course, in sustaining and eventually raising the level of this trend.

Because this history focuses principally on the environment for Army recruiting, it is well beyond its scope to examine the management changes that occurred in USAREC over the past 15 years. For those who are close to those developments, however, it may be of some interest to present the results of a survey taken among Army recruiters (officers, NCOs, and civilians) in late 1986. The purpose of this survey was to evaluate a number of factors identified then as bearing on the ability of Army recruiters to achieve or surpass their current level of effectiveness in these 15 years. The respondents were asked to provide two judgments regarding each factor: (1) its seriousness then (i.e., its impact on recruiter effectiveness at the time of the survey) and (2) the probability that it would be eliminated or substantially reduced by 2001. The results are presented in the following:

Item	Factor	"Seriousness" at beginning of 1987 (0-10)	Probability of elimination by 2001 (0-100)
1.	Continued use of DA selectees.	6.6	59
2.	Unnecessary administrative paperwork.	6.4	51
3.	Lack of automated recruiter aids (e.g., laptop computer enabling recruit to make conditional acceptance in his own home).	4.5	56
4.	"Micromanagement" of recruiters.	6.5	46
5.	Inadequate managerial training of station commanders.	7.0	47
6.	Inappropriate restrictions on PMS.	4.9	34
7.	Lack of career recognition for recruiting service.	5.3	43
8.	Lack of recruiter training (e.g., on USAR options).	6.6	55
9.	Apathy among recruiters.	6.4	44
10.	Lack of flexibility in how recruiter can use his time.	4.8	51
11.	Inadequate personal involvement of battalion and company commanders to ensure that their personnel are doing what is required.	5.7	39
12.	Treatment of recruiters by commanders "as the highest paid privates in the Army."	6.4	34

Whatever the reality of the last 15 years in these areas, it is clear from the 1986 estimates that the typical factor was somewhat above 5.0 in seriousness and that there was not a great deal of optimism or certainty about the chances that it might be eliminated. (The latter point is confirmed by the average probability estimate, which is 47%.) In general, therefore, the forecast at the time was rather bleak, involving the likely continuation of a number of constantly needling problems that undercut Army recruiting effectiveness.

Some readers might wish to return to the preceding trend (T8419) and examine the question of whether the achievement shown there occurred despite these problems or because they were, in fact, overcome during this period--or, perhaps, because they were misunderstood or poorly evaluated in the first place.

* * *

Over the last 15 years, a key indicator for USAREC was the level of expenditures per new Army recruit (T8405). This indicator, which stood at about \$4,000 in 1986, rose to \$4,500 in 1990 and then \$5,000 in 1995. It then slowed its growth (in real 1986 dollars) to reach \$5,100 today. Overall growth from 1986 through 2000 equaled almost 28%, a substantial rise in view of the facts that the Army's budget and the recruiting budget itself held almost flat during this period. The explanation, in part, was USAREC's increased investment in equipment and facilities. More important, however, were the additional real expenditures required to deal with various complexities introduced by the environmental and internal factors discussed throughout this report.

Given the difficulties of recruiting in the past 15 years, it was perhaps surprising (and gratifying) that the DEP loss rate (GSMA) remained constant at 6% (T8439). As in the past, many contractees used DEP as a hedge against not getting a good civilian job or not being accepted in college. However, as in the past, many recruiters believed that somewhere between one-third and one-half of the DEP loss rate was entirely within the control of the recruitment system. In their opinion, that this proportion continued to slip away was often due solely to recruiter apathy. As one recruiter put it recently, "We cause most of our own problems."

* * *

Male hispanics aged 17-21 provided a growing pool of possible recruits over this period, rising from about 0.36% of the population in 1986 to about 0.58% in 2000. High unemployment within this group led to increased enlistments, the effect of which was to slowly increase the percentage of hispanics in the total active Army. This percentage rose from about 4% in 1985 to 5% in 1986 and then to 7% in 1995, where it has held since (T8411).

One of the negative consequences of this development was that substantial resources had to be devoted over this period to instructing recruits in the English language so that they could serve effectively. In this regard, it is important to note that the percentage of recruits for whom English was a second language increased from 9% in 1986 to 11.5% in 2000 (T8437). But the problem was not just one of language. Indeed, the ECLT probably kept out a number of hispanics who were not truly bilingual. This group also included a disproportionate share of non-graduate, Cat IV's, and a few B categories. That is, the underlying issue regarding these accessions was quality.

Male blacks aged 17-21 increased by 50% as a percentage of the population during this period, starting at about 0.65% in 1986 and ending at about 0.98% in 2000. Blacks as a percentage of the active Army, however, held constant at about 28% over the last 15 years (T8412). Had economic conditions for young blacks not been so desperate throughout this period, the recruiting job within this group might well have been less successful. Nevertheless, the Army was perceived as offering more opportunities, with less discrimination, than the private sector.

Male Asian-Americans aged 17-21, who represented a very small percentage of the U.S. population in 1986 (0.035%), increased to 0.042% by 1996 and essentially held at that level thereafter. Asian-Americans as a percentage of the active Army hovered between 2.0%-2.5% in the last 15 years (T8413).

The following table summarizes these developments. The values for whites are derived by inference from the preceding discussion.

Group	Percentage of the Army(%)		
	In 1990	In 1995	In 2000
Hispanics	6.0	7.0	7.0
Blacks	28.0	28.0	28.0
Asian-Americans	2.0	2.0	2.5
Whites	64.0	63.0	62.5

It is important to observe that women became an increasingly larger presence in the Army over the past 15 years. As a percentage of the total active force, their share rose steadily from 10% by the end of 1987 to 15% by the end of 2000 (T8414). This is consistent with the tendency (noted on pp. 6-7) for women to move into jobs traditionally held by males. The Army provided some (though not a great many) ready-made possibilities for females, as the opportunities for them in the civilian sector—with equal opportunity and pay—became more and more difficult to find.

Finally, stepping back from the many details in this report, we note an interesting possibility that has emerged over the years. For some recruits, the Army was always the service of first choice. Is it possible, however, that the Army could be the service of first choice for all recruits? Our historians have recently concluded that the probability was higher over the past 15 years than many contemporary observers thought. Their judgment is that the cumulative probability of this development from the end of 1986 reached 5% by 1991 and then slowly doubled over the years to 2001 (E8212). Among the major considerations that caused this increase were those we discussed earlier: the absence of war, the high esprit de corps in the Army, the Army's

high level of modernization, the "value match" between many young people and the Army, occasional surges in pro-military sentiment, a high level of public confidence in the Army's ability, the continuation of ACF and other attractive benefit programs, and the like—plus changes in Army advertising and a high level of effectiveness among recruiters, supported by a strong recruiting budget.

It might be noted that during this period several traditionally relevant motives for recruitment held their level of importance (e.g., M3, "To better myself"), while others (e.g., M1, "To be a soldier") were considered seriously more often than in the past. Still other motives became decisive more frequently (e.g., M20, "To belong to a group," or M22, "To find adventure/excitement," or M5, "To earn the respect of others"). At the same time, motives that merely concerned making money (e.g., M12 and M25) slipped somewhat in significance.

No one today expects that the Army will in fact become the service of first choice in the foreseeable future. But here, as elsewhere in these pages, it is clear that the environment over the last 15 years has been, on balance, a good deal more positive for Army recruiting than many persons in the early 1980's anticipated it would be.

POSSIBLE IMPLICATION FOR POLICY

As discussed at greater length in Chapter 5, the process of distilling policy implications from a scenario can be accomplished in various ways, all of them judgmental. The same is necessarily true when it comes to the development of policy alternatives for dealing with these implications.

The following paragraphs provide a few observations on the implications of the "most likely" scenario for Army recruiting. It should be recognized, however, that these thoughts reflect merely the judgment of the senior author of this report, who is not an expert on Army recruiting. That is, the results will surely represent the least satisfactory review of the "most likely" scenario. Chapter 5 makes it clear that the careful use of experts, preferably in some sort of collective or cooperative analysis of the scenario, will produce something very different: a far more exhaustive set of implications, sophisticated enough to capture the real subtleties in the data and authoritative enough to reveal much or most of the range of practical options for coping with future developments.

Presumably, a full policy analysis of the "most likely" scenario by Army recruitment professionals would generate many dozens of ideas. For example, in the Army's Professional Development of Officers (PDOS) study of 1984-1985, a quick review of that study team's 40-year forecasts by only a handful of officers enabled them to find nearly 75 specific policy ideas in just a couple of hours of concentrated brainstorming. Similarly, when the Army and civilian participants in USAREC's Futures Workshop met to review USAREC's first "scenario" in November 1985, a "scenario" that was actually only a small set of forecasted trends, they were able to identify at least as many ideas after only a day's discussion. Here, we will offer just six fairly broad observations.

First, it appears to a layman that the essential feature of the future presented in the "most likely" scenario is its quality of evolutionary change, unmarked by any abrupt or radical discontinuities. This recruiting environment is thus one in which management has several luxuries, among them the following:

- Crisis management is minimized.
- Decisions can have long lead times--i.e., plans and programs can be developed on the assumption that the environment will be reasonably stable during implementation down-stream.
- Options developed today can be maintained--i.e., efforts to develop a very full range of innovative management policies for the years ahead will not be wasted, because the environment itself, once understood, is not likely to close off many of these options.
- In short, management has extraordinary flexibility to do "the right thing."

Second, it appears that virtually none of the prospective developments described in the "most likely" scenario is directly within management's control. (Specifically, few if any of the trends or events numbered from 1000 through 6000 can be substantially affected by anything that Army recruiting management might do, and in many cases in the 7000-8000 series, the only possibilities to alter the directions forecasted will be modest--i.e., through advocacy efforts within the Department of the Army, which in turn might affect decisions within the Department of Defense, etc.) For this reason, it is largely pointless for recruitment managers to try to invent ways to change the world. Per unit of invested energy, it would be far better for them to find ways to change the recruiting process and recruitment system. As Voltaire suggested in *Candide*, the environment makes the case for concentrating on tending one's own garden.

Third, any changes internal to the recruiting system that are directed toward increasing the effectiveness of the recruitment sale are likely to be affected, sometimes strongly, by the degree to which plans and programs take explicit account of developments in the "most likely" future. After all, this future may be evolutionary, but it is not static. Tomorrow will be different from today, and there is an ebb and flow in many of the individual external forces that influence recruiting. Hence, the environment not only provides for management flexibility, but insists that it be used. Shifts in the economic sphere, for example, may require corresponding shifts in advertising campaigns and promotional materials. Shifts in the relative importance of the various motives of recruits may require the same, as well as new training programs for recruiters so that they can take advantage of the oppor-

tunities thus opened. Shifts in such factors as the maturity, computer awareness, economic objectives, and values of young people within target markets all imply pro-active preparation.

Fourth, changes internal to the recruiting system that are directed toward increasing the effectiveness (and efficiency) of recruiters (and thereby the rate of success in the recruitment sale) must be multi-dimensional. At one extreme, as suggested above, the recruiters themselves must be made aware, perhaps much more aware, of present and future developments in the environment. At the other extreme, attention will probably have to be paid to the sorts of administrative and stylistic considerations presented in the "most likely" scenario (p. 32). The latter were evaluated and forecasted in the context of this scenario, and the outlook for them was hardly encouraging. It seems clear, however, that they can, and perhaps should, be addressed independently of any scenario.

Fifth, it is vital to recognize that the "most likely" scenario was constructed from forecasts, not predictions. That is, a measure of uncertainty is associated with each projection. Sometimes, as indicated by the upper and lower quartiles in the graphs, this uncertainty is very great. In policy development, it cannot be ignored. And if it cannot be reduced, then the premium falls on inventing policy alternatives that will enable the Army recruiting system to do well no matter how things begin to develop. This is not simply a question of contingency planning, which, of course, is essential. It is also a question of searching out policy options that are as robust as possible--i.e., that "work" across as many future environments as possible.

Finally, there is a danger that the "most likely" future--or, indeed, any alternative future--might somehow be taken as final and, hence, that the policy suggestions derived from it will also be considered equally final. For reasons discussed at the beginning of this chapter, these are serious errors. An additional policy idea is implied by the fact that scenarios are transitory things--namely, that from time to time the scenarios should be updated to ensure their continued value in policy planning.

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4. ALTERNATIVE FUTURES

INTRODUCTION

In this chapter we present three scenarios that are alternatives to the "most likely" future:

- Scenario A: Assertive America
- Scenario B: Compliant America
- Scenario E: Chaotic World

These three were selected from a much larger set of possibilities because of the differences they reveal about the future environment for Army recruiting and, hence, the recruitment challenge in these environments. They are not intended as a "worse case" or "best case"—an approach to scenario-writing that we reject as dangerously misleading. (See Appendix C.) Thus, they do not represent the outer limits of the possibilities that the Army recruiting system may actually have to confront.

These scenarios merely represent interesting and fairly realistic possibilities implicit in the results from the Delphi position of this study. What sets one future off from another is the nature of the events that occur in the scenario and the sequence in which these events occur. In the "most likely" scenario, only one of the forecasted events occurred: A cure for AIDS was found. But this event was not forced to occur. It was actually forecasted to occur, and this forecast was simply described. The same was true for all of the other Delphi events. That is, the "most likely" future merely described the anticipated probabilities (or, more precisely, the medians).

Of course, because any event can happen once its probability exceeds zero, and because every event in the Delphi eventually exceeded zero, there are many possible combinations and permutations of the events. As a matter of fact, the number of futures that can be distilled only from the Delphi set of events is practically infinite.

Distilling these futures is probably done most efficiently (and rigorously) through the use of a futures research technique called cross-impact analysis. (See Appendix E for details.) In such a model, events may be allowed to happen randomly, in accordance with their probability, or be forced to occur in some fixed order. In the first case, the model then traces out the way in which the occurrence of a particular event affects the probabilities of the remaining events, as well as the occurring event's effects on the forecasted level of each of the trends. In the second case, the model outputs only the trend impacts. (In effect, the event-to-event impacts are eliminated once the order of occurrence is specified.) After all of the events have been decided to occur (or not to occur), the result is a distinct path of developments. Such a path provides the basic data needed to write the scenario for the case in question.

Scenarios A and B were generated by allowing the model to run on the basis of the Delphi probability estimates. In contrast, Scenario E involved forcing the events to occur. To produce as much action as possible in Scenario E, the rule was used that an event would happen in the year in which its cumulative probability curve reached 10%. On this basis, virtually all of the events were decided to occur, and, although the rule is quite arbitrary, the resulting path is nonetheless possible.

Incidentally, Round 1 of the Delphi invited the participants to suggest other events of equal or greater significance. These ideas were edited and fed back for evaluation in Round 2. Table 4.1 shows the resulting median probability estimates for these new items, which should be interpreted as their probability in the "most likely" future.

Although these newly suggested events were not subjected to the full Delphi process, and hence are not included in the "most likely" scenario presented in Chapter 3, the seriousness with which some of them were addressed in Round 2 indicated that they might well be worth carrying forward into the generation of the alternative futures. An asterisk following an event number indicates an item included in the model.

Table 4.2 presents the complete list of events used in the cross-impact analysis. As discussed in Appendix E, it represents a radical reduction of the full set. Cutting the number of events to 28 was necessitated by the limita-

tions of the cross-impact model we used. For the same reason, a cut also had to be made in the number of trends that could be processed in the modeling effort. In the end, only the 78 most interesting and perhaps most policy-relevant trends were included.

Note that Table 4.2 also shows the year in which the events occurred in the scenarios. This listing, plus the underlying estimates of the cross-impact factors and the revised forecasts of the trends, provides all of the "objective" data available to the scenario-writer as he begins his task. What makes it possible to prepare the alternative scenarios is an awareness of these data and recollection of details from the "most likely" scenario, both augmented by imagination.

Scenarios A and B are written as narratives, after the model provided by the "most likely" scenario. Scenario E, as will be seen, is structured as an outline. We have chosen this format for several reasons. First, it allows the reader to see something of the kind of outline actually followed in writing Scenarios A and B. As suggested a moment ago, the art of writing narrative scenarios lies in the attempt to synthesize the available material in a way that is faithful to the data (including the cross-impact estimates), plausible, internally consistent, and interesting. All of the causal relationships in the narrative (other than the cross-impact relationships), as well as all of the concrete details not in the statement of the various trends and events, need to be invented by the scenario-writer in order to meet these objectives. None of this material is included, of course, in Scenario E. The reader must invent it.

Second, the form used to present Scenario E allows the reader to appreciate better the cross-impact relationships in our model. As discussed in Appendix E, the cross-impact factors show the causal linkages among the events and between the events and the trends. The overall model is not shown in Scenario E, but enough is presented to indicate the complexity of its structure. As will be noted, the listing in Scenario E includes only the trend impacts of 15% or more, produced by the occurrence of the event on the trends in question. More precisely, it shows the maximum impact of the event on the trend, if it is at least 15%. Also shown is the number of years required for the maximum impact to be felt. A zero in this column indicates that the impact would be instantaneous. Not shown are how long the maximum impact is likely to be felt on the trend, nor the final value of the impact, which sometimes has a sign opposite to that for the maximum. Finally, to keep this scenario as simple as possible, no trends with impacts less than 15% are included, though there were many of them.

A third reason for presenting the "chaotic world" scenario in this format is that it represents a well-established alternative to the narrative scenario. This alternative, which is a variation on what is sometimes called the "branch-point" scenario in national security planning, enables the user to focus immediately on the specific events that have the greatest effect on the shape of the future, for better or worse. The consequences of the occurrence of these crucial events are simply listed, which makes them stand out more than in a narrative scenario. (Indeed, the rhetoric of the narrative scenario usually permits the author to include only the more important consequences.) Hence, the identification and evaluation of policy alternatives to deal with the key impacting events and their consequences can be accomplished faster. The trade-off one makes in using a branch-point scenario is between this increased efficiency in policy analysis and the difficulty faced in trying to weave together the logic of the pattern of event occurrences and impacts.

Scenario E will thus give the reader the opportunity to construct the "chaotic world" future--i.e., to imagine how it really could happen. In the "Trends" section of Volume 2, we present a number of trend projections to show how it did, in fact, materialize in our model.

Table 4.1

Events Suggested by the Delphi Respondents

	New event	Median probability estimate by the end of:		
		1990	1995	2000
E7210.*	Congress modifies the military retirement system so that new accessions must fulfill a longer period of service or reach a minimum age of 60 to collect benefits.	30	30	50
E7211.	Congress begins limited inductions to fill critical military unit vacancies.	10	10	10
E7212.*	Joint recruitment advertising is mandated for all of the services; individual advertising is prohibited.	25	40	50
E7122.	Western Europe becomes a nuclear-free zone.	5	10	15
E8213.	The Army makes a massive transition to battlefield robotics applications.	5	5	10
E8214.	Army recruitment emphasis on quality produces minority underrepresentation in the Army. Congress mandates minority quota recruiting.	10	15	25
E7123.	Moslem fundamentalists achieve control of Saudia Arabia and other key Arab States, precipitating a protracted war with Israel and a major oil crisis.	10	13	15
E7124.	Japan rearms, assuming full responsibility for its own defense.	10	20	25
E6103.*	A major civil disaster occurs (e.g., a meltdown in a nuclear power plant in the Northeast Corridor or a massive earthquake on the West Coast).	10	25	30

*Included in the cross-impact model.

Table 4.2

Events Included in the Cross-impact Analysis

	Event	Year of occurrence		
		A	B	E
E2201.	Major riots by the poor occur in a number of large cities, causing many deaths and significant property damage.		1997	1992
E4101.	A world depression begins (i.e., unemployment reaches 15-20% in the advanced industrial nations).	1994	2000	1992
E4202.	Large private corporations establish lucrative college student financial aid packages with follow-on employment obligations.			1989
E5101	The Communist Party in a NATO country comes into power on the national level.	2000		1988
E5105.	The PRC and the U.S.S.R. re-establish full economic and diplomatic ties.			1990
E5106.	A pro-Soviet Communist government takes over in Mexico.	1995	1992	1989
E5107.	A verifiable mutual freeze on nuclear weapons production and development is agreed upon by the United States and the U.S.S.R.			1989
E5201.	An anti-military President takes office.			1993
E5203.	Congress mandates at least two years of national service (either civilian or military) for all 18 year olds.			1994
E8101.	The Army is assigned the mission of security of major public utilities and other essential facilities.			1991
E6103	A major civil disaster occurs (e.g., a meltdown in a nuclear power plant in the Northeast Corridor or a massive earthquake on the West Coast).		1992	1991
E7101.	Massive demonstrations for arms control and reduction occur throughout the Western World.	1994		1988
E7103.	Congress mandates withdrawal of a large number of troops from foreign soil (e.g., Europe, Korea, or Central America).		1989	1990
E7107.	A "terrorist state" (e.g., Syria, Libya) initiates a program of indiscriminate, random attacks within the United States	1989	1991	1987
E7109.	The number of nations known to possess nuclear weapons reaches at least 15.		1994	1992
E7110.	The United States is involved in an international confrontation at least as dangerous as the Cuban Missile Crisis in 1962.	1991	1989	1988

Table 4.2 (continued)

Events Included in the Cross-impact Analysis

	Event	Year of occurrence		
		A	B	E
E7113.	The United States is involved in a popular low-intensity conflict--and slowly loses.			1994
E7120.	The United States is involved in a high-intensity conflict in which chemical or biological weapons are used.	1992	1999	2000
E7202.	Congress institutes a draft for the active component.			1993
E7204.	Congress imposes a military wage freeze.			1988
E7205.	The armed forces are required to eliminate enlistment bonus program.			1989
E7206.	Terrorists successfully attack a U.S. nuclear power plant, producing a massive release of radioactivity.		1992	
E7208.	Congress imposes a ceiling on the number of authorized recruiters.			1988
E7210.	Congress modifies the military retirement system so that new accessions must fulfill a longer period of service or reach a minimum age of 60 to collect benefits.	1991	1990	1988
E7212.	Joint recruitment advertising is mandated for all of the services; individual advertising is prohibited.		1994	1988
E8201.	The Army is assigned the mission of security of major public utilities and other essential facilities.	1993		1991
E8202.	The President directs Army troops to patrol the border between United States and Mexico.			1991
E8208.	The Army drops its Army College Fund program; no substitute is provided.	1999	1994	1988

SCENARIO A: ASSERTIVE AMERICA

For a time, the late 1980's appeared to be following the track anticipated by most observers in 1986. Economic growth was steady, if unremarkable. Inflation remained low. Job opportunities materialized as expected, though unemployment hovered around 7% and young people aged 17-21 were much worse off, particularly if they were part of an ethnic or racial minority. Army recruiting proceeded on course.

Apart from the short-lived spectacle of the Iran-Contra hearings, no doubt the most important development of the 1987-88 period was that, once again, the Nation was absorbed in Presidential politics. The major parties had many contenders for the Presidency, and 2 full years of debate and candidate-sponsored media events, plus an unprecedented amount of media sniping, were required to sort out the final contenders. The election itself, however, produced a lop-sided victory for a candidate who, it turned out, was very much like a John F. Kennedy--though without the charisma--in foreign policy and defense issues, an incipient hard-liner, but in domestic affairs, slightly to the left. Of course, long before the last primary was over, the Nation had come to interpret phrases like "slightly to the left" to mean merely that the candidate was supportive of a tax increase on personal and corporate income to reduce budget deficits, of tit-for-tat protectionism as a legitimate way to restore the U.S. economy, and of cuts in defense spending to support major Federal efforts to repair the Nation's infrastructure, the educational system, and the so-called safety net, particularly for health care.

Throughout the long campaign, the new President had made clear his determination to use "all of the powers at his disposal" to achieve his programs. What he had not counted on, however, was a sudden, bold, and perhaps insane move by the Libyan dictator in September 1989, on the 20th anniversary of his revolution and just a year and a half after President Reagan's action to eliminate all Iranian missiles threatening oil shipping in the Persian Gulf. After much careful planning (and training), Libya launched a program of random, indiscriminate terrorist attacks within the United States (E7107). At the outset, of course, Libyan sponsorship was not known, although it was clear from the terrorists' messages to the media and Federal and local authorities that the purpose of these attacks was to weaken "America's insidious efforts, directly and through Israel, to block a just settlement of Arab and Muslim grievances in the Middle East."

In the year that followed, the number of terrorist acts against Americans jumped 20% (T7201). The carnage was often appalling. Domestically, the social effect was to induce both fear and outrage, as indicated, in part, by an obvious decline in the public's sense of optimism about the future (T2216), a suddenly deepened intolerance of those who behaved--or even looked--out of the ordinary (T2210), a rise in the acceptance of traditional values (T2209), a massive increase in popular support for the military (T2224), and increasingly intense public pressures for the Government to "do something." A feeling took hold that a truly major disaster was in the offing, such as an attack on a nuclear power plant that would release massive radiation (E7206).

As the months wore on and the situation worsened, the consequences for the recruiting system proved to be positive. The evident maturity of young people increased (T2212), as did the sense of patriotism of those aged 17-21 (T2211), with the effect that the "value match" between new recruits and the Army increased significantly (T8438). Moreover, given the seriousness of the threat and the increasing likelihood that the Army might be involved both internationally and domestically--e.g., in protecting public utilities (E2201) or guarding the borders (E8202)--the effectiveness of the typical recruiter in making the recruitment sale was increased (T8419); there was an external challenge to meet. Not incidentally, the general level of Army esprit de corps rose accordingly (T8407).

Politically, the effect was to dash many of the new President's hopes for his platform promises, particularly those concerning the defense budget and the conduct of foreign policy. For instance, his intention to reduce substantially the U.S. military presence overseas was almost totally undermined (E7103). His intention to cut military spending was blocked, as Congressional support for the military--and a military solution to the terrorist problem--rose (T5201), though far more temperately than it did among the general public. Worse by far, however, was that the eventual discovery of Libya's role led the Administration, first, to a bitter public denunciation of that regime and, second, to highly visible preparations for a direct and full-scale military response. The President stated that the "United States will not be passive; it will not negotiate with a terrorist state; and it demands an immediate halt to these despicably barbaric acts." And he reminded the world of his often repeated intention to use his powers to the fullest if the Nation were threatened.

What made these actions and assertions dangerous was not that Libya could withstand a massive U.S. assault. It appeared very unlikely that it could. Rather, it was the potential involvement of the Soviet Union. The chaos in the Middle East following the sputtering out of the Iraq-Iran war by 1988, the U.S. elimination of Iranian control of the Straits of Hormuz, the rise in fractionalism among Muslim fundamentalists after the death of the Ayatollah, and the gradual strengthening of the OPEC cartel had provided many opportunities for increased Soviet influence in the region. Moreover, just as Krushchev had found that "peaceful co-existence" implied a doctrinal shift that was eventually intolerable to the rest of the Soviet political leadership, so Gorbachov found that "glasnost" was an insufficient foundation for U.S. relations when playing hardball on contested courts. Though the U.S.S.R. had no defense treaty with Libya, it perceived that a U.S. action there would jeopardize its recently achieved level of influence throughout the Middle East, and it was compelled, therefore, to warn the United States of "absolutely grave risks to its own territory" if it were to proceed against Libya. To underscore this message, the Soviets began shipping and airlifting huge quantities of armaments to Libya, accompanied, at Libya's request, by a growing number of Soviet military advisors.

As 1991 began, a particularly vicious terrorist act in a Chicago shopping center caused the President to transmit a very long and rather rambling message over the Hot Line, declaring that the patience of the United States with Libya was at an end, that the differences between our Government and Libya were "not a matter requiring the mediation of the Soviet Union," that the Soviet Union should "take all steps necessary to extricate itself from its unfortunate support of that regime" (including returning its advisors), and that, in any case, the American public was prepared to "accept any risk" to halt the terrorist threat. This message ended by asking about future Soviet intentions in or regarding that country. Incredibly, the Secretary General responded publicly in a speech to the Soviet Congress that produced global alarm because it echoed in many ways the tone of scorn and ridicule toward the President that Hitler had adopted in his remarkable speech to the Reichstag in reply to a similar letter from President Roosevelt in early 1939.

At once, the United States found itself in an international confrontation at least as dangerous as the Cuban Missile Crisis of 1962 (E7110). Not only was there an escalation in the level of antagonism between the United States and the U.S.S.R. (T7106) and between NATO and the Warsaw Pact (T7105), with a concomitant drop in the actual and perceived level of strategic nuclear stability (T7103, T7104), but the American public came quickly to support the President (T2211, T2224), the Congress was dragged along (T5201), and, indeed, military appropriations were increased (T8401).

A significant victim of these developments was the Administration's domestic political program, especially those parts of it pertaining to sewing the safety net back together. The elderly, one of the President's strongest blocs during the 1988 campaign, found that their political clout was reduced substantially in the election of 1992 (T5202).

Initially, the recruiting system suffered also. Although many indicators descriptive of the attitude of young people moved favorably (T2211, T2212, T8438), the fact was that the growing danger of nuclear war increased the probability of arms control demonstrations (E7101) and undercut the effectiveness of both the Army recruiter (T8419) and Army advertising (T8404). The 1991 Army recruiting mission was missed by about 2,000 recruits. ("After all," said some who might have been recruited, "being all that I can be doesn't include being the first to be vaporized.") Female enlistments dropped sharply (T8414) and the DEP rate rose sharply (T8439). Ironically, in the midst of these developments, Congress modified the military retirement system so that new accessions had to fulfill a longer period of service or reach age 60 to collect benefits (E7210).

Meanwhile, emboldened by the apparent Soviet support, the Libyan terrorists, now apparently joined by other Arab groups, increased the frequency and violence of their efforts (T7201).

In the months that followed the Secretary General's derisive answer to the President, the election campaign of 1992 moved bitterly but inevitably toward the President's re-election. The President's major opponent knew that in the present international climate his loss was assured, if only because he was widely viewed as being "anti-military" (E5201). Nevertheless, he forced an acrimonious debate on national security issues, one that was peculiarly reminiscent of the Goldwater-Johnson clash in 1964—"peculiar" because, in this case, the incumbent did not try to appear more dove-like than the challenger, but merely insisted that the "responsibilities of a great power had to be met." The terms of this debate were such that the public was swept by waves of patriotic fervor

(T2211), pro-military sentiment (T2224), fear (T2204), powerlessness, and despair (e.g., the percentage of high school seniors foreseeing a nuclear war in their lifetime--T2217--rose substantially).

During this period, the United States completed its preparations for a full-scale invasion of Libya (and, if necessary, Syria); consulted privately (but not very successfully) with its NATO allies; used every forum at its disposal to warn the Libyans to desist and the Soviets to back off; and, finally, in late 1991, announced that "shortly, at the time of its choice and using the means it believes to be appropriate, the United States intends to put an end to this scourge on human decency and international order." At a session of the United Nations Security Council, the U.S. Ambassador stated flatly that, with or without the Security Council's approval, the United States would take these steps very shortly--in fact, "on the next provocation"--and that the Soviet Union "would be well-advised to look immediately to its own best interests and avoid the awesome peril that will inevitably be manifest in any attempt to deflect the United States from its present course."

Weeks before these pronouncements, United States, Israeli, and French intelligence had confirmed that Soviet advisors were being withdrawn from Libya. Even today it is not known authoritatively why, although it is suspected that the leadership was importantly affected, for the first time, by widespread public opposition to its position--a legacy, perhaps, of the Soviet war in Afghanistan. In any event, the fairly rapid Soviet departure left the Libyans confused, and for a time they halted their actions in the United States. In fact, the United States had succeeded in winning world opinion to its side.

That might have been sufficient to put the matter to rest, but on February 12, 1992, a die-hard cell of terrorists in San Francisco, apparently seeking to kidnap or kill the President's national security advisor (who was known to be flying into San Francisco Airport on that day), threw the entire Bay Area into chaos and shock. Simultaneously, at 3:30 p.m., it caused major traffic accidents that blocked traffic in all directions at the intersections of Highways 101 and 230, 280 and 380, and 101 and 92, thus producing the greatest traffic snarl in the history of the automobile. At the same moment, with the airport now isolated, the terrorists hit and took control of the tower, just as the national security advisor's plane was on approach to land. Gunshots had alerted several pilots in other planes on the ground, one of whom identified exactly what was happening and was able to warn the advisor's plane away. Two days later, when troops from the Presidio had recaptured the tower and the destroyed communications and radar equipment had been replaced, the Bay Area began to return to normal. None of the 16 terrorists had survived; 33 other persons also died (6 of them in the highway turmoil) and another 27 had been badly wounded. Incontrovertible evidence linked the terrorists to Libya.

The President recognized that this was the moment to strike: the provocation was intolerable, war plans had been laid, public opinion was overwhelmingly on his side, and the Soviets were virtually gone from Libya. The United States-Libyan war was launched, following a declaration of war by Congress, on March 1, 1992 (E7120). It seemed to all observers a certain easy victory.

Confident of defeating the Libyans and unwilling to jeopardize the public's extraordinarily high level of support, the President tempered his use of force somewhat. As later historians remarked, this moderation provided further evidence of Santayana's point that those who ignore the past are condemned to repeat it. After all, there were several 8-to-10-year wars that provided ample warning: the French against the FLN in Algeria, the Americans against the Communists in Vietnam, the Iraqis against the Iranians, the Soviets against the Afghans, the Contras against the Sandanistas, etc. Initially, however, this strategic shift hardly seemed to matter; for instance, the United States was quickly able to establish total control of the air and to establish beachheads on the ground. In short order, however, three developments conspired to turn this "puny little war" into a disaster. The repercussions for the Nation--and, indeed, the world--proved to be terrible.

The first was that the Libyan forces turned out to be remarkably invulnerable to the U.S. onslaught. Having cleverly prepositioned their massive stocks of Soviet war materials and having essentially full participation of the population, the Libyans were capable of waging a terrorist war on their own soil. The odds still favored the United States, of course, but within the first 6 months the conflict had been transformed into a grueling war of attrition. Worse by far, however, was that as the months wore on, the Libyans became more confident. In September 1992, this led them to escalate the war by introducing the large-scale use of chemical and biological weapons. U.S. ground forces were completely unprepared for this development, and they began to incur frighteningly high rates of casualties.

This turn of developments shocked the world and, almost instantly, turned public sentiment in the United States against the declared war. Public optimism about the future was shattered (T2216). Support for the military tumbled (T2224), and there was a significant decline specifically in the public's confidence in the ability of the Army to achieve its combat mission (T2222). Army esprit de corps fell accordingly (T8407). The initial enthusiasm for the war, particularly among young people, was immediately dashed, as manifested not only by a sudden drop in patriotic feelings (T2211) and other conventional measures, but also by a rise in obvious actions to avoid being drawn into the military--e.g., a decline in the high-school-dropout rate (T2203), a surge in college enrollments (T2204, T2205), greatly heightened competition for the military from the private sector for high school and college graduates (T8424, T8425), a major jump in the DEP loss rate (T8439), etc. The Army recruiting mission increased 20% over the 1986 level during this period (T8423), but the difficulty and cost of meeting this contract increased even more (T8404, T8419, T8405).

The second development was that this terrorist war came to have two fronts: one in Libya, the other throughout the United States and, in fact, wherever Americans were to be found. The number of terrorist incidents against Americans increased by 10% as the war reached a peak of intensity in 1993-1994. Great fear captured the people, particularly as they imagined such possibilities as the poisoning of public water supplies, nuclear threats against whole cities, the use of nerve gas against large assemblies, the destruction of major power supplies, etc. Americans assumed a siege mentality, bitter and distrustful. Shooting incidents were not uncommon. Although the public's worst fears never materialized--thanks in part to Government actions like the 1993 decision to assign the Army the mission of security of critical utilities and other essential civilian facilities (E8201)--it became increasingly clear to the Administration that the Libyan War had to be brought to a quick end.

The third development made the end inevitable. When the war began in 1992, the United States and other advanced industrial countries were in the midst of an economic revitalization unlike any seen since the Great Bull Market of 1982-1988. The war fueled growth, just as it had for Presidents Truman and Johnson; in fact, the rate of growth in GNP increased by one-half from 1992 to 1994 under this influence (T4201). But there was a price to pay: inflation more than doubled (T4202) and the national debt increased (T4203). As in some past recoveries, however, the earlier signal of revival was a sharp rise in stock prices, and such a rise was already well along when the war began in 1992. Indeed, the exchanges soared, with the Japanese market once again leading the way. Price-to-earnings (P/E) multiples of 60-80:1 were again common in Japan.

Unfortunately, the Japanese stock market crashed utterly on November 24, 1993, when there was a massive simultaneous sell-off by profit-takers who left other major investors holding the bag, unable to meet their margin calls. Lacking the safeguards built into the U.S. system after 1929, the Japanese market suddenly lost some 40% of its value. The effects quickly changed the world economy. Tragically, one of the first consequences was the Japanese liquidation of its U.S. assets, an action followed almost immediately by Arab attempts to do the same. This put the United States in a position where it could only meet these obligations, continue to service the national debt, and pursue the Libyan War by substantially increasing the money supply. In turn, as might have been expected, this produced havoc in the economy: interest rates soared, the U.S. market collapsed, investment in plant and equipment ceased, and unemployment jumped, soon reaching 15%-20% for the labor force as a whole (T4217) and much higher levels for 17-21 year olds (T4218), especially hispanics (T4219) and blacks (T4220). Thus began the Great Depression of 1994 (E4101), a global calamity whose effects are still being felt today, in 2001.

Needless to say, this depression made it far easier for the military services, including the Army, to meet its manpower objectives, despite the horrors of the war in Libya. Moreover, not only were recruitment costs significantly cut (T8402, T8403, T8415, T8405), but the quality of accessions increased, because of the competition for the available slots (T8432, T8433, T8435). Of course, the DEP loss rate dropped virtually to zero (T8439). Not surprisingly, the number of female recruits increased in this situation (T8414).

The Western World, racked by the effects of the depression, tended to hold the United States responsible. Many pointed especially to the war as the ultimate cause of the catastrophe. Additionally, as the depression deepened in 1994, there was an ominous rise in the seriousness of various superpower rivalries: directly between the United States and the U.S.S.R. (T7106), between NATO and the Warsaw Pact (T7105), between North and South Korea (T7110), between Taiwan and the PRC (T7112), and between the United States and the PRC (T7107). Other destabilizing rivalries grew in significance, notably between India and Pakistan (T7109) and, to a

lesser extent, among the nations of the Middle East (T7108, T7114). By the end of 1994, spontaneous massive demonstrations for arms control and arms reduction--to say nothing of demonstrations against the United States-Libyan War--occurred throughout the Western World (E7101).

Under this complex interplay of military, political, economic, and societal forces, the Western World turned toward the left for solutions. In Mexico, for example, where the economy was in complete disarray, a revolution in 1995 brought a pro-Soviet government to power (E5106).

By this time, the United States was open to virtually any solution to the Libyan War. An answer was precipitated in 1995 when Gorbachov's successor proposed to the United Nations that the U.S.S.R. be given a trusteeship over Libya--an astonishing idea if only because it was identical to a proposal made by Stalin after World War II. At this point, the United States finally accepted the advice of its allies and threw the entire matter into the hands of the Security Council. Before the year was out, the Council had agreed to establish a peacekeeping force (including Saudi, Polish, and Danish troops) to stand between the Americans and the Libyans until a formal peace agreement could be negotiated. This was accomplished before the November Presidential election in the United States; the terms amounted to the admission of a stalemate. This fact, coupled with the recollections of the war and the economic suffering everywhere, assured the defeat of the President's party and the coming into power of a very liberal administration in 1996.

The years that followed witnessed unremitting efforts to rebuild the domestic and global economy. By the late 1990's, when the depression reached its bottom, the U.S. Federal debt had increased by some 25% over the 1986 level (T4203).

For many reasons, the United States was nevertheless viewed as a beacon by others, especially in Latin America, and illegal immigration proved to be a major problem in this period. The new Mexican government also produced waves of political refugees who tried to come north. Inasmuch as unemployment was still very high in the United States (T4217-T4220), real median household income was much lower than in 1986 (e.g., T4223), the number of two-income families had been cut substantially (T4206), the percentage of families (T4225) and children under 16 (T4226) in poverty was large indeed, family members were increasingly banding together in order to survive (T1209), etc., these migrants became a ready political issue.

From the public's point of view, some of the Army's prestige was restored when, in 1999, the President ordered Army troops to patrol the border between the United States and Mexico (E8202). Although this assignment caused Army esprit de corps to fall (T8407), and recruitment became difficult because the duty seemed to many potential recruits to be demeaning (T8404, T8424-T8427, T8439), the public was supportive (T2224). In fact, when the Army successfully obstructed the Latin American terrorists who were using the "closure of the border" as a reason for launching actions in California and Texas (T7201), the public's support of the Army as a highly capable military institution jumped significantly for a time (T2222).

As the 20th century came to an end, the world was a stiller, smaller, more sullen place than it was 15 years ago. Government intervention in the economy of individual nations has been substantial, with a corresponding loss of personal freedom, but a greater acceptance of traditional values (T2209). Hostilities of the cold-war variety are prevalent as haves and have-nots eye each other warily. The United States still leads the Western alliance, though uneasily. (For instance, one of the NATO countries installed a Communist government in 2000 (E5101), thus threatening the entire alliance structure.) Fortunately, perhaps, no one now in power sees any serious immediate military threat either to the alliance or, indeed, to specific U.S. global interests. Where it thought necessary, the United States had asserted itself in the past. This may also be required in the future, of course. But for the moment, the agreed-upon need is to rebuild the economic system both nationally and internationally.

SCENARIO B: COMPLIANT AMERICA

Over the last 15 years, the United States allowed itself to back off repeatedly from international confrontations. It reversed long-standing major policy positions in an attempt to avoid conflict. Its focus was increasingly inward--in part, because of domestic calamities (like the West Coast earthquake of 1992) and, in part, because of a return to a "Fortress America" approach (especially after Mexico installed a Communist government and, perhaps independently, international terrorism finally hit home in the United States in a serious way). It suffered an oil embargo with the same surprising patience as the supply disruptions it endured in the 1970's. But pressures to "strike out" increased as the Nation seemed to lose its self-esteem and confidence. These forces burst forth in 1999, with the United States becoming a combatant in a bitter (and still ongoing) war in the Middle East. This war has been fought with unusual ferocity for a post-WWII conflict. Indeed, chemical and biological weapons are in general use. Moreover, the politics and economics of this war have been such that the world has now been brought into the beginnings of a global depression.

The Army's ability to recruit and maintain a high-quality force was made easier by the absence of war during most of this period, as well as by serious economic problems that caused greater than expected unemployment. In the last 2 years, with United States involvement in a war employing chemical-biological weapons, the recruitment challenge has been intense.

Nuclear Stability

This period from 1987 to 2001 turned out to be far different than was expected in 1986 with respect to the stability of the strategic nuclear balance (T7103). In 1986, it was thought that a relatively high degree of stability was likely through the rest of the century. However, the United States found itself at the brink of a war in the early part of this period (E7110), which threatened the entire system of deterrence.

In an attempt to cool down the level of tension between NATO and the Warsaw Pact countries, the President brought all troops based on foreign soil back to CONUS (E7103).

Once American troops were brought home, however, nuclear stability increased dramatically, even exceeding what had been expected previously. Unfortunately, the situation was relatively short lived. The balance was challenged in 1992 when the Mexican government went Communist (E5106), and plummeted shortly after it was definitely confirmed that the number of nations with a nuclear capability had risen to 15 (E7109).

Perceptions of both the American public and the Soviet populace did not dovetail with this rise and fall of nuclear balance stability. It is interesting to note that the Soviet perception (T7104) was much closer to the reality of the situation than was the more sanguine view of the American public (T2220). Even last year, when stability was at its lowest, the American populace was more confident than it should have been. The Soviets, however, were much clearer in their realization of a genuine threat that year. One rationale given by sociologists was the panic the American public experienced in 1989 when the United States was at the brink of war. Having experienced real instability, the American public became cautious and withdrawn until it was evident that we could not avoid fighting in a war in the Middle East.

In this regard, young people appeared to be more perceptive than the general population. It is interesting (and frightening) to note that a poll taken last year showed that 50% of American youths expected a nuclear war in their lifetime (T2217). Although patriotism was high, recruiters clearly combated the concern of potential recruits that they would be facing not conventional warfare, where skill determined outcome, but nuclear warfare, where skill was less significant than timing. Consequently, in their recruitment strategies, Army recruiters focused on the importance of a strong military to act as a deterrent to nuclear war.

Regions Of Antagonism

Armed conflict was only narrowly averted in many sectors of the world from 1987 to 2001. In the troubled Middle East, however, tension eventually erupted into full-scale combat (E7120), with extremely serious military, political, and economic consequences for the United States.

In the early part of the period, as indicated earlier, tensions in Europe between NATO and Warsaw Pact countries (T7105) peaked in 1989, just short of war, but were dramatically reversed thereafter when all U.S. forward stationed troops were brought back to CONUS, clearly demonstrating U.S. sentiment for peace at almost any price.

In Asia, the long-standing antagonism between North and South Korea reached a very high level at the end of 1990. Following peace efforts by the United States, tensions decreased somewhat but still remained at a relatively high level throughout the period (T7110). In contrast, the PRC and Taiwan managed to stabilize their political differences during these years (T7112). Pakistan and India experienced a worsening of differences, with tension becoming most severe from 1994 to 1996 and again in 2000. Unless peace efforts are initiated quickly, war appears unavoidable in this region within the near future (T7109).

In Central America, high tensions remained the norm between Nicaragua and her neighbors throughout the period (T7111).

Thus, in these regions, U.S. allies faced constant threats to peace and stability throughout this period. As noted, the United States played a peacekeeping role while maintaining a high state of readiness in the military. Recruiters looked for individuals who were multi-talented, e.g., spoke one or more foreign languages, and were easily trainable, as it was unknown where troops might be deployed during this period and the high state of world tension required increased realism in training and demanded extreme dedication of purpose among combat arms, CS and CSS.

War

The traditional fear, hatred, and antagonism between Israel and her Arab neighbors peaked in 1996 and remained at this level throughout the period (T7108). Fortunately for Israel, the level of antagonism among the other Middle Eastern nations was also high during the last 15 years (T7114), which kept them from uniting against her in hostilities. Their only success among themselves was destructive to the world economy. It occurred when two major players in the region, Saudi Arabia and Kuwait, finally relented to pressure from other OPEC states and reduced petroleum exports to the United States, thus beginning the highly disruptive oil crisis of 1997 (E6101).

In the meantime, Libya continued its policy of overt support to the PLO, providing arms, training, and a base for terrorist attacks. Open conflict between Libya and Egypt culminated in a full-scale war that began in 1998, when the PLO, based in Libya, attacked Egypt. In order to gain an immediate advantage, Libya resorted to the massive use of chemical/biological weapons and, had it not been for quick U.S. intervention, might have overwhelmed Egypt. U.S. active involvement (E7120) appears likely to contain Libyan aggression, though the war drags on. The horrors of this conflict have made Army recruiting very difficult.

The Soviets have remained uncharacteristically quiet about events in the Middle East, preferring to concentrate on their own economic developments.

GNP, Federal Debt, And Inflation

The U.S. economy experienced a 3% growth rate in GNP (T4201) until the recession in the early 1990's. The recession was caused, in large part, when the long-feared California earthquake became a devastating reality, nearly toppling San Francisco and severely crippling thousands of small and large high-tech companies throughout the Silicon Valley (E6103). Fortunately, the loss of human lives was kept to a minimum by an effective monitoring and early warning system. The effect on the economy was not as fortunate. Mass unemployment occurred in the Silicon Valley. Venture capital to reconstruct these firms was not immediately forthcoming since it was generally believed that the situation in the Valley would be "hopeless" for many years. Worse yet, perhaps, were the effects of the loss of financial records in major banks, which led to the collapse of several major Western financial institutions. Indeed, the economic effect of the earthquake was felt throughout the entire country.

By 1995, however, the growth in GNP was back up to its predicted level. Then, unexpectedly in the fourth quarter of 1997, an energy crisis arose as a consequence of increased tension in the Middle East, as indicated earlier.

The results of the energy crisis caused the growth rate of the GNP to fall to 2.5% in 1997 and 2.0% in 1998. Some relief came in 1999 as the United States prepared itself to aid Egypt as indicated earlier, but the relief was shortlived.

U.S. involvement in the Libyan-Egyptian war on the side of Egypt prompted several of the Arab states to withdraw their assets from U.S. banks. This withdrawal was caused by the perception in these countries that the war might escalate and spread to Saudi Arabia, which would then need its own assets to finance its war effort. To make matters worse, Brazil and Argentina defaulted on their loans to the United States in the same year. The withdrawal of assets and the defaulting on the loans produced instant chaos in the world's financial markets. Many institutions failed almost immediately. It was clear by 2000 that the world was entering another great depression (E4101). By the beginning of 2001, unemployment reached 15%-20% in the advanced industrial nations.

While the Federal debt followed closely predicted levels (varying less than 4%), the rate of inflation (T4202) jumped sharply during the recession, then fell, rose in 1992, and then surged upward in 1999, triggered by the high level of military expenditures required to sustain involvement in the Middle East war. It is interesting to note that since this war is being conducted on a pay-as-you-go basis, there has as yet been no substantial increase in the Federal debt as a result of the war, a condition similar to the one we experienced in 1969, when there was a 10% surcharge to finance the Vietnam war.

Defense Expenditures

Defense expenditures, as a percentage of the Gross National Product (T7202), were forecasted in 1986 to decline slowly over the entire period, reaching 6.0% by 2001. However, as the result of such cost-cutting measures as increasing the period of military service required before retirement benefits would be paid (E7210), and bringing the troops home, defense expenditures fell to about 6% of GNP in 1990, before temporarily rising again as a consequence of the major terrorist attack in the United States that occurred shortly thereafter (E7206).

Later temporary increases were precipitated by the fear of having a Communist neighbor in Mexico and worries about the implications of the existence of more nations with nuclear capabilities. But these concerns were shortlived, and defense expenditures decreased until the war of 1999. Last year they rose almost to 9% of GNP.

Army Budget

The size of the Regular Army held at the 1986 level throughout this period. Early expectations were that the size of the Army budget in constant 1986 dollars (T8401) would increase slowly to reach about \$80 billion in 2000. In fact, however, the budget fluctuated in response to the sorts of developments discussed earlier. For example, in 1989, the budget began to decrease to the point that, by 1992, it had fallen to \$68.4 billion. This was partially a reflection of an economic austerity drive by the Government, but also a reaction of the American public to the United States being at the brink of major war in 1989, fueled by the argument that a smaller Army budget would communicate our commitment to peace and thus reduce international tension. However, when we discovered that a terrorist state had adopted a policy of direct attacks on facilities and citizens in this country (E7107), American sentiment began to shift. This shift increased when Mexico went Communist in 1992, and when one of our nuclear plants was actually hit by a terrorist attack. At this point, the budget quickly resumed its forecasted level and, indeed, hit nearly \$90 billion in 1994. A dip followed, but the current war required a \$88 billion budget for the Army last year.

Correspondingly, the U.S. public supported a strong military defense at the level foreseen in 1986 (T2224), at least until 1989, when the United States found itself at the brink in 1989. Then support grew slightly. It returned to the 1986 level when the great depression began in 2000, with its accompanying economic hardships.

Despite the budgetary problems that faced the military, the application of superior technology enabled the Army to exceed its expected level in modernizing its equipment and weapons, and increasing its mobility (T8408). This was accompanied by a high degree of public confidence in the army's ability to perform its mission (T2222), a confidence which jumped in 1994 and then again in 1999-2000, no doubt because of the increasingly turbulent international environment.

Labor Market

Labor market conditions varied during this period. Unemployment for the 17-21-year-old age group (T4218) was substantially higher than forecasted in 1986 (15%-17%) and peaked at 23% with the beginnings of the great depression of 2000. But unemployment was far worse for hispanic (T4219) and black (T4220) youths. The level of unemployment for hispanics, which was 23% in 1986, increased to 28% in 1993 as a result of the recession of 1992. It then rose to 30% in 1999 and reached 35% last year. The experience for 17-21-year-old black youths was even more dismaying. Unemployment for this group was 30% in 1986 and increased to 40% by the end of the century. This increase was spurred in part by the layoffs of many minority youths employed in energy-dependent industries severely crippled by the energy crisis of 1998. In turn, these distressing unemployment patterns resulted in a great percentage of hispanic and black youths volunteering for military service.

The desire to better oneself (M3) and the desire to have gainful employment (M10) have always been critical motivators for new recruits entering the Army. Even in prosperous economic times, many young people saw the Army as a viable career option to acquire skills unobtainable elsewhere. During particularly difficult economic conditions (which have certainly been the case in the past 15 years) joining the military was the only alternative to unemployment for many youths, particularly minority youths. Recruiters, therefore, found no shortage of youths in these groups eager to join the Army as a way of improving their economic condition and career prospects.

Schools And Youth

America remained one of the leaders in the percentage of high school graduates entering post-secondary education (T2204). Throughout the period, roughly 47% of college-age Americans entered college; however, the demographic distribution was mixed, as usual, as indicated by the fact that only 18% of minority youths entered college (T2205).

A major problem of American education was the apparent disparity between the two-stage rise in the perceived quality of public schools (T2201) and the constant non-completion rate of youths in high school (T2203). With regard to perceived quality, the rises occurred first in 1988-89 and then in 1998 and 1999. One rationale given for this rise in the perceived quality of school was the corresponding increase in high school students trained on microcomputers (T3201).

With regard to non-completion rates, youths not finishing high school remained constant at 25% for the entire period. It may be assumed that the high and constant illiteracy rate of 15% (T2202) caused many frustrated youths to drop out of high school prior to graduation. Many of these youths saw the Army as one of few routes to self-betterment and skill acquisition. Their enlistment accounts for the low but constant educational deficiency level of Army recruits (T8435).

Emotional Maturity

The youths that were entering the Army, although sometimes not educationally superior, were emotionally mature. The emotional maturity of 16-year-old youths (T2212) generally increased over the period as a consequence of tough times, particularly from 1987 to 1992. This higher level of maturity was good news to Army recruiters as more mature youth were volunteering to serve. Moreover, it was gratifying to observe that the percentage of the 17-21-year-old cohort who were strongly patriotic (T2211) increased steadily from 50% in 1987 to more than 60% by 2001.

Lifestyle Diversity

It is interesting to note that public acceptance of diverse lifestyles (T2210) varied inversely with hard times. That is to say, the American public was generally accepting of lifestyle diversity until the recession of 1991 and the depression in 2000, when acceptance plummeted.

Women

In 1986, it was forecasted that the percentage of women (T8414) in the active Army would increase from some 10% to 15% by the end of the century. In fact, the growth occurred almost exactly as forecasted until 1999,

when the war in the Middle East rekindled the argument that women should not be involved in combat situations of any kind. Women also saw, of course, that that war was particularly brutal. The result was an immediate drop in enlistments, and lower retention rates. As of last year, the percentage of women in the Army stood at 12%, and it seems likely to fall more.

Esprit de Corps

Army esprit de corps fluctuated during this period (T8407). For example, as noted earlier, the time required for retirement was increased from 20 to 30 years. As a result, morale fell. But it quickly rose to its expected level by 1994 and indeed increased above this level in 1994, where it generally remained throughout the period. Due to the Army's increased competence and the challenge of the war of 1999, morale hit an all-time high in the last 2 years.

Army Recruits

The aptitude of Army recruits rose steadily throughout the period. The average score on the AFQT, which was about 53 for 1986, reached 55 for the first time in 1996 (T8432). It actually jumped to 57.4 last year, as the soaring unemployment enabled the Army to raise its standards. Correspondingly, the percentage of recruits who were computer literate was forecasted to increase steadily from 10% to about 30% at the end of the century (T8436). This forecast proved remarkably stable until last year, when the harsh economic conditions caused a cutback in existing training programs and decisions to defer new ones. On the whole, the values of NPS recruits were fairly compatible with Army values, a compatibility which, in fact, was slightly higher than anticipated in 1986 (T8438).

Recruiting Contract Mission

The recruiting contract mission for the Regular Army (T8423) varied from expectations in 1986, when it was forecasted that it would be around 135,000 recruits per year. This mission fell to 127,000 by 1993—in small part, because of change in the retirement policy noted earlier, which reduced the requirements for new recruits to maintain the workforce level, and, in large part, because of the cuts in the Army budget. After 1993, the mission increased in almost every year. Last year, it jumped to 160,300, as a result of manpower needs in the Middle Eastern war.

It should be noted that expenditures per Regular Army recruit did not increase as expected (T8405). That is, starting from a base of \$4,000 per recruit in 1986, it was expected USAREC expenditures would rise to \$5,100 by the end of the century (in real 1986 dollars). In reality, the figure reached only \$4,900; indeed, from 1991 through 1999, the cost per recruit ranged from \$100-\$500 below expectations as a consequence of both increased efficiency of USAREC and generally adverse economic conditions in the U.S. economy.

The DEP loss rate remained consistent with expectations (T8439), except during the period of high international tensions from 1988 to 1991, when the DEP loss rate ranged upward to 7% from an expected 6%. The same phenomenon occurred in 1999 as a consequence of the war of 1999, but it fell to 5% when the great depression of 2000 began.

The recruiting budget for USAREC (T8402) remained at about 1% of the Army budget, although it rose to 1.3% of the Army budget in 1991 thanks to national security needs (e.g., terrorist attacks on U.S. installations), and it held at this level until the end of this century, when it dropped to 0.9% of the Army budget. The latter drop was a consequence of the beginning of the great depression, which served to increase the number of volunteers that came forth to serve.

Finally, the proportion of the Army recruiting budget devoted to advertising was much greater in the early years of this period than expected. It had been expected that advertising would slowly fall from 13% to 7% of the recruiting budget over the last 15 years (T8403). However, an increase in advertising money became necessary in the early 1990's. During this time, the American public response to international tension was one of appeasement, and this forced the recruiting command to increase advertising expenditures to some 11% of the budget. In 1993, as a result of adverse economic conditions, the necessity for advertising began to drop. By 1998, the percentage of the recruiting budget taken by advertising had fallen to 2%. Another reason for the decrease

in expenditures in advertising was that after 1994 the Department of Defense required joint-service ads (E7212), thereby lessening the cost of advertising by each service.

SCENARIO E: CHAOTIC WORLD

Year	Event	Description	Impact	Years
1987	E7107.	A "terrorist state" (e.g., Syria, Libya) initiates a program of indiscriminate, random attacks within the United States.		
		<u>Major Trend Impacts:</u>		
		T2209. % of adults who accept traditional values.	+15	0
		T2210. Public tolerance of lifestyle diversity.	-15	0
		T7201. Terrorist acts in the United States.	+20	1
1988	E5101.	The Communist Party in a NATO country comes into power on the national level.		
		<u>Major Trend Impacts:</u>		
		No trend impacts greater than 15%; a number of less significant impacts.		
1988	E7101.	Massive demonstrations for arms control reduction occur throughout the Western World.		
		<u>Major Trend Impacts:</u>		
		T2216. % of public optimistic about next 5 years.	-15	0
		T2224. Public support of military.	-20	0
		T8424. Competition w/corps for HSG.	+15	1
1988	E7110.	The United States is involved in an international confrontation at least as dangerous as the Cuban Missile Crisis in 1962.		
		<u>Major Trend Impacts:</u>		
		T2212. Maturity of 16 year olds.	+15	0
		T2217. % of HS seniors foreseeing nuke war.	+12	0
		T2220. Public view of level of strat nuke stability.	-30	0
		T5201. Congress support of the military.	+25	1
		T7103. Stability of strategic nuke balance.	-50	0
		T7104. U.S.S.R. perception of strategic nuke balance.	-50	0
		T7105. NATO-Warsaw Pact antagonism.	+80	0
		T7106. United States-U.S.S.R. antagonism.	+80	0
		T7115. U.S.S.R.-PRC antagonism.	-30	0
		T7201. Terrorist acts in the United States	+15	0
		T8404. Impact of Army recruiting ads.	-15	1
		T8407. Army esprit de corps.	+25	0
		T8414. Women as % of Army.	-15	1
		T8419. Recruiter effectiveness.	-20	1
		T8422. Value of educational benefits in recruitment.	-20	1
		T8439. DEP loss rate.	+20	1
1988	E7204.	Congress imposes a military wage freeze.		

Year	Event	Description	Impact	Years
		<u>Major Trend Impacts:</u>		
		T8402. Recruiting spending as % of Army budget.	+ 20	1
		T8404. Impact of Army recruiting ads.	-50	1
		T8406. Enlisted pay as % of civilian pay.	-15	2
		T8407. Army esprit de corps.	-40	0
		T8419. Recruiter effectiveness.	-20	0
		T8422. Value of educational benefits in recruitment.	+ 20	2
		T8425. Competition w/corps for college grads.	+ 15	1
		T8433. Av. AFQT in top TSC's.	-20	1
		T8435. % recruits educationally deficient.	+ 15	1
		T8439. DEP loss rate.	+ 20	1
1988	E7208.	Congress imposes a ceiling on the number of authorized recruiters.		
		<u>Major Trend Impacts:</u>		
		T8403. Ad spending as % of recruiting budget.	+ 50	1
		T8404. Impact of Army recruiting ads.	+ 30	1
		T8405. Recruiting cost per Army recruit.	-20	2
		T8415. Number of Army recruiters.	-20	2
		T8419. Recruiter effectiveness.	+ 30	2
		T8427. Competition w/ other svcs for college grads.	+ 20	2
1988	E7210.	Congress modifies the military retirement system so that new accessions must fulfill a longer period of service or reach a minimum age of 60 to collect benefits.		
		<u>Major Trend Impacts:</u>		
		T8404. Impact of Army recruiting ads.	-15	1
		T8407. Army esprit de corps.	-25	2
1988	E7212.	Joint recruitment advertising is mandated for all of the svcs; individual advertising is prohibited.		
		<u>Major Trend Impacts:</u>		
		T8403. Ad spending as % recruiting budget.	-50	2
		T8404. Impact of Army recruiting ads.	-50	2
		T8419. Recruiter effectiveness.	-20	1
		T8422. Value of educational benefits in recruitment.	-25	2
		T8427. Competition w/other svcs for college grads.	+ 30	1
1988	E8208.	The Army drops its Army College Fund program; no substitute is provided.		
		<u>Major Trend Impacts:</u>		
		T8402. Recruiting spending as % of Army budget.	-15	1
		T8404. Impact of Army recruiting ads.	-30	1
		T8405. Recruiting cost per Army recruit.	-15	1

<u>Year</u>	<u>Event</u>	<u>Description</u>	<u>Impact</u>	<u>Years</u>
		T8414. Women as % of Army.	-15	1
		T8419. Recruiter effectiveness.	-50	1
		T8422. Value of ed benefits in recruitment.	-90	2
		T8439. DEP loss rate.	+ 15	1
1989	E4202	Large private corporations establish lucrative college student financial aid packages with follow-on employment obligations.		
		<u>Major Trend Impacts:</u>		
		T8422. Value of educational benefits in recruiting.	-15	2
		T8424. Competition w/corps for HSG.	+ 20	1
		T8427. Competition w/svcs for college grads.	+ 25	1
1989	E5106.	A pro-Soviet Communist government takes over in Mexico.		
		<u>Major Trend Impacts:</u>		
		T2216. % of public optimistic about next 5 yrs.	-15	0
		T7106. United States-U.S.S.R. antagonism.	+ 20	1
		T8401. Size of Army budget.	+ 15	2
1989	E5107.	A verifiable mutual freeze on nuclear weapons production and deployment is agreed upon by the United States and the U.S.S.R..		
		<u>Major Trend Impacts:</u>		
		T2216. % of public optimistic about next 5 yrs.	+ 20	0
		T2217. % HS seniors foreseeing nuke war.	-12	0
		T2220. Public view of nuke stability.	+ 16	0
		T7103. Stability of strategic nuke balance.	+ 20	0
		T7104. U.S.S.R. perception of nuke balance.	+ 20	0
		T7106. United States-U.S.S.R. antagonism.	-25	1
1989	E7205.	The armed forces are required to eliminate enlistment bonus programs.		
		<u>Major Trend Impacts:</u>		
		No trend greater than 15%; a number of less significant impacts.		
1990	E5105.	The PRC and the U.S.S.R. re-establish full economic and diplomatic ties.		
		<u>Major Trend Impacts:</u>		
		T2222. Public confidence in Army's ability in war.	-20	0
		T5201. Congress support of military.	+ 15	1
		T7104. U.S.S.R. perception of nuke balance.	+ 20	2
		T7105. NATO-Warsaw Pact antagonism.	+ 20	0
		T7106. United States-U.S.S.R. antagonism.	+ 20	0
		T7107. United States-PRC antagonism.	+ 20	2
		T7115. U.S.S.R.-PRC antagonism.	-95	1

<u>Year</u>	<u>Event</u>	<u>Description</u>	<u>Impact</u>	<u>Years</u>
		T7202. Defense spending as % of GNP.	+ 20	1
		T8408. Army modernization.	+ 15	1
		T8423. RA recruiting mission.	+ 20	1
1990	E7103.	Congress mandates withdrawal of a large number of troops from foreign soil (e.g., Europe, Korea, or Central America).		
		<u>Major Trend Impacts:</u>		
		T7106. United States-U.S.S.R. antagonism.	-20	1
		T8407. Army esprit de corps.	-20	0
		T7110. North and South Korea antagonism.	+ 20	1
		T7111. Nicaragua-neighbor antagonism.	-20	2
		T7112. PRC-Taiwan antagonism.	-20	2
		T7201. Terrorist acts in United States	-20	2
1991	E6101	The nation finds itself in an energy crisis at least as severe as the one in the mid-1970's.		
		T2209. % of adults who accept traditional values.	+ 20	0
		T2216. % of public optimistic about next 5 yrs.	-25	0
		T4201. Growth in GNP.	-33	0
		T4202. Rate of inflation.	+ 20	0
		T4219. 17-21 yr old hispanic unemployment rate.	+ 15	0
		T4220. 17-21 yr old black unemployment rate.	+ 20	0
1991	E6103.	A major civil disaster occurs.		
		<u>Major Trend Impacts:</u>		
		T4201. Growth in GNP.	-20	0
		T4202. Rate of inflation.	+ 20	0
1991	E8201.	The Army is assigned the mission of security of major public utilities and other essential facilities.		
		<u>Major Trend Impacts:</u>		
		T2222. Public confidence in Army's ability in war.	+ 15	0
		T8404. Impact of Army recruiting ads.	-30	1
		T8407. Army esprit de corps.	-15	0
		T8424. Competition w/corps for HSG.	+ 20	2
		T8425. Competition w/svcs for HSG.	+ 20	2
		T8427. Competition w/svcs for college grads.	+ 15	2
191	E8202.	The President directs Army troops to patrol the border between United States and Mexico		
		<u>Major Trend Impacts:</u>		
		T2222. Public confidence in the Army's ability in war.	+ 20	0
		T5201. Congressional support of the military.	+ 20	0
		T8404. Impact of Army recruiting ads.	-15	1

Year	Event	Description	Impact	Years
		T8426. Competition w/other svcs for HSG.	+ 20	2
1992	E2201.	Major riots by the poor occur in a number of large cities, causing many deaths and significant property damage.		
		<u>Major Trend Impacts:</u>		
		T2209. % of adults who accept traditional values.	+ 15	0
		T2210. Public tolerance of diversity.	-30	0
		T2216. % of public optimistic about next 5 yrs.	-15	0
1992	E4101.	A worldwide depression begins (i.e., unemployment reaches 15-20% in the advanced industrial nations).		
		<u>Major Trend Impacts:</u>		
		T4201. Growth in GNP.	-300	1
		T4202. Rate of inflation.	-80	1
		T4203. Federal debt.	+ 25	3
		T4217. Total unemployment rate.	+ 175	1
		T4218. 17-21 yr old unemployment rate.	+ 100	1
		T4219. 17-21 yr old hispanic unemployment rate.	+ 50	1
		T4220. 17-21 yr old black unemployment rate.	+ 50	1
		T4222. % new jobs requiring computer skills.	-20	1
		T4223. 15-24 yr old householder median income.	-20	1
		T4207. % college grads overqualified for jobs.	+ 100	1
		T2216. % of public optimistic about next 5 yrs.	-90	1
		T4206. % of families with 2 incomes.	-50	1
		T1212. % of births to yr. olds.	-20	1
		T1213. % of births to 30 yr olds.	-20	1
		T2210. Public tolerance of diversity.	-25	1
		T2209. % of college-age who go to college.	+ 40	1
		T1209. Families as a % of households.	+ 15	1
		T1211. % single parent households w/kids.	-40	3
		T4225. % of families in poverty.	+ 60	1
		T4226. % of kids in poverty.	+ 70	1
		T2212. Maturity of 16 yr olds.	+ 30	1
		T2211. % of 17-21 yr olds highly patriotic.	+ 20	3
		T3201. % HS kids trained on micros.	-20	1
		T2203. HS dropout rate.	+ 20	1
		T2202. % 17-21 functionally illiterate.	+ 15	3
		T2215. Corporate spending on training.	-70	1
		T2204. % HSG who go directly to college.	-50	1
		T2205. % of college-age who go to college.	-50	1

<u>Year</u>	<u>Event</u>	<u>Description</u>	<u>Impact</u>	<u>Years</u>
		T7105. NATO-Warsaw Pact antagonism.	+ 20	1
		T7106. United States-U.S.S.R. antagonism.	+ 20	1
		T7104. U.S.S.R. perception of nuke balance.	-15	1
		T2224. Public support of the military.	-25	1
		T5201. Congress support of military.	-25	1
		T5202. National political clout of elderly.	-15	1
		T8408. Army modernization.	-20	2
		T8407. Army esprit de corps.	+ 20	1
		T7111. Nicaragua-neighbor antagonism.	-20	1
		T7109. Pakistan-India antagonism.	+ 35	1
		T7115. U.S.S.R.-PRC antagonism.	-20	1
		T8401. Size of Army budget.	-20	1
		T8402. Recruiting spending as % of Army budget.	-35	1
		T8403. Ad spending as % recruiting budget.	-70	1
		T8404. Impact of Army recruiting ads.	+ 50	1
		T8424. Competition w/corps for HSG.	-50	1
		T8426. Competition w/corps for college grads.	-50	1
		T8425. Competition w/svcs for HSG.	-70	1
		T8427. Competition w/svcs for college grads.	-70	1
		T8431. % of NPS recruits 21.	-20	1
		T8435. % recruits educationally deficient.	-15	1
		T8415. Number of Army recruiters.	-15	1
		T8439. DEP loss rate.	-95	1
		T8437. % recruits w/English as a 2nd language.	-15	1
1992	E7109.	The number of nations known to possess nuclear weapons reaches at least 15.		
		<u>Major Trend Impacts</u>		
		T2216. % of public optimistic about next 5 yrs.	-20	0
		T7103. Stability of strategic nuke balance.	-50	1
		T7104. U.S.S.R. perception of strategic nuke balance.	-50	1
		T7105. NATO-Warsaw pact antagonism.	-15	1
		T7106. United States-U.S.S.R. antagonism.	-15	1
		T7109. Pakistan-India antagonism.	+ 20	1
1993	E5201.	An anti-military President takes office.		
		<u>Major Trend Impacts:</u>		
		T2216. % of public optimistic about next 5 yrs.	-30	0
		T2224. Public support of military.	-15	1
		T7106. United States-U.S.S.R. antagonism.	-15	2
		T7107. United States-PRC antagonism.	-15	2
		T7202. Defense spending as % of GNP.	-15	2

<u>Year</u>	<u>Event</u>	<u>Description</u>	<u>Impact</u>	<u>Years</u>
1993	E7202.	T8407. Army esprit de corps.	-30	2
		Congress institutes a draft for the active component.		
		<u>Major Trend Impacts:</u>		
		T8402. Recruit spending % Army budget.	-85	2
		T8403. Ad spending % recruiting budget.	-90	2
		T8404. Impact of Army recruiting ads.	-50	1
		T8405. Recruiting cost per Army recruit.	-30	1
		T8407. Army esprit de corps.	-20	1
		T8415. Number of Army recruiters.	-25	1
		T8419. Recruiter effectiveness.	+ 20	1
		T8424. Competition w/corps for HSG.	-90	1
		T8425. Competition w/corps for college grads.	-90	1
		T8426. Competition w/svcs for HSG.	-40	1
		T8427. Competition w/svcs for college grads.	-20	1
		T8436. % recruits computer literate.	-15	1
		T8437. % recruits w/English as a 2nd language.	+ 15	1
		T8439. DEP loss rate.	-75	1
1994	E5203.	Congress mandates at least two years of national service (either civilian or military) for all 18 year olds.		
		<u>Major Trend Impacts:</u>		
		T1212. Births to yr. olds.	-20	1
		T2204. % HSG who go directly to college.	-80	3
		T2205. % of college-age who go to college.	-20	3
		T2209. % adults accepting traditional values.	+ 25	3
		T2210. Public tolerance of diversity.	-30	2
		T2212. Maturity of 16 yr olds.	+ 15	3
		T2215. Corporate spending on training.	-20	3
		T2216. % of public optimistic about next 5 yrs.	+ 20	1
		T4201. Growth in GNP.	+ 20	4
		T4217. Total unemployment rate.	-20	4
		T4218. 17-21 yr old unemployment rate.	-90	4
		T4219. 17-21 yr old hispanic unemployment rate.	-90	4
		T4220. 17-21 yr old black unemployment rate.	-20	2
		T4222. % new jobs requiring computer skill.	+ 20	4
		T5201. Congress support of military.	-20	1
		T5202. National political clout of elderly.	+ 17	3
		T8403. Ad spending as % recruiting budget.	+ 20	1

<u>Year</u>	<u>Event</u>	<u>Description</u>	<u>Impact</u>	<u>Years</u>
		T8404. Impact of Army recruiting ads.	-30	1
		T8419. Recruiter effectiveness.	-20	1
		T8424. Competition w/corps for HSG.	-70	1
		T8425. Competition w/corps for college grads.	+40	2
		T8436. % recruits computer literate.	-20	2
1994	E7113.	The United States is involved in a popular low-intensity conflict--and slowly loses.		
		<u>Major Trend Impacts:</u>		
		T2210. Public tolerance of diversity.	-20	1
		T2212. Maturity of 16 yr olds.	+15	2
		T2216. % of public optimistic about next 5 yrs.	-30	1
		T2222. Public confidence in Army's ability in war.	+25	0
		T4201. Growth in GNP.	+25	1
		T4202. Rate of inflation.	+100	1
		T5201. Congress support of military.	+15	1
		T8404. Impact of Army recruiting ads.	-20	1
		T8407. Army esprit de corps.	-20	3
		T8419. Recruiter effectiveness.	-20	1
		T8422. Value of educational benefits in recruitment.	+15	1
		T8424. Competition w/corps for HSG.	+80	1
		T8425. Competition w/corps for college grads.	+100	1
		T8439. DEP loss rate.	+30	1
1995.		No additional events occur.		
1996.		No additional events occur.		
1997.		No additional events occur.		
1998.		No additional events occur.		
1999.		No additional events occur.		
2000.	E7120.	The United States is involved in a high intensity conflict in which chemical or biological weapons are used.		
		<u>Major Trend Impacts:</u>		
		T2210. Public tolerance of diversity.	-50	2
		T2212. Maturity of 16 yr olds.	+20	1
		T2216. % of public optimistic about next 5 yrs.	-70	2
		T2217. % HS seniors foreseeing nuke war.	+20	2
		T2220. Public view of strategic nuke stability.	-35	2
		T2222. Public confidence in Army's ability in war.	+25	2
		T4201. Growth in GNP.	+50	2
		T4202. Rate of inflation.	+200	2

<u>Year</u>	<u>Event</u>	<u>Description</u>	<u>Impact</u>	<u>Years</u>
		T4207. % college grads overqualified for jobs.	-40	2
		T5201. Congress support of military.	+ 30	2
		T7103. Stability of strategic nuke balance.	-75	1
		T7104. U.S.S.R. perception of strategic nuke balance.	-50	1
		T7105. NATO-Warsaw pact antagonism.	+ 20	2
		T7106. United States-U.S.S.R. antagonism.	+ 25	2
		T7114. Arab-Arab antagonism.	-90	2
		T7202. Defense spending as % of GNP.	+ 80	2
		T8401. Size of Army budget.	+ 30	2
		T8407. Army esprit de corps.	+ 40	0
		T8408. Army modernization.	+ 25	3
		T8410. ARNG troops as % of RA.	-20	2
		T8414. Women as % of Army.	-30	2

5. USING THESE FUTURES RESEARCH RESULTS

INTRODUCTION

This chapter outlines a way of approaching the scenarios and Delphi forecasts to identify the implications of these materials for policy. This approach is conceptually simple, moderately easy to use, and potentially very productive. It can also be readily modified for use by a single individual or by a team, which may undertake the policy analysis either independently or collectively.

There are, of course, many ways other than the one described here in which to identify policy options. These can range from the most casual and impressionistic methods (see the examples given at the end of Chapter 3) to the most highly structured and formal. In the original design of this study, for instance, the intent was to conduct the policy analysis using one of the more formal approaches, known as the Focused Planning Effort (FPE), which is a special kind of face-to-face meeting among experts. Although the FPE was finally not included, because of problems that arose in scheduling the participation of senior officers, it remains an available tool. Similarly, other group techniques--such as the CONSENSOR-based meeting--might also be adopted. The aim here, however, is simply to sketch out a rather fast, low-cost, and effective way to proceed that accomplishes the same objective.

Whatever the method ultimately selected for the identification and evaluation of policy options in light of this report's forecasts and scenarios, it is worth remarking that proper use depends on proper understanding of this material. Thus, before turning to the description of the policy analysis process, we offer the following reminders of points made elsewhere in this report that may help avoid dangerous misunderstandings--and, hence, dangerous misuses.

Some Reminders

First, literally nothing in the scenarios should be viewed as a prediction of a future state of affairs. The futures research community rejects the idea that there is a single future "out there," waiting only to be discovered by a gifted analyst. Rather, it holds that there are an infinite number of possible alternative futures, each to a varying extent the possible result of interactions among human choice, institutional forces, natural processes, and unknowable chance events.

This way of thinking about the future has come to be reflected in the distinction between the terms "prediction" and "forecast." In the new vocabulary of strategic forecasting, these terms still have several meanings, but the basic idea in each case is clear. A prediction is an assertion about how some element of "the" future will in fact materialize. (Predictions take two basic forms. The scientist's version is, "If A, and only A, then B." The psychic's version is, "B.") In contrast, a forecast is a probabilistic statement about some element of a possible future. But note that "probability" in futures research does not mean relative frequency (the classical interpretation) but degree of belief (the Keynesian interpretation). (Thus, the underlying form of statement of a forecast is, "If A, plus some allowance for unknown or unknowable factors, then maybe we can expect B or something very much like B.") Every assertion or numerical estimate in the scenarios in this report is a forecast in this sense.

Second, the mode of forecasting adopted in the Delphi and in the scenarios was exploratory--i.e., the attempt was to determine what might happen in the future, given reasonable expectations about forces in motion. (See Appendix C for additional details.) The "most likely" future, as presented in Chapter 3, is intended to provide a glimpse of the "betttable" exploratory future, and reflects a consensus judgment of the Delphi panelists, none of whom, however, is likely to agree with every particular. More important, none is likely to think that this future is desirable in all or even many particulars. The same is true, of course, for each of the alternative futures. Because these futures are exploratory, they exclude preferences. Accordingly, they exclude policy actions that would be considered novel or innovative vis-a-vis today's policy set. By implication, these scenarios assume only the continued functioning of today's policies.

Third, because the statements and quantitative estimates are intended to be policy-relevant, it is pointless to try to judge their value on the basis of how accurately they describe the future. Accuracy is a criterion for evaluating predictions only. The criteria that should be used in evaluating forecasts--especially policy-relevant forecasts--are few in number and disconcertingly soft, as indicated in Table 1.1. From the decisionmaker's point of view, there seem to be only eight:

1. Clarity. Are the object of the forecast and the forecast itself intelligible? Are they clear enough for practical purposes? (The user may, for example, be incapable of rigorously defining "GNP" or "the strategic nuclear balance," but he may still have an excellent ability to deal with forecasts of these subjects. On the other hand, he may not have the least familiarity with the difference between households and families, and thus be puzzled by the meaning and implications of forecasts in this area. Similarly, he may have no trouble understanding a median estimate or the interquartile range, but he may be utterly baffled about the difference between an objective and a subjective trend.)

2. Intrinsic credibility. To what extent do the results "make sense"? Independent of the method or methods used, do the results have "face validity"? Are they mutually consistent?

3. Plausibility. To what extent are the results consistent with what the user knows about the world outside of the scenario and how this world "really" works or may work in the future?

4. Representativeness. To what extent does the set of forecasts adequately cover the issues? Has the future been trivialized?

5. Policy Relevance. If the forecasts appear to be in the ballpark, to what extent would their actual occurrence affect the successful achievement of the user's mission or assignment, or those of his organization?

6. Urgency. To what extent do the forecasts indicate that, if action is required, time must be spent fairly quickly to develop and implement the necessary changes?

7. Comparative advantage. To what extent do the results provide a better foundation for investigating policy options than other sources now available to the user? To what extent do they provide a better foundation now for future efforts in forecasting and policy planning?

8. Technical quality. Was the process that produced the forecasts and the scenarios technically sound? To what extent was this process at the state of the art?

These criteria can be viewed as filters. The first must be adequately met before the second, the second before the third, etc. To reject an individual forecast, a set of forecasts, or a scenario requires making an argument showing that it cannot pass through all or virtually all of these filters. A "good" forecast or scenario is one that survives such an assault; a "bad" forecast or scenario is one that does not. It is that simple.

Fourth, because the forecasts often cover familiar ground and yet inevitably leave some considerations out of account, there is the triple danger of weighing the results against a perception of "obviousness":

•For some things included, users may say, "Of course! What else is new?"

•For other things included, some users may say, "How stupid! These people are wildly optimistic (or pessimistic or naive or . . .)."

•For things omitted, some users may say, "How can the results be credible if such an obvious trend or event, cause, or consequence, was overlooked?"

These objections are difficult to take very seriously. If the user understands that forecasts, like plans, are transitory things and need constant adjustment if they are to be helpful in guiding thought and action, he will also understand that these objections, far from undercutting the existing results, move them importantly in precisely the right spirit and direction for modern strategic planning. The appropriate response to these criticisms, as we shall see in more detail when we discuss the policy analysis process, is quite simple: If something important is missing, add it. If something unimportant is included, strike it. If something important is included but the forecast seem trivially obvious, or the forecast seems highly counterintuitive, probe the underlying logic. If the results survive, use them. If not, fix them. It is not at all necessary at this stage to conduct another Delphi inquiry

or build and run another cross-impact model. It is necessary only to (1) correct the offending part of the scenario and (2) do so in such a way that the eight criteria listed earlier are satisfied.

Fifth, users should be sensitive to the interconnectedness of the forecasted events and trends as they review the results. The cross-impact model (in Appendix E) represents a formal means of being explicit and systematic about this issue. Nevertheless, the "most likely" scenario was written without using this model, which, of course, is used only to generate alternative futures. Thus, in describing the "most likely" future, all of the cross-impacts were handled subjectively, with a good deal of help from various comments by the Delphi panelists. The fact, however, is that subjective cross-impact analyses can be as rewarding as the real thing. Indeed, when the goal is to take the full data base into consideration, and when the data base is as large and intricate as the one presented here, no computer model is adequate to the task, and mental processing of the cross-impacts is the only practical option available to the user.

Finally, although the development of specific policy recommendations was beyond the scope of this study, as finally defined, such work is surely the most important purpose these study results can serve. But this work will almost certainly require thoughtful, systematic, and sometimes very demanding effort by users, if the resulting policy ideas are to be coherent and tailored to the specific concerns and needs of the Army recruitment system. The results in this report merely set the stage for this essential task. Hence, we should remark that the least fruitful way to take advantage of these results would be merely to browse through them. Browsing is much better than flailing at uncertain futures, but it is only a beginning.

IDENTIFYING AND EVALUATING POLICY OPTIONS: A SIMPLE APPROACH

The procedure outlined below will probably be most productive if it is made a team effort, but, as suggested earlier, it can be accomplished by an individual. The argument for involving more than one person is that it is basically--and unavoidably--a judgmental activity, and the product of a group, whether working face-to-face or privately, will almost certainly be more complete and reliable than that of a single individual. In any event, the process involves the following 16 major steps.

1. Assemble the organization's current environmental planning assumptions. If they are scattered through various documents, bring them together in one place. If they simply do not exist, assume for the moment that they are represented, in their entirety, by the "most likely" scenario in Chapter 3 of this report.

2. Read the "most likely" scenario very carefully. Rigorously criticize the underlying forecast data and the supporting discussion, looking for omissions, errors of fact or interpretation, and internal inconsistencies. (These will almost certainly be present in many cases, from the user's point of view.) Make this process as formal, systematic, and detailed as possible. Apart from transitions, background explanations, and occasional details introduced to increase the readability of the scenario, every sentence in the "most likely" scenario was intended to be germane to the question of possible future recruiting policies. Accordingly, all need to be scrubbed. As part of this task, it is important, of course, to identify and eliminate any parts of the scenario judged to be irrelevant. The overall aim of this effort should be to polish the "most likely" scenario so that it represents the indispensable, core set of environmental issues worth serious attention now or in the foreseeable future in the organization. Set aside any rejected items for later reference as a check on the adequacy of this screening.

3. Augment and improve the quality of the results from Step 2 by reviewing currently available forecasts of the same developments from other sources--internal studies, purchased services, and published reports. If the forecasts differ from source to source, decide which of them is most acceptable for now, and incorporate them in the "most likely" scenario. Be as explicit as possible about the reasons for making these decisions, because this step is the basis for meeting the "comparative advantage" criterion discussed earlier. File the rejected forecasts for use later in checking the degree to which this criterion was met.

4. As necessary, revise the organization's environmental planning assumptions (from Step 1) to make them consistent with the new version of the "most likely" scenario (from Steps 2 and 3). These assumptions may now

be viewed as a high-level summary of the "most likely" scenario, and they should not be changed until the scenario is changed.

5. If one does not already exist, develop a set of performance measures for the recruitment system--i.e., a set of quantitative indices that will reflect how well the system works, particularly in anticipating or reacting to developments in the environment. The number of indicators should be no larger than the absolute minimum required to depict performance meaningfully. (A reasonable number might be 10-15.) The focus should be on system output (e.g., the type and quality of recruits, the DEP loss rate, the impact of advertising and promotional materials, the level of cooperation from high schools, etc.), though some measures may describe system status (e.g., morale of volunteer and selected recruiters, overall effectiveness of recruiters, etc.). Measures concerning system inputs, such as the average recruiting cost per Army recruit, should be minimized. (While critical to other planning and policy tasks, only rarely will they be useful in developing a menu of policy options in the environmental context.) Several examples of useful performance measures are scattered through the "most likely" scenario.

6. In light of the environmental planning assumptions (from Step 4), quickly and judgmentally make two forecasts of each of the performance measures, the first describing the probable behavior of the measures in the "most likely" scenario, and the second showing realistically how the organization would prefer the measures to behave. (That is, simultaneously make an exploratory and a normative forecast of each measure.) Do this forecasting by making a graph for individual measures, with time on the "x" axis and index values on the "y" axis. Let the normative, or desired, level for "today" equal 100. The actual level for today may be equal to, or higher or lower than, the desired level. On such a scale, a 20% increase over today's level would take the relevant curve to 120. A 70% reduction would take it to 30.

7. Check the adequacy of the exploratory forecasts of the performance measures by rigorously examining them against randomly chosen but relevant sections and/or paragraphs in the revised "most likely" scenario. Revise the forecasts as necessary, and keep track of the environmental factors in the scenario that produced specific changes, plus or minus, in these forecasts.

8. While completing the preceding tasks, especially Steps 6 and 7, begin developing a list of any policy ideas that surface which may contribute to improving the recruiting system no matter what environment may actually materialize in the future. Do not be overly critical of these ideas; this is a brainstorming step. Call this "List 1."

9. When Step 7 has been completed, review the results for each performance measure and sort the measures into two groups. Group 1 will include those for which the normative and exploratory forecasts are identical or acceptably close, at least in the short term (i.e., the next 3-5 years). This group will thus include those measures which, in the "most likely" future, can be expected to behave as the organization wants them to behave. Group 2 will include those for which this is not true, thereby signaling an obvious problem of some sort. The larger the gap between the expected performance and the desired performance, the greater the problem facing the organization.

10. Probe each of the measures in Group 1 (from Step 9). By definition, the outlook for them already appears acceptable. But "acceptable" may not be enough, and it is important to ask if there is any reason to believe that the forecasted desired level could realistically be enhanced within the "most likely" future. For example, improvements might be achieved if something in the environment could be changed. At this point, begin List 2, which will be a list of possible actions by the organization that could, directly or indirectly, alter the environment to improve the behavior of the performance measures. Similarly, begin List 3, which will record those policy ideas that can enhance these performance measures through actions directed not at the environment, but at the recruitment system itself. As before, the "most likely" future must be assumed, and the list should be checked against this scenario from time to time.

11. Probe each of the performance measures (from Step 9) that are in Group 2--i.e., the ones for which there is a significant gap between the expected and the desired level. Here it is possible to identify precisely those developments in the "most likely" environment that produced, or contributed to producing, the gap. (Recall that in Step 7 a record was made of at least some of these developments.) For each, inquire into possible organizational actions to change these environmental factors favorably. Record such actions on List 2. If no such options exist, it is both possible and necessary to look for steps the organization can take internally to eliminate or minimize the effects of these harmful environmental factors. Record these ideas on List 3.

12. Set aside the "most likely" scenario. It has served its purpose for now. But focus on Lists 2 and 3, and ask if any of the policy ideas on either can realistically be moved to List 1 (from Step 8)--i.e., the list capturing those organizational actions that appear to be invulnerable to any reasonable environmental development. Establish the final version of List 1, the things that seem to be worth doing "no matter what."

13. Confirm the adequacy of List 1 by mentally running it past Scenarios A, B, and E in this report (Chapter 4), or any other better environmental scenarios available to the organization. For instance, assume that Scenario A "happened." Assume that the List 1 policies had been implemented in this future. How well did they fare? Repeat this process for the remaining alternative environmental futures. Any policies that survive this kind of scrutiny are, indeed, probably invulnerable. This does not mean, of course, that they are worth implementing. (We shall address that issue later.) It does mean, however, that there is a fairly good chance that they will survive if implemented.

14. Any policy on List 1 that fails the test in Step 13 should be moved to Lists 2 or 3, whichever is more appropriate.

15. Repeat Step 13 for Lists 2 and 3 simultaneously. Because the user will already be familiar with the alternative futures, as a result of his screening of List 1, this second pass through them will provide the opportunity not only to evaluate the options on Lists 2 and 3, but also to develop a List 4, which will record promising actions to maintain or enhance the behavior of the performance measures if one or another development specific to a particular alternative future were to occur. Key each action on List 4 to the development in question. Similarly, any action on List 2 and 3 that fails this screening against an alternative future should be both flagged and keyed to the scenario and specific development that caused it to fail.

16. Any action on Lists 2 or 3 that passes the screening in Step 15 should be moved to List 1.

* * *

At this point, the organization will have four sets of policy ideas, each scrubbed against an improved version of the "most likely" scenario and against each of the alternative futures:

List 1. Invulnerable policies, ones that appear to be worth implementing in any reasonable future because they are probably able to withstand all environmental shocks in these futures. Some of these policies will be directed toward changing the environment; the rest toward changing the recruitment system. All will be very strong candidates to be implemented in the "most likely" future.

List 2. Risky environmental policies, ones that the organization may take to be worth implementing to alter the "most likely" environment, while recognizing that they could well fail if some developments not included in that future were to occur. Specific threatening developments were identified in Step 15, and they will need to be monitored by the planning and analysis staff.

List 3. Risky internal policies, ones that the organization may take to be worth implementing to alter the recruitment system itself, again recognizing that certain previously identified events could undercut their effectiveness.

List 4. Contingent policies, ones that the organization might wish to implement if future monitoring and/or scanning efforts indicated that one or more of the threatening events specified on Lists 2 or 3 during Step 15 appeared to be rapidly growing in probability or on the verge of happening.

Assuming prior familiarity with the scenarios, as well as a strong determination by management to develop quickly a rich array of policy options, the 16-step process leading to these 4 lists could probably be completed by an individual or a group within 2-4 weeks, allowing for detailed design, execution, and follow-on analysis of the results. Within another 2-3 days, using a tool like the Focused Planning Effort (FPE), it would also be possible to evaluate the policies judgmentally against a set of criteria to produce a first-cut estimate of the worth of each option on each list. (These criteria might include considerations of dollar cost of implementation,

availability of needed skills, availability of needed procedures or other institutional arrangements, time to payoff on each affected performance measure, magnitude of payoff, etc.) In this way, a rank-ordered set of possibilities would emerge. Following management review and sign-off, the options that appear to be most valuable could then be subjected to the sort of detailed policy evaluation that is conventional within the organization.

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