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**THE NPG
FORUM**

Manning The American Military: Demographics and National Security

by Martin Binkin

This is the sixth in a series of NPG FORUM papers exploring the idea of optimum population—what would be a desirable population size for the United States? Without any consensus even as to whether the population should be larger or smaller, the country presently creates its demographic future by inadvertence as it makes decisions on other issues that influence population change.

The approach we have adopted is the “foresight” process. We have asked specialists in various fields to examine the connection between alternative population futures and national or social objectives in their fields of interest. In this issue of the FORUM, Martin Binkin explores the connections between demographics and national security. Mr. Binkin is a senior fellow in the Foreign Policy Studies program at the Brookings Institution, currently on sabbatical, serving as the Secretary of the Navy Fellow in the Economics Department, United States Naval Academy. He has written extensively on defense manpower issues.

It is said that Josef Stalin, once cautioned against offending the Vatican, asked his advisers how many divisions the Pope could field. Traditionally a nation's standing in the world has been determined by its military power and, for most of history, military power has been expressed in terms of division flags or the number of men under arms. By the middle decades of the 20th century, however, mass armies had become an anachronism, first because of the introduction of thermonuclear weapons and later with the spawning of sophisticated military technologies that became substitutes for raw manpower. Even small nations, like Israel, were able to prevail in military confrontations with much more populated enemies. More recently, the Japanese have demonstrated that economic power may be at least as important as military power in contemporary global relationships. Despite these trends, however, much of the conventional wisdom still holds that large armed forces are the *sine qua non* of national power. Thus the prospect that the population of United States may not continue to grow into the 21st century—and, depending on national policy choices, could decline markedly—has aroused some concern. These fears, however, are unwarranted.

This essay examines the question: “Is a rising United States population needed to meet our future military manpower requirements?”

In brief, I will argue that:

—U.S. military strength is not presently constrained by population size,

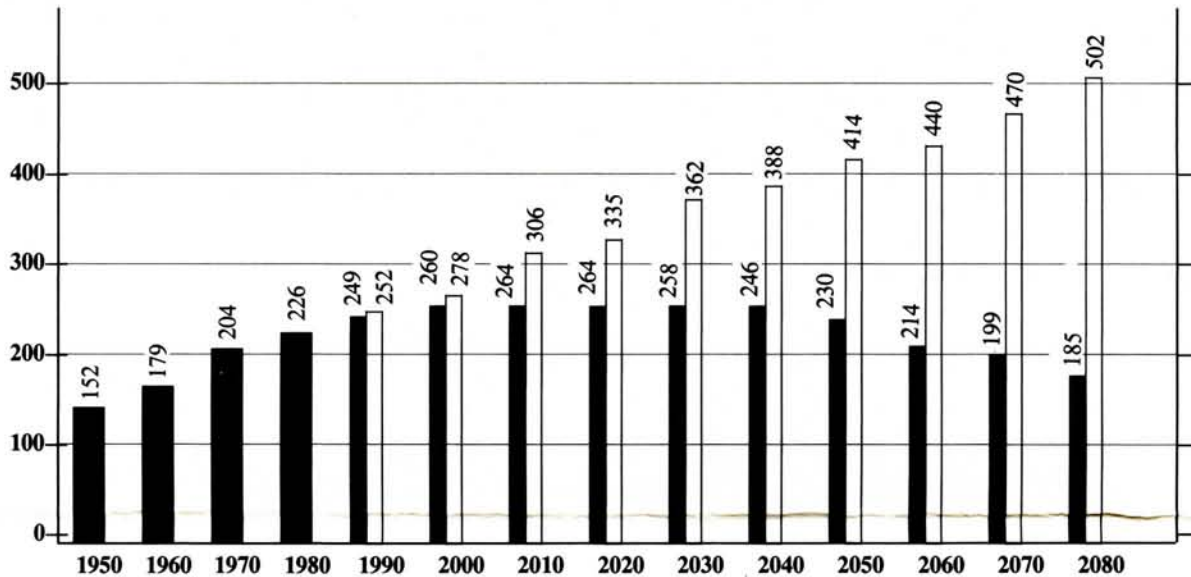
—in the future, a reduction in military manpower requirements is more likely than an increase,

—but, through efficient manpower management, even a substantially larger military requirement could be sustained by the smaller population envisioned in the Census Bureau's “lowest” projections through the middle of the 21st century.

Demographics and Military Recruitment: Recent Experience

Dwindling birthrates in the United States—a trend that started in the late 1950s and brought the baby boom to an end in the mid-1960s—raised a host of public policy issues. As the children of that period (dubbed the “birth-death” generation) have grown older, the effects have already been felt, most notably by the nation's primary and secondary educational institutions. As the first cohorts of that generation completed high school in the early 1980s, higher education institutions and the civilian labor force began to notice the effects, while the armed forces braced themselves for the challenges expected to accompany the decline in the size of the pool of prospective volunteers for military service. The concern was somewhat similar to the alarm now expressed by some observers as they contemplate the prospect of an eventual turnaround in U.S. population growth.

Figure 1. Total U.S. Population, 1950-2080
Past & Projected



Sources. 1950-80, Census Data. 1990-2080 projections from Gregory Spencer, **Population Projections of the United States, by Age, Sex and Race: 1988 to 2080**, Series P-25, No. 1018, Bureau of the Census, 1989.

The lower projections are from the “lowest” series (#19), assuming net annual immigration of 300,000 and fertility (TFR) converging at 1.5 in 2080. The highest series (#9) assumes annual immigration of 800,000 and ultimate TFR of 2.2. (There is in fact a lower series in which immigration and emigration are in balance, but the Bureau does not consider that a serious possibility. The higher projection is by no means the highest possible scenario, particularly since it makes very modest assumptions about immigration.)

At the turn of the decade, in fact, there was good reason to worry about the impact of demographic trends on the nation’s ability to field a peacetime force of two million strong: during the latter half of the 1970s, when the number of Americans in the military-eligible population (18- to 22-year-olds) was at an all-time high, the armed forces compiled the poorest recruitment record in its history. In fiscal year 1979—the peak-year for “baby-boomers” turning eighteen years of age and entering the military’s prime recruiting pool—about half of the Army’s new recruits had standardized aptitude test scores in the lowest acceptable category (below the thirtieth percentile). Thus the prospect that the youth population would shrink by 25 percent over the next fifteen years and uncertainty about birth and fertility rates beyond that period set off alarms among defense manpower planners. If the armed forces were having trouble maintaining a force that comprised less than one percent of the American population, some feared, how would the nation ever hope to raise an Army large enough to win World War III, should that horrible prospect materialize? After all, at the peak of World War II the United States military establishment had under arms over eleven million men and women, or close to ten percent of the total population.

Total Population Projections

Such concerns, however, can be readily discounted. First, even before recent events in the Soviet Union and Eastern Europe, a replay of World War II between NATO and the Warsaw Pact—that is, a protracted conventional conflict

involving millions of troops—was considered an extremely long shot. The betting among serious analysts was that any conventional military confrontation between the two sides would be measured in terms of days or weeks, rather than months or years, ending early either in negotiations or in escalation to nuclear conflict. In any case, few envisaged any situation that would require tens of millions of Americans to serve in the armed forces.

But even if, against all odds, the nation was to get involved in a protracted war of attrition that would require a substantial expansion in the size of the armed forces, full mobilization would be ordered, conscription would be reinstated and some 18 million American men in the 18-through-26 year cohorts would provide the initial pool of draftees, followed as necessary by men in the older age groups and perhaps expanded opportunities for American women to serve or, indeed, be conscripted into military services. In the extreme, a U.S. military force equal to that of the second World War (11 million) would now constitute less than 5 percent of the total population compared with close to 10 percent in that conflict. In short, the current size of the American population is more than adequate to support “worst-case” scenarios, provided that the nation is willing to reinstitute conscription. And, as Figure 1 shows, even at the “lowest” projections by the Census Bureau, total population size would not be an issue in the foreseeable future. The population projected for 2080, for example, while substantially smaller than the current figure, would still be larger than the population that sustained our armed forces during the second World War.

The “Qualified and Available” Population

The more relevant issue is the requisite population to sustain American military forces under voluntary peacetime conditions. The key consideration here is not so much the size of the total American population, but rather the size of the relevant-age youth cohorts that form the supply pool of prospective volunteers.

The magnitude of the challenge can be seen in Table 1, which calculates the proportion of “qualified and available” males who would have to volunteer for military service before reaching age 23 if the military services are to attain their projected active and reserve manpower needs¹. This calculation follows one age group through time—excluding those who, because they are on a college track, are *not likely* to volunteer and those who, because they would be mentally, physically, or morally unqualified, *cannot* volunteer.²

Table 1. Proportion of Qualified and Available Males Required Annually for Military Service, Fiscal Years 1984-88

Thousands unless otherwise indicated

<i>Item</i>	<i>1984-88</i>
Total noninstitutionalized 18-year-old males ^a	1,800
Minus: nonavailable college students (adjusted for dropouts) ^b	525
Minus: Unqualified males	526
Mental ^c	337
Physical or moral ^d	189
Equals: Qualified and available male pool	729
Total male recruit requirement	376
Active forces	278
Reserve forces	98
Percent of pool required	52

Sources: Total 18-year-old male population from Bureau of the Census, *Current Population Reports*, series P-25, no. 704, “Projections of the Population of the United States: 1977 to 2050” (GPO, 1977), pp. 44-48, 51-55. Institutionalized population estimates based on preliminary data from the 1980 census provided by Bureau of the Census. First- and second-year dropouts based on estimates provided by National Center for Educational Statistics. Mentally unqualified derived from data contained in special tabulations provided by Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics. Physically and morally unqualified derived from unpublished data provided by Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics. Male recruitment requirements compiled from Department of Defense, *Manpower Requirements Report, FY 1984*, vol. 3: *Force Readiness Report* (DOD, 1983), pp. III-12, III-20, III-21, IV-10, V-7, VI-6, VI-9, VI-10. Projections of Navy and Marine Corps reserve requirements based on fiscal 1983 recruitment data.

a. Assumes 1.5 percent of the male population aged 18 to 24 is institutionalized.

b. Estimates based on 1980 participation rates: in 1980, 74.4 percent of the youth cohort that had entered the fifth grade in 1972 completed high school and 46.3 percent of the initial group enrolled as full- or part-time students in programs creditable toward a bachelor’s degree. Assumes that 25 percent of first-time enrollees leave during the first year and 12.5 percent during the second year.

c. Based on 1981 military aptitude requirements, 2 percent of males with one or more years of college would be expected to be unqualified, 10 percent of high school graduates without college experience would not meet minimum standards, and 60 percent of non-high school graduates would not qualify.

d. Assumes that 16.3 percent of the male youth population meeting minimum aptitude requirements would be disqualified on physical grounds and 3.9 percent would fail to meet moral standards.

As the table depicts, during 1984-88, an average of about 1.8 million males turned 18 each year. Based on past experience, about 525,000 of them were considered to be “dedicated” college students (those who would remain in college at least into the third year) with a low propensity for enlisted military service. (This group, of course, provides the bulk of military officer candidates, but the military officer corps represents such a small fraction of the relevant age cohorts that the size of those cohorts is not an important consideration in staffing the officer corps.) Another 526,000 would fail to meet the minimum physical, moral, or aptitude standards for entry into the armed forces.

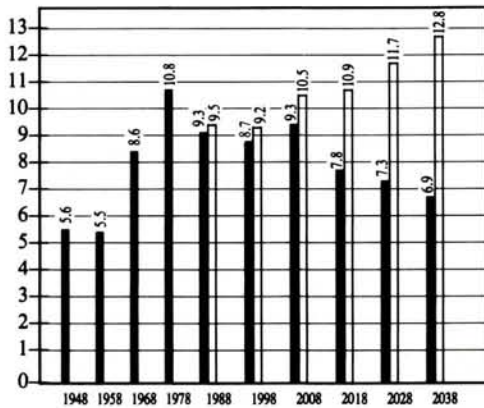
To maintain an active military force of about 2.1 million and a reserve force of roughly 1.0 million, about 376,000 males had to be recruited annually (278,000 active and 98,000 reserves), or about 50 percent of the “qualified and available” pool of eighteen-year-old males. Daunting though this task might appear, recruiting goals were met with relative ease, at relatively modest cost, and without compromising the quality of the forces. In fact, the armed forces faced the formidable task of meeting these recruitment goals over a period during which the youth population was in decline. As matters turned out, they not only survived a 15 percent dip in the youth population that occurred during the 1980s, but they literally thrived, attracting recruits with record-setting levels of education and aptitude test scores. By the close of the decade, close to 90 percent of all new military recruits had earned their high school diplomas, compared with just over 70 percent in the late 1970s. Likewise, fewer than 5 percent of the new recruits in 1989 scored in the lowest acceptable category (below the 30th percentile) on the standardized military aptitude test, compared with close to 30 percent a decade earlier.

A variety of factors contributed to this seeming paradox, including an economic recession that led to diminished employment prospects for American youth, substantial military pay increases, an improved educational benefits package, and a growing popularity of the military among America’s young, attributed partly to the replacement of President Jimmy Carter’s characterization of American ‘malaise’ with President Ronald Reagan’s ‘standing tall’ jingoism.³ In any event, the message should be reassuring for those concerned that a decline in the size of the American population over the long term might preclude the nation from fielding adequate military forces.

Youth Population Projections

For the near term, the size of the youth population will continue to shrink until the middle of the 1990s, when the effects of the “birth dearth” will run their course. While the size of the 18-to-21 male population will dip to 6.66 million in 1994, the number of young American males will still be large relative to the pre-“Baby-Boom” era, making it unlikely that the armed forces will run into any difficulties in attracting a sufficient number of volunteers. Cohort sizes will begin to increase again after 1995, an upturn that can be expected to last at least until 2010⁴, after which estimates are uncertain, depending on assumptions about immigration and fertility rates. As figure 2 indicates, the differences between the U.S. Census Bureau’s “highest” and “lowest” projections are substantial; by 2038, the size of the 18-to-22 year-old cohort is expected to range from a low of about 7 million to a high of close to 13 million.

Figure 2. U.S. Population: Males, Ages 18 through 22 (in millions)



Source: as in Figure 1. All cohorts have been shifted from 20-24 age cohorts by advancing them two years; this does not affect the number at this level of rounding.

At the low end, the size of the cohort would be about 20 percent smaller than now exists, but it would still surpass the size of the similar-aged cohorts of the 1950s and early 1960s.

Future Prospects

What are the chances that the armed forces could continue to meet their manpower needs under the lower population projections? The answer depends on a variety of factors that become more uncertain the further in time that one projects, but the conclusion here is that the nation could field requisite military forces under the “lowest” population scenario, especially if current prospects for reducing the size of the military establishment do in fact materialize and especially if a variety of manpower policies—many legacies of the conscription era—were remodeled to meet the needs of the contemporary military establishment. It is convenient to separate these policies into those that affect the demand for “qualified and available” males and those that affect their supply.

Demand Options

On the demand side, the most important variable is the size of the armed forces. Obviously, the smaller the forces, the fewer personnel will be needed out of the youth cohort, all other things equal. Given the recent changes in the Soviet Union, Eastern Europe, and Central America, the prospects have brightened for sizable reductions in the United States armed forces. Indeed, it does not seem premature to speculate that the large standing forces maintained by the world’s superpowers during the years of the Cold War will become an anachronism. While the ultimate size of the U.S. armed forces, given present trends, is difficult to predict with precision, some knowledgeable observers believe that the military establishment could be cut in half by the end of the century.⁵ Under those circumstances, it is reasonable to assume that the annual flow of personnel into the military could be cut from close to 400,000 to less than 200,000. Should that situation transpire, any remaining concerns about the adequacy of the population to support the armed forces, even under a low-growth population trajectory, would evaporate.

But even if the current trend toward greater superpower stability is reversed, and if cuts in the size of the armed forces do not occur, the demand for new male recruits can still be reduced substantially by substituting women or civilian personnel for uniformed males. Some steps have already been taken toward this end. In fact, the role of women in the military has been expanded appreciably over the past two decades: compared with 1972, when women constituted less than 2 percent of the force, today they account for close to 11 percent of the total. This expansion has leveled off in recent years, primarily because of laws and policies that prevent them from filling a range of “combat” positions. This expansion could be resumed if recent efforts to relax the combat exclusions are successful.⁶

The demand for young male Americans to perform military service could also be reduced by staffing more of the jobs now filled by uniformed personnel with civilians. The ground rules that govern the relative numbers of military and civilian employees in the armed forces are imprecise, and the rationale underlying the determination of the current composition is unclear. Whether combat forces—for example, Army or Marine Corps infantrymen, naval destroyer crews, and Air Force strategic bomber crews—should be military or civilian is obviously not at issue. And few would doubt that those who directly support the combat forces and are expected to operate in a combat zone should be uniformed personnel.

Even when agreement is reached on this obvious point—that “combat forces” should be composed of military personnel—a question remains: what constitutes “combat forces?” The distinctions are not as sharp as they appear. Must crews flying and servicing airlift aircraft similar in configuration to those used commercially, such as the C-5, be military? Must naval support ships, such as oilers and tenders, be manned by uniformed sailors? In fact, some civilian contractor employees routinely deploy with the combat fleet. And drawing the line between military and civilian personnel combat support functions becomes more difficult when it is recalled that U.S. combat forces currently deployed rely on foreign national civilians for certain forms of support.

The retention of a larger proportion of military personnel beyond one term of service would also reduce turnover and hence the annual requirement for new recruits. For example, to sustain a force, say, of 500,000 enlisted personnel of which 36 percent are careerists (i.e., serve beyond an initial tour of four years) would require an annual input of about 80,000, while the same size force with 44 percent careerists would need only 70,000 new recruits per year. Thus, to the extent that the military services retain a larger proportion of their personnel, they could substantially control the demand for new volunteers while continuing to meet total manpower needs. Arguably, this would be a prudent course to follow in any event, since modern military technology places a higher premium on an experienced workforce.⁷

Supply Options

Turning to the supply side of the issue, the “qualified and available” male population, as defined above, excluded certain categories of individuals. Changes in recruitment policies and entry standards could bring some of these categories into the supply pool, thus increasing the number of potential volunteers.

Summing Up

Since college students have typically not shown an interest in serving in the enlisted ranks, the armed forces understandably dedicate few recruiting resources to the campus market. Although it is unreasonable to expect that the military services could attract large numbers of graduates of four-year colleges and universities into the enlisted force, it is appropriate to consider programs designed to attract graduates of two-year junior or community college programs. Just how many of the approximately 525,000 youths in each cohort that might be attracted is difficult to predict, but the success of the Army College Fund program during the 1980s, which offered extra educational benefits to certain classes of volunteers, suggests that incentive programs could be devised to increase the propensity among the college-bound to serve in the armed forces and thereby expand the supply of those who would be “qualified and available” for military service.

Another approach for expanding supply is to adjust educational and test score entry requirements. Actually, specifications concerning the quality mix of recruits are arbitrary since there are no hard-and-fast rules for judging how smart or how well-educated individuals must be to function effectively in the armed forces. As indicated in Table 1, about 29 percent of each eighteen-year-old cohort can be expected to fail to meet current standards for entrance into the armed forces. Relaxation of these standards, which has been done periodically in the past depending on supply and demand, would give the services access to a larger supply pool within cohorts of the same size. Furthermore, an adjustment in physical standards along the lines of those adopted during the second World War that allowed people who were not “combat fit” to fill limited duty billets, could enlarge the pool even more.

The United States has been able to field armed forces of sufficient size to support its national security strategy under challenging conditions—declining youth cohorts and an all-volunteer recruitment system. The force of the evidence indicates that total population growth is neither a necessary or sufficient condition to ensure that the nation is able to protect its security interests.

At bottom, it is becoming increasingly apparent in the closing years of the 20th century that military strength is not necessarily synonymous with national security. Other elements—the availability of energy and food at reasonable cost; the natural resource balance; the skill levels of the population; and the degree of popular identification with the system—also deeply influence a nation’s security.

I do not profess to expertise in these areas. Elsewhere in this series of essays the Pimentels have argued that a smaller population is essential to the maintenance of living standards as the country moves into a solar-based energy system and changes its agricultural practices to save its resource base. Vernon Briggs has argued the importance of better education and less job competition at the unskilled level to avoid generating an alienated underclass overrepresented with ethnic minorities. If the lower Census projection would in fact contribute to the pursuit of these and other elements of national security, I am confident that future military manpower requirements would not stand in the way of a national decision to take that course.

FOOTNOTES

1. The calculation here is confined to male youths since, under present policies, they will continue to constitute about 90 percent of all military personnel. Obviously, if the armed forces expanded the role of women beyond the current goals, a smaller proportion of the male population would have to be attracted. This possibility is discussed later.
2. For a description of this methodology, see Martin Binkin and John D. Johnston, *All-Volunteer Armed Forces: Progress, Problems, and Prospects*, prepared for the Senate Committee on Armed Services, 93 Cong. 1 sess. (GPO, 1973), pp. 40-42, 59-60.
3. For a further discussion of these factors, see Martin Binkin, *America’s Volunteer Military: Progress and Prospects* (The Brookings Institution, 1984, pp. 13-14.)
4. The annual number of births began to rise in 1975 not because of increases in fertility rates but rather because of the delayed ‘echo effect’: more women, born during the baby boom, reached their

childbearing years. Once this generation passes beyond childbearing, starting in the 1990s, annual births will decline once again, barring larger-than-expected increases in fertility rates.

5. See, for example, William W. Kaufmann, *Glasnost, Perestroika, and U.S. Defense Spending* (Brookings Institution, 1990)
6. According to the conventional wisdom, the supply of women who are interested in military service is too small to support anything more than a modest expansion. Recent research indicates, however, that higher recruiting goals for women could probably be met if the same enlistment incentives, recruiting techniques, and advertising strategies that have been used for attracting male volunteers were applied to females. See James R. Hosek and Christine Peterson, *Serving Her Country: An Analysis of Women’s Enlistment* (Rand Corporation, January 1990).
7. For a discussion of this issue, see Martin Binkin, *Military Technology and Defense Manpower* (Brookings Institution, 1986).

NEGATIVE POPULATION GROWTH, Inc.

210 The Plaza, P.O. Box 1206, Teaneck, N.J. 07666-1206, Telephone: (201) 837-3555

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