# Propensity to Serve in the U.S. Military: Temporal Trends and Subgroup Differences

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Solution in the advent of the all-volunteer military force in the early 1970s, the Department of Defense and the individual services have undertaken large-scale research programs aimed at monitoring the quantity and quality of personnel in the civilian labor force who might be available for voluntary military service. These programs have included large-scale longitudinal surveys of the propensity of youth to serve in the military. Recent research has demonstrated a significant relationship between such propensity and actual enlistment. It has also shown variations in propensity over time, revealed variations in propensity among subgroups in the youth population, and suggested a recent decline in propensity to serve among African American youth. Our own recent research has docu-

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mented gender differences both in enlistment propensity and in the association between propensity and actual enlistment.<sup>6</sup>

This article extends our analysis of these issues using data from the University of Michigan's Monitoring the Future (MtF) project, which has surveyed high school seniors since 1975 and eighth and tenth grade students since 1991. We will use these data to describe changes in propensity to enlist in the military that have occurred during late adolescence in recent years, and changes that have occurred in the enlistment propensity of high school seniors during more than two decades of the all-volunteer force; and we will link these changes to the societal and organizational environments within which they have occurred.

## The Environment of the All-Volunteer Force

Factors that potentially might affect either enlistment propensity or actual enlistment have not been constant during the two and a half decades of the volunteer force. A decade into the volunteer force era, Thurman suggested that there had been four phases of recruiting the force, characterized by changes in the world situation, the state of the American economy, and the availability of recruiting resources. These phases are described in Table 1.

The first phase of the all-volunteer force, which lasted from 1973 to 1976, was characterized by entry-level military pay that had been adjusted upward in the last years of conscription, recruiting resources that had been enriched to make the volunteer force a success, the continuation of the Vietnam-era G.I. Bill, and high youth unemployment in a large military age-eligible cohort in the civilian labor force. It achieved successful recruiting of sufficient number of cognitively capable high school graduates. Increasing proportions of them were women and minorities, although our database does not capture this phase.

The second phase, which completed the decade of the 1970s and is reflected in the data presented below, was a reversal of the first. Caps on military pay made the armed forces less competitive in a recovering labor market. The G.I. Bill, which has long been recognized as a major recruitment incentive for high mental aptitude personnel,<sup>8</sup> ended. It was replaced by the Veterans' Educational Assistance Program (VEAP), which required paycheck deductions, and was a less attractive and popular benefit. The services were punished for their success in the first phase by cuts in recruiting resources. Concurrently, youth unemployment dropped. Although the military age-eligible population was growing with the last

Table 1
Six Phases of the All-Volunteer Force, by Conditions of
Recruiting Climate: 1973–1997

Descriptive Characteristic	Phase 1 1973–76	Phase 2 1976–80	Phase 3 1980–83	Phase 4 1983–87	Phase 5 1988–90	Phase 6 1991–97
Entry-Level Pay*	Rising	Falling	Rising	Falling	Stable	Stable
Recruiting Resources	Rising	Falling	Rising	Rising	Falling	Falling, then Rising
Educational Benefits	Rising	Falling	Rising	Rising	Rising	Stable
Recruiting Environment**	Good	Poor	Good	Poor	Poor	Poor
Recruit Quality***	Falling to Rising	Falling	Rising	Rising	Stable	Falling

Notes: \* Based on comparability of military and civilian compensation; \*\* Determined primarily by youth unemployment and cohort size, but influenced in phase six by the Gulf War and military downsizing; \*\*\* Defined by educational attainment and aptitude test scores.

baby-boom cohorts, some services began to miss recruiting objectives, and a miscalibration of scores on a new selection and classification test used by all services since 1976 contributed to a significant decline in the mean mental aptitude level of recruits during this period. Had it not been for this miscalibration, and the concomitant recruitment of hundreds of thousands of personnel whose real qualifications were below the minimum required for enlistment, the volunteer force might have failed during this period.

The early 1980s constituted a third phase, which could be characterized as a recovery from the second. Pay increases in 1981 and 1982 brought recruit compensation into approximate comparability with entry-level civilian pay. The army and navy implemented noncontributory supplements to VEAP, and a new G.I. Bill was authorized. Despite a declining age-eligible recruiting pool, enlistment quality and quantity were high.

Gilroy, Phillips, and Blair<sup>9</sup> extended Thurman's analysis a decade and a half into the all-volunteer force era, and specified a fourth phase, extending from 1983 to 1987 when, despite a downturn in pay comparability in 1983, the army's recruiting objective was to build upon the success of the third phase, particularly through investment in educational

benefits. Reflecting the decline in pay comparability at a time of high entry-level civilian wages, a declining youth population, and declining unemployment, there was a decline in enlistment contracts and a reduction in the delayed entry pool. Nonetheless, 1984 was a banner year in terms of quality of enlisted accessions, and personnel quality continued to increase during this period.

Segal and Bachman suggested that a fifth phase began in 1988 when, with the age-eligible pool still declining—a reflection of the post-baby boom birth dearth—entry-level civilian wages high, and unemployment low, non-prior service accessions declined and had to be offset by increased reenlistments to maintain force levels. They demonstrated that the factors that characterized this period were associated with changes in enlistment propensity, as measured by MtF. We suggest that a sixth phase began in the early 1990s after the end of the Cold War in Europe and the Gulf War on the Arabian Peninsula, when propensity has been shown to decline in the face of ambiguity about military missions in the 1990s.

As the decade of the 1980s ended, America began a downsizing of the armed forces by about 35 percent, mandated by budgetary pressures and the collapse of the Warsaw Pact threat. The 1990–91 deployment to the Persian Gulf and the war on the Arabian Peninsula delayed the downsizing, but with the Gulf War over and the reduction of U.S. force strength in Europe, we may be in the process of a post-war demobilization similar, in at least some respects, to those that were the norm prior to the Cold War.

The Gulf War served as a dramatic reminder to the post-Vietnam generation of American youth that the function of the military is to wage war. Subsequently, the post-Cold War retrenchment of the military, with dramatic reductions in force, suggested to youths that job security, which is one of the most important job characteristics for young Americans, <sup>11</sup> may be less characteristic of the contemporary American military than it was during the Cold War.

### Database

Our data for analyzing enlistment propensity from the second to the sixth of these phases are from the Monitoring the future (MtF) project, an ongoing cohort-sequential survey conducted by the Institute for Social Research at the University of Michigan. The study involves base-year surveys of nationally representative samples of each high school senior class, beginning in 1975, plus annual follow-up surveys mailed to sub-

Sample and by Subgroups

Table 2	
Ranges of Cases per year (1976–1997) for the Total	

Total Sample	14,832–18,906
Males	6,806–8,828
Females	7,240-8,864
White Males	4,748–6,426
White Females	4,952–7,414
Black Males	702-1,029
Black Females	849–1,207
Hispanic Males	173–814
Hispanic Females	212–814

samples of each class in the years following graduation. The study design has been extensively described elsewhere.<sup>12</sup>

The main data for this paper consist of base-year surveys of seniors from the twenty-one graduating classes of 1976 through 1997.<sup>13</sup> We also report preliminary findings on enlistment propensity of base-year samples of eighth and tenth graders, who were included in MtF the first time in 1991. See Table 2 for the numbers of cases for the total sample and subsamples.<sup>14</sup>

Previous analyses of military attitude items in this database have dealt with the relationship between high school seniors' expectations and actual post-graduation activities for early cohorts of the all-volunteer force, 15 racial and gender differences, 16 propensity trends in the early years of the all-volunteer force, 17 relationship between drug use and military propensity, 18 and the implications of self-selection for military service. 19

#### Measures

The base year questionnaires each year included a question asking: How likely is it that you will do each of the following things after high school? Serve in the armed forces was one of the activities listed, and all respondents were asked to choose among the following alternatives: definitely won't; probably won't; probably will; definitely will. Recognizing that students do not live in a completely volitional world, the questionnaires also included a set of items asking: Supposing you could do just what you'd like and nothing stood in your way. How many of the follow-

ing things would you WANT to do? [Mark all that apply]. Serve in the armed forces was one activity to which they were asked to respond.

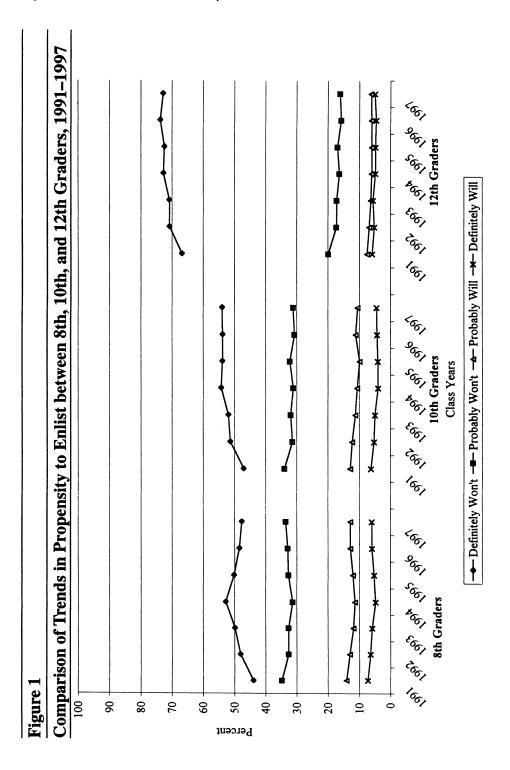
Any respondent who *expected* to serve, regardless of whether he or she *wanted* to serve, was also asked to indicate branch of service and expectations about being an officer and about having a career in the armed forces. In the follow-up surveys, respondents were again asked about the same activities, and were asked to respond whether they were currently engaged in that activity, had already done it, planned to do it, or would not do it.

## **Results**

Change in propensity through adolescence. Figure 1 presents data on propensity to serve for the eighth, tenth, and twelfth grade samples in each year from 1991 to 1997, using the question of whether it was *likely* that they would serve, rather than the question of whether they wanted to serve, as the measure of propensity. These data are available only for the sixth phase of the volunteer force, and this is the conventional measure of enlistment propensity. However, as we shall see below in our discussion of market segments, the relationship between these two alternative measures varies among social groups and between phases of the volunteer force.

There is not much variation across grade levels in the proportion of students who say that they *definitely will* serve in the armed forces after high school. This response was given by about five percent of each sample each year, and was fairly invariant by year and by grade.

The rest of the pattern does change across grades, and is similar from year to year. The percentages of students who say that they probably will or probably won't serve in the armed forces decline with increasing grade level, and the percentages who say that they definitely won't increase, with the greatest increase occurring between the tenth and twelfth grades. The definitely won't responses also increase somewhat at each grade level between 1991 and 1996, so that the lowest propensity occurs among twelfth graders in 1996. There was a slight increase in 1997. While these data reflect a series of cross-sectional surveys each year rather than a true panel, it would appear that students who are definite in their feelings about military service as early as the eighth grade are unlikely to change during their high school years. However, those who are less certain, whether they are leaning in favor of or against military service, tend over time to resolve their indecision in a negative direction. If there is a



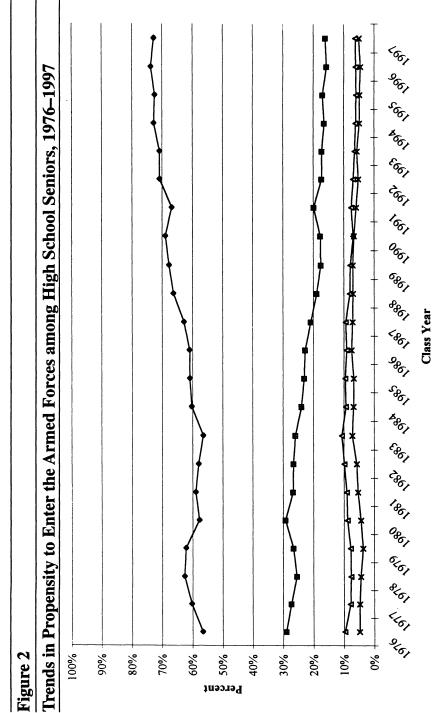
message for the military recruiting community in these data, it is to explore ways to make military service attractive as early as the eighth grade, even though eighth graders are not yet eligible to enlist, so that indecision at that age might be resolved in a less negative direction.

Change in propensity over time. Figure 2 presents the MtF twelfth grade propensity data from 1976 onward. MtF did not exist when the volunteer force was implemented. Since 1976, those high school seniors who said they definitely will enter the armed forces have been a small and relatively stable group, although with a group this small, a two percent shift is proportionately very large. There has been a slight decrease over time in the percentage saying they probably will serve, a more marked decrease in the percentage saying they probably won't serve, and a dramatic increase in the percentage saying that they definitely won't serve in the military. These data from high school seniors seem to recapitulate the maturational pattern that we observed among eighth, tenth, and twelfth graders in Figure 1. There are downward shifts over time in the percentages of students who are undecided, particularly among those who feel that they probably won't serve in the armed forces, and the net resolution of indecision is in a negative direction.

During the second phase of the volunteer force (1976–1980), in a poor recruiting environment and with falling recruiting resources, the percentage of high school seniors saying they definitely would serve varied between 3.7 and 4.8, while those who said they definitely would not varied between 56 and 63 percent. During the third phase (1980–1983), in a better recruiting environment with richer recruiting resources, those saying that they definitely would serve increased to a range from 5.3 to 7.1 percent, while those who said they definitely would not serve did not go above 59 percent.

In phase four (1983–1987), in a poorer recruiting environment but with increasing recruiting resources, the percentage saying they definitely would serve stayed relatively high, varying between 6.7 and 7.1, but the percentage saying they definitely would not serve also stayed high, exceeding 60 percent in each year. In the fifth phase (1987–1990), with recruiting resources falling further, the percent saying they definitely would serve remained relatively stable, but for the first time, over two-thirds of the respondents in each year said that they definitely would not serve.

The period from 1991 to 1997 does seem to be a distinct phase, at least in terms of propensity to serve, and is the poorest to date on this measure. The percent saying that they *definitely would not* serve dipped slightly in 1991, but stayed above two-thirds, and this percentage went above 70 in 1992 and stayed there. The percentage saying they *definitely* 



-- Definitely Won't -- Probably Won't -- Probably Will -x Definitely Will

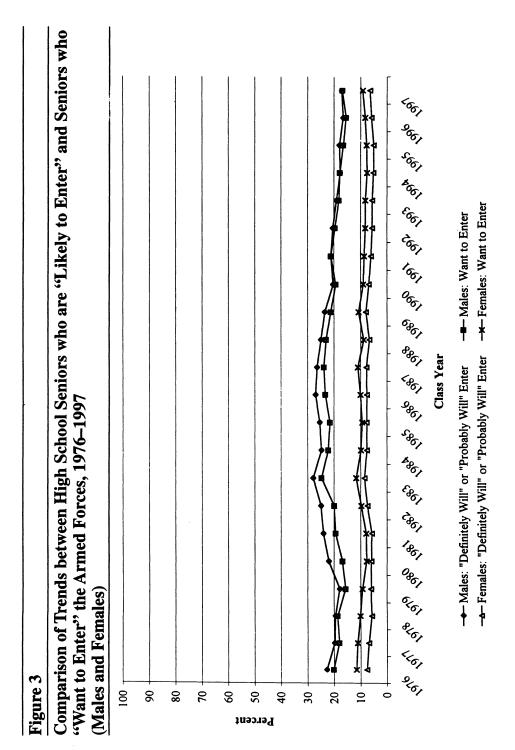
would serve, by contrast, dropped below 5 percent during this period, for the first time since 1980.

Labor market segmentation. Just as propensity to serve has not been constant across time, neither has it been constant across social groups. During the volunteer force era there have been major variations in the enlistment of women, of racial and ethnic minorities, and of college-bound youth. We now turn to variations in propensity to serve among these groups. As indicated earlier, we looked at two alternative propensity measures: whether people think it likely that they will serve, and whether they want to serve. We will note that for some groups, the expectation of service exceeds the desire to serve. There are people in these groups who perceive that the military will provide them with opportunities not available in the civilian labor force, even though they don't want to be in the military. On the other hand, for some groups, desire exceeds expectation. There are people in these groups who would like to serve, but who perceive obstacles to doing so (and/or have more compelling reasons for choosing an alternative course).

Gender. One of the major changes in the volunteer force has been the increased integration of women in the force. At the birth of the volunteer force, about two percent of our military personnel were women. The volunteer force was born at a time of increasing labor force participation by women and, while the military is still a predominantly male organization, over fourteen percent of our personnel are now women. This is not a uniquely American phenomenon, but a reflection of a cross-national trend 20

Figure 3 presents propensity data by gender for the 1976–1997 period, using two measures of propensity. The traditionally masculine nature of military service is apparent here. Men are considerably higher on both measures of propensity than are women. For most years, more men think it likely that they will serve than want to serve. In a sense, this difference may reflect a process of economic conscription that replaced the process of political conscription that had been represented by the Selective Service system. However, since about 1991, there has been a good fit among men between desires to serve and expectations of service so that the two questions on propensity are redundant.

A different pattern appears among women high school seniors. Not only do they report lower propensity to serve than men, but they also report fairly consistently higher desires to serve than expectations that they "probably" or "definitely" would serve.<sup>21</sup> This is a segment of the labor force whose desires to serve are not being met, perhaps due to perceptions of limited opportunities for women in the military. It would



appear to be a fertile labor market segment for recruiting purposes. Interestingly, in 1996 and 1997, estimates of the likelihood of serving increased somewhat among women, and converged with desire to serve.

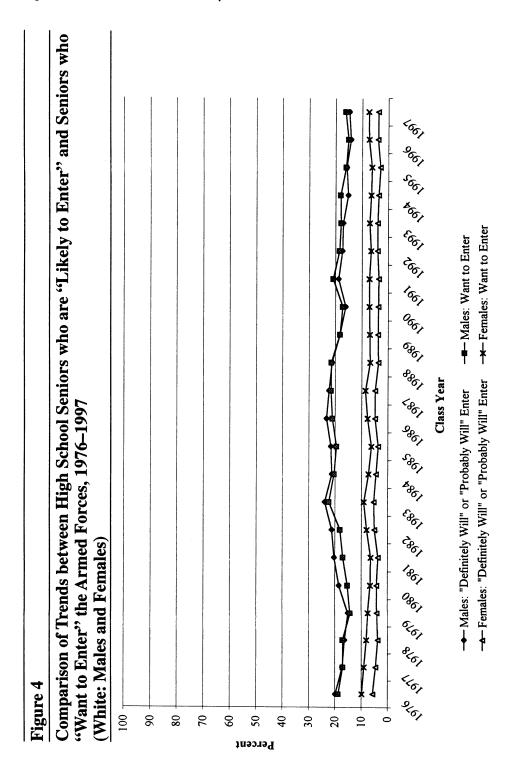
The effects of the recruiting environment are also obvious in these data. During the low-resource second phase of the volunteer force (1976–1979), both propensity measures declined for both genders. In the enriched environment of the third phase (1980–1983) both measures climbed for both groups. Subsequently, there has been a long-term decline, somewhat more apparent among men than among women.

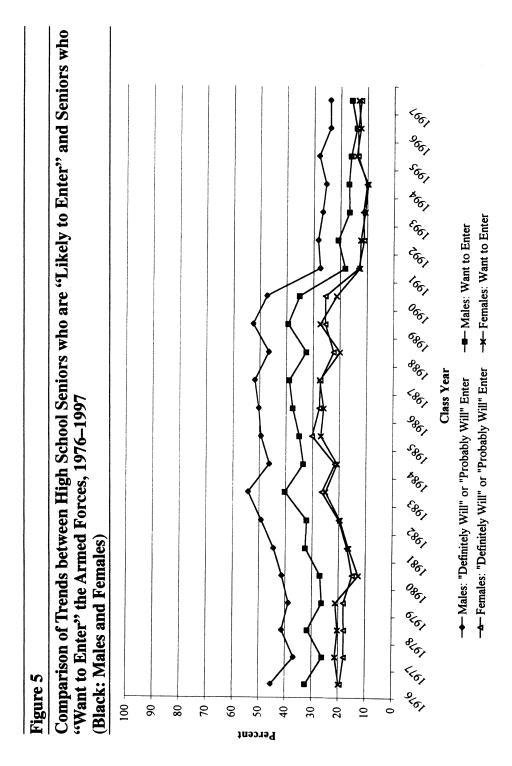
Race and Ethnicity. African Americans have been overrepresented in the volunteer force relative to their proportion in the U.S. population, and changes in their level of representation have been affected more by changing personnel policies than by the increasing proportion of the population that is black.<sup>22</sup> Hispanic Americans are the most rapidly growing segment of the labor force, but have been under represented in the armed forces.

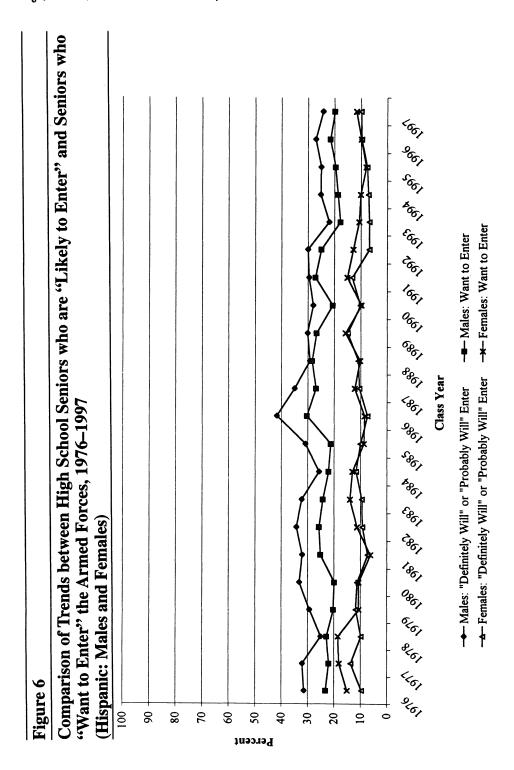
Having shown a significant gender difference in enlistment propensity, we present our data on racial and ethnic effects by gender. Propensity data for white, black and Hispanic high school seniors are presented in Figures 4, 5, and 6, respectively. We first discuss the findings for men and then for women.

As Figure 4 reveals, white men have shown fairly low propensity to enlist, and their desire to enter the military has been closely associated with their expectations of serving. Both propensity measures show some sensitivity to the phases of recruitment. During the second phase (1976–1980), in a poor recruiting environment, both propensity measures declined. In the enriched recruiting environment of the third phase (1980–1983) both measures increased. A plateau was maintained through the fourth phase (1983–1987), but propensity declined again through the fifth phase until it spiked slightly at the time of the Gulf War.

Up until 1990, the group that had the highest expectation of service was African American men, where phase two recruiting resources had a clear salutary effect on propensity. As Figure 5 shows, their desire to serve was not as great as their expectation of service, but between 1981 and 1990, they had the highest desire to serve as well. Black propensity to serve dropped precipitously on both measures in 1991, and is no longer as differentiated from other groups as it was previously. The decline in enlistment propensity since 1990 that has worried policy-makers is almost wholly due to this change ("normalization") in propensity among African Americans. Indeed, since 1991, desire to enter the military has been somewhat lower among black than among white or Hispanic men, although expectations of actually serving are similar for all three groups.<sup>23</sup>







Hispanic men, like African American men, reported higher expectations for service than desires for service during most of this period, although they tended to have lower propensity than African Americans. As Figure 6 shows, from 1988 on, this differential between desire to serve and expectation of serving decreased somewhat.<sup>24</sup>

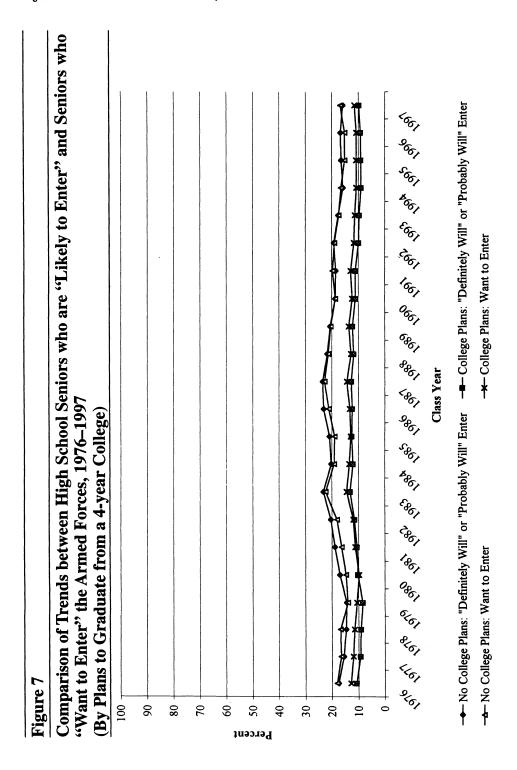
The patterns are somewhat different for women in the three racial ethnic groups. As Figure 4 shows, white women have lower enlistment propensity than white men. Their propensity scores vary very little from year to year. Unlike white men, their desire to enter the military somewhat exceeds their expectations of doing so.

African American women, like African American men, have the highest propensity scores of the three groups. Like African American men, their propensity increased during phase three, and declined markedly in 1991. As Figure 5 shows, however, there has been a very close fit between their desire to enter the military and their estimated likelihood of doing so.

The propensity of Hispanic women, like that of Hispanic men, has been somewhat variable from year to year. As Figure 6 reflects, during the third and fourth phases of the volunteer force—most of the decade of the 1980s, Hispanic female propensity was lower than black female propensity. In the 1990s, Hispanic female propensity first exceeded, and then converged with black female propensity.

Educational aspirations. During the years of the volunteer force, the American armed forces have recognized a need for personnel at higher mental aptitude levels; however, such high aptitude youth are more likely to aspire to higher education than military service as their desired post-high school activity. In other words, while the armed forces are in competition with civilian employers for the bulk of their entry-level personnel, they are in competition with colleges and universities for the best and the brightest. The armed forces have capitalized on the rapidly increasing cost of higher education, and have used educational incentives—G.I. Bills, the Veterans' Educational Assistance Program, and additional service-specific programs—to encourage college-oriented youth to serve in the military before college, thereby earning financial benefits applicable to the cost of education.<sup>25</sup>

Figure 7 presents military service propensity data for high school seniors who planned in their senior year to graduate from a four-year college, and those who aspired to less education. Those who plan less than four years of college education are about one and a half times more likely to want to serve and to expect to serve, compared to those who plan to graduate from a four-year college. Desires to serve and expectations of service are highly congruent in the former group. In the latter,



desire to serve tended to be higher than expectation of serving. A more attractive package of educational benefits might persuade more college-bound youths who want to serve to do so.<sup>26</sup>

#### Discussion

During the 1990s, a small but relatively constant proportion of students in the eighth, tenth, and twelfth grades have thought that they definitely would serve in the armed forces after high school. Larger proportions who in the eighth grade thought that they probably would or probably would not serve declined markedly in the tenth and twelfth grades, yielding strong majorities who said that they definitely would not serve. A time trend toward resolving uncertainty in favor of not serving appeared among twelfth graders between 1976 and 1996 as well, suggesting that both maturational and temporal effects have mitigated against enlistment propensity.

Across the two decades examined, consistent differences in propensity were found among a number of socio-demographic categories: men had higher enlistment propensities than women and African Americans had higher propensities than Hispanics, who in turn had higher propensities than whites; and youths not expecting to attend college had higher propensities than the college-bound. In all of these groups, propensity showed sensitivity to the recruiting environment, declining in the second phase of the volunteer force, rising in the third, stabilizing in the fourth, declining markedly in the fifth, particularly among African Americans and Hispanics, and stabilizing at a low level in the sixth.

The sixth phase follows the end of the Cold War in Europe, and includes a major period of military downsizing, while the number of nontraditional missions undertaken by the armed forces, such as peace-keeping, has been increasing markedly. This presents the services with the challenge of convincing American youth that there are still opportunities associated with military service, that there are still missions to be performed, and that these missions are associated with national interest, rather than simply the needs of extra-national bodies such as the United Nations. The recruiting that the services must continue to do is being conducted in an expanding economy, with a relatively low rate of youth unemployment. The difficulties of recruiting in this environment have already been reflected in lowering of recruiting goals and substituting increased reenlistment for decreased recruiting, thereby aging the force, and in a lowering of enlistment standards at the margins, e.g., increasing the number of non-high school graduates accepted for service.

Our analysis suggests additional recruitment strategies, including earlier intervention in the post-high school planning process of youth, increased attention to segments of the youth labor market characterized by higher desire to serve than expectations of serving (such as white women and Hispanic men), and enhanced educational incentive programs to bring college-oriented youth into the armed forces.

#### Notes

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- 12. Jerald G. Bachman, Lloyd D. Johnston, and Patrick M. O'Malley, *The Monitoring the Future Project after Twenty-Two Years: Design and Procedures*. MtF Occasional Paper 38 (Ann Arbor, MI: Institute for Social research, 1966).
- 13. Data from 1975 are not included because of lack of comparability in questionnaire formats. We will occasionally refer to follow-up data where warranted by subgroup differences in the relationship between propensity and actual enlistment.
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- 21. The relationship between propensity and actual enlistment is lower for women than for men. By the third follow-up only forty-one percent of women who in their senior year said they would definitely join the military had done so, compared to about seventy percent of their male peers with similar propensity. See Jerald G. Bachman, Peter Freedman-Doan, David R. Segal, and Patrick M. O'Malley, *Trends in Military Propensity and the Propensity-Enlistment Relationship* (Ann Arbor, MI: Monitoring the Future Occasional Paper 40).
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- 23. The association between propensity and actual enlistment is lower for African-Americans than for the sample as a whole. For African Americans in our sample who were high school seniors between 1976 and 1991, of those who said they would definitely join the military, about forty-five percent had done so by the third follow-up survey. See Jerald G. Bachman, Peter Freedman-Doan, David R. Segal, and Patrick M. O'Malley, Trends in Military Propensity and the Propensity-Enlistment Relationship.

- 24. The relationship between enlistment propensity and actual service among Hispanics is more similar to the pattern for whites than for African Americans. By the third follow-up about sixty percent of those who said they would definitely serve have done so. See Jerald G. Bachman, Peter Freedman-Doan, David R. Segal, and Patrick M. O'Malley, Trends in Military Propensity and the Propensity-Enlistment Relationship.
- Jere Cohen, Rebecca L. Warner, and David R. Segal. "Military Service and Educational Attainment in the All-Volunteer Force," Social Science Quarterly 76 (1995): 88-104.
- 26. Relationships between propensity and actual service are similar, regardless of college plans. Of the former group, about 66 percent of those who said that they would definitely serve had done so by the third follow-up. Of the latter group, about 62 percent had served by the third follow-up. See Jerald G. Bachman, David R. Segal, Peter Freedman-Doan, and Patrick M. O'Malley, "Does Enlistment Propensity Predict Accession?" Armed Forces & Society 25 (1998): 59-80.