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NAVAL POSTGRADUATE SCHOOL

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THESIS

NATIONAL SERVICE: CAN WE AFFORD IT?

by

Douglas J. DeBode

December 1987

Thesis Advisor:

David R. Henderson

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It is found that the term "National Service," as used in this context, more accurately describes a job creation program for lower income youth than a service program designed to attract youth from a cross-section of American society.

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National Service: Can We Afford It?

by

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Lieutenant, U.S. Navy
B.S., United States Naval Academy, 1981

Submitted in partial fulfillment of the
requirements for the degree of

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It is found that the term "National Service," as used in this context, more accurately describes a job creation program for lower income youth than a service program designed to attract youth from a cross-section of American society.

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I. INTRODUCTION

A. BACKGROUND

The issue of National Service has been present since it was first developed by William James in 1910 when he presented his essay on "The Moral Equivalent of War". He proposed that America's youth be conscripted into the program to fill various needs of society, "get the childishness knocked out of them"¹ and return to society as more mature citizens. The same theme is usually presented by today's National Service Program proponents. Current programs propose national service as an inexpensive vehicle to meet many of society's unfilled needs, to provide an avenue for youth to mature, and to instill a sense of national pride and duty in today's materialistic youth.

National service is not a single program, but rather many programs. Essentially, national service volunteers would be enlisted to provide some form of socially useful service such as: improving the environment, care of the elderly, child care or tutoring. Conceptually, the volunteers would receive some compensation below the market rate for the services they provide. The ability of the government to provide these services at a cost below their real value is the most attractive factor to elected officials. The presence of volunteers, despite the low pay, is assumed

by supporters to be an indication of the true spirit of service that exists in today's youth. Although the basic benefits of the concept are evident, the vehicle with which to arrive at those ends is not.

Various models for national service programs have been presented over the last several decades without any of them gaining a majority of the support. These range from voluntary models, where individuals may choose not to participate, to mandatory service along the lines of the military draft. No single program has received endorsement from a majority of the national service interest groups. This indecision on a direction for the program to take is primarily responsible for the currently fragmented state of the issue. The National Service Secretariat in Washington D.C. is the principal organization lobbying for the acceptance of a voluntary national service program in Congress.

Congress has been interested in the idea of national service for many reasons. Some legislators see it as a means of providing a low cost program to help the needy. Additionally, providing an avenue for youth to mature and to gain a better appreciation for their country through public service is much too appealing for some Congressmen to pass up. A national service program appears on the surface to be a political gold mine in which all would benefit at a minimal financial cost to society. Representative McCloskey presented HR 2206 in the House of Representatives in

February 1979. His proposal, amongst the first, did not receive wide support in Congress and failed to gain passage. Included in HR 2206 were several politically distasteful clauses. Among these was Section 112 which stated that:

Whoever evades or refuses to register in the National Service System as required under Section 103(a) or fails to report for induction under Section 108 when ordered to do so shall be imprisoned for not more than two years.

This criminal penalty clause, along with the severely reduced pay rates for junior military enlisted personnel and the payment of a "subsistence stipend" to volunteers, is too closely associated with forced work camps and involuntary servitude to be a politically or socially acceptable option.

The appeal for a national service program continues in the 100th Congress with the introduction of six new or revamped national service bills.² These bills range from discontinuing the current national student loan program and replacing it with benefits earned from "voluntary" service as in the case of HR 1749 (Representative David McCurdy), to providing matching funds to states with youth service programs (HR 460 introduced by Representative Leon Panetta). These programs are not as politically distasteful as HR 2206 and may gain greater acceptance, but are not representative of a complete voluntary national service program.

Senator Albert S. Gore of Tennessee and Senator Paul Simon of Illinois, both seeking the Democratic Presidential

nomination, support a national service program along with former Democratic Presidential candidate, Gary Hart. The growing political support at the level of Presidential candidates and the increase in the need for these low-cost services³ may force the national service issue into the spotlight in the 1988 presidential election. The increased interest in this issue is evidenced in a statement by Representative Jerry Sikorski, the Chairman of the Human Resources Subcommittee in the House Committee on the Post Office and Civil Service:

There are too many unmet needs in this country. A voluntary national youth service could be what we're looking for There is more interest in national youth service now than there has been in over a decade.⁴

Support for a national service program seems to be gaining momentum in Congress, as evidenced by the increased number of national service bills. However, for every supporter of a program there appears to be an equally vocal opponent.

Staff assistants to Representative Leon Panetta (D-California) stated in October 1987 that a voluntary program currently stood the best chance of passage in Congress. The staff further believed that there is approximately a 50-percent chance that the current Congress would pass some type of a national service bill.⁵

The current political state of the issue is only one of several factors under consideration on the national service issue. There are a myriad of serious constitutional, moral, and ethical questions surrounding the issue. Most of these questions center around the mandatory and "coercive-voluntary" models for national service. The purpose of this thesis is neither to address these questions nor to address the issue of the value of benefits provided by the various models. To address either of these issues would be to unnecessarily inject additional values of the author into the analysis. To refrain from including these issues makes the results of the study more objective and, therefore, a more valuable tool with which to judge the costs of the various models.

It is assumed that a program will pass Congress if it can be shown to be economical, socially valuable, and has the clear support of the majority of the electorate. The value of the benefits derived from each model will be left for the supporters of the programs to present. Some models assume that costs will be shared by the federal government, states and the "local sponsor" of the program. The author's interest is the cost to society, not to individual segments or organizations. The costs, therefore, will not be broken down by who will pay, but will instead be presented in their entirety.

B. IMPLICIT COSTS

The calculation of implicit costs is necessary to fully evaluate the costs an individual must bear under each of the three models. Implicit costs, as used in this thesis, are essentially the difference between the value of an individual's labor and the wages and benefits he receives as compensation from the national service program. The value of an individual's labor is the amount of compensation an individual would receive if given the opportunity to select the use of his time to optimize his income. An individual who voluntarily selects the national service alternative under Model One indicates by his selection that national service is the optimal manner in which to use his time and, therefore, implicit costs are not included in the calculation of costs for Model One.

Models Two and Three delay the time when an individual can choose the occupation which yields his or her optimal income. By delaying this decision, these two models have forced the individual to accept a level of income which is presumably beneath that income the individual would have commanded if given the opportunity to make the selection freely. This suboptimal income for the individual necessitates the inclusion of implicit costs in Models Two and Three.

C. REVIEW OF LITERATURE

Several estimates of the costs of national service programs have been completed in the past and, undoubtedly, several more will be initiated in the future. Most existing estimates are used as a basis of support for their author's position on the issue. Estimates by Donald Eberly and Adam Yarmolinsky, for example, appear to be extremely low to help support their respective positions.⁶ Estimates have also been made by the Congressional Budget Office and the Department of Defense.⁷ None of the estimates which currently exist include implicit costs, and therefore, are not a true measure of the costs of the program.

Eberly and Yarmolinsky estimated the cost of a 1 million-member program at \$5.5 billion and \$3 billion, respectively, in 1979. At the same time, the Committee for the Study of National Service estimated a cost of \$8 billion⁸, more than twice the amount of Yarmolinsky's estimate. Which, if any of these, are reliable estimates? Who is using the numbers to support a personal cause?

The issue of national service appears to have the potential, as former Senator Gary Hart put it, to "be the biggest issue of the 1980's".⁹ Existing cost information is inaccurate and misleading and could conceivably be used in the selection of one program over another or even in the selection of national service in general. The emphasis of this thesis is to provide more accurate and useful estimates

of costs to help decision-makers to make more informed and intelligent decisions on the issue.

The majority of existing literature on the subject of national service is written by relatively few individuals in support of their position. However, the lines of the battle over this issue are not clearly defined. The issue is not over only what type of program should be instituted, but also if some models are even constitutionally permissible.

The American Civil Liberties Union (ACLU) is perhaps the strongest opponent of any mandatory or "coercive-voluntary" system. It has stated that:

Social and economic arguments for conscription as social engineering amount to justifications for involuntary servitude by the young to save money or inconvenience for their elders. The Union opposes in principle the conception of compulsory non-military service precisely because of its compulsory feature This kind of system would amount to involuntary servitude prohibited by the Thirteenth Amendment. The socially desirable ends . . . are praiseworthy . . . , but must be achieved by a system resting on free choice and economic inducement¹⁰

It is highly probably, in light of the ACLU's statements, that any non-voluntary system of national service would be challenged in the courts on the basis of its constitutionality.

Although the ACLU's position that any mandatory system would be unconstitutional seems to be supportable, others have questioned the intent of the Founding Fathers when the "involuntary servitude" amendment was written. They believe

this is restricted solely to prohibit slavery for private masters, not for the state.¹¹

Supporters of a voluntary system, such as Eberly, assume that once the idea of national service becomes ingrained in American society, ". . . youth service would become a much needed rite of passage for many young Americans."¹² A 1977 Gallup Poll, indicating that a national service program was favored by almost 2 to 1, would appear to support this view. However, when the likely volunteers (18-24 year olds) were polled by Gallup in the same survey, the results indicated that 47 percent were favorable toward national service while 50 percent were opposed.¹³ These are the percentages that should be used, since the 18-24 year olds are the group who will be called upon to volunteer. Contrary to the "rite of passage," newspaper articles are written almost daily stressing that today's youth are more concerned with money than ever before. An article carried by the Associated Press entitled "Money More Vital to 1990 Class" plainly points this out. The American Council on Education, in conjunction with UCLA's Higher Education Research Institute, found that 71 percent of the 280,000 college freshmen they interviewed placed "being very well off financially" as their primary goal. The shift in the value of money to youth is evident when compared to the results of the same basic study conducted in 1967. In 1967, 83 percent of the youth interviewed stated "developing a

meaningful philosophy of life" was at the top of their list.¹⁴

The Department of Defense did a study on the effects of a national service program on military recruiting and found that until the program gets large, the effect on the military is negligible.¹⁵ Population projections for the 17- to 21-year-old male population show a declining trend of available youth to meet the demands of the military. Assuming that the percent of high school graduates remains relatively constant, the number of individuals available and qualified to enter the military will decline into the near future.¹⁶

The implementation of a large national service program would accentuate this decline at the program's beginning. However, by all estimates, after the program reached a steady state, the number of people completing their service would approximately equal the number newly entering.¹⁷

The decline in 17- to 21-year-olds, from approximately 10.8 million in 1980 to 9.0 million in 1990,¹⁸ should reduce youth unemployment to an acceptable level; yet, this is one of the basic problems which supporters of national service indicate their programs will solve.

These represent only the major areas of conflict. Differences in specific programs and options, as well as these major areas, prevent any analysis of the costs of the issue without the use of assumptions.

D. ASSUMPTIONS

Many sides of the national service issue remain unresolved and in a fluid state. This facet of the issue necessitates the use of multiple assumptions in any meaningful analysis. The basic assumptions that are incorporated in this analysis are listed here.

The constitutionality of the mandatory programs for national service is left to the courts to decide. The first assumption of this thesis is that all programs analyzed are constitutional, or that an amendment to the constitution could be passed to permit the program. While this may not be particularly realistic, the issue of constitutionality does not directly affect the costs of the programs, and therefore is not relevant to this study.

The effects of a national service program on youth unemployment will not be addressed. The assumption is made that any effect of a program to reduce the level of unemployment is a benefit, not a cost, and the valuation of that benefit is left to future studies.

A basic assumption inherent in the analysis of this paper is that youth will tend to act out of self-interest. This assumption is not intended to imply that all youth are solely interested in money; however, their willingness to provide service to society steadily decreases as the price they must pay climbs. This assumption is needed to judge the incentives and benefits necessary to entice volunteers

into the program as well as to calculate implicit costs. If youth follow utopian ideals instead of acting out of self-interest, any estimate of the incentives necessary to enlist volunteers would be purely subjective. In light of the UCLA study referenced above, this assumption seems valid.

To simplify calculation of costs and provide a more meaningful analysis of the program's potential costs, I assume that the programs are not phased in over time, as their proponents suggest, but instead are brought to full strength as quickly as possible. The phase-in costs will be substantially below the costs of the programs at full strength and are not a meaningful indication of the program's true costs.

The "coercive-voluntary" model is essentially voluntary, but participation is encouraged using negative incentives for non-participants. According to Danzig and Szanton, any individual who does not complete his or her service would be assessed a 5 percent surtax on his or her personal income tax liability. When service is completed, the surtax would be removed. In this model the assumption is made that the 5 percent surtax is a strong negative incentive for individuals to "volunteer" and that all individuals will volunteer to avoid the tax. Additionally, it is assumed that the only model of Danzig and Szanton's which may receive public support is the model which establishes a "cut-off date" for the program. The cut-off date would be

used to prevent the surtax from being assessed on citizens beyond the roughly 25-year-old age group. These are essentially very realistic assumptions, since human nature dictates that most people would prefer to "get the service out of the way" now than pay the tax for the remainder of their lives. Additionally, the majority of the population, post-service age, would be hesitant to tax themselves for a program they did not have the option of choosing at an earlier age. It also seems reasonable to assume that they would not interrupt their prime earning years to enroll in the program.

The last basic assumption is that it is very realistic to assume that some of the money presently spent on youth, welfare, and even law enforcement could be redirected towards a national service program if one were enacted. The amount of money that could be involved would be a very rough estimate; however some funds could be redirected. In reference to the anticipated decrease in law enforcement costs, a recent study has shown that "job opportunities targeted to (the) high-risk black teenage population have the additional beneficial effect of reducing crime rates."¹⁹ The redirected money could be used to reduce the net additional costs of a national service program. However, this research is primarily interested in the gross cost of the program. The use of redirected money to reduce the cost of the pro-

gram is therefore essentially a way to provide funding (which is a matter beyond the scope of this paper).

E. RESEARCH OBJECTIVES

The objective of this thesis is to estimate the costs of three representative national service models, given stated assumptions. The inclusion of costs essentially excluded in other studies is key to the accuracy of this study's results. The total costs of the proposals must be evaluated prior to making an intelligent decision on which, if any, of the models should be pursued as a national policy.

II. METHODOLOGY

This chapter reviews the general methodology used in the calculation of costs for each of the models presented. Each model requires different assumptions which yield substantially different estimates for each cost category. Separate descriptions of each model, associated assumptions, and a brief synopsis of the methods used in each model to estimate values appear on the following pages. The information is presented in a format that makes for easy comparison of the three models.

Implicit costs, which arise in the "coercive-voluntary" and mandatory models, differ significantly in their calculation from other costs, and for that reason are discussed separately at this point in the paper.

A. CALCULATION OF IMPLICIT (I.E., OPPORTUNITY) COSTS

Implicit costs, as discussed in Chapter 2, essentially arise when the true value of an individual's time/labor is not adequately reflected in his or her wages and other compensation. Normally, this situation results in a loss to the individual, as in the case of national service. The monetary value associated with this difference in wages and compensation is the implicit cost that must be "paid" by the

individual. Although this cost will not be paid by the government or a sponsoring organization, it must be borne by the individual and, therefore, is very appropriately included as a cost of any program under which it occurs. In the case of national service, Models Two and Three include implicit costs.

Implicit costs, as stated above, arise due to the differential between the value of an individual's labor and the wages this person is "forced" to accept for it. The proposed wages and compensation received by a person in a national service program are relatively simple to calculate. The value of the compensation is the combined value of the wages and GI Bill benefits received by the member. Medical benefits are not included since most employers provide health plans for their employees. Assuming the benefits provided by each health plan are equal, the use of the value of the plan to calculate implicit costs would be improper. This is true because implicit costs are the difference between compensation received and compensation foregone when the individual was inducted into the national service program. Since medical benefits of equal value appear in each compensation package, no difference exists. Values can be estimated for each of these factors to provide a reasonable value for compensation and wages for each member. Training costs are purposefully left out of the calculation of compensation. It is possible that an individual will use the

training he or she received in the national service program upon return to society. This would especially manifest itself in the case of training in a marketable skill such as carpentry or as a healthcare worker. Although the potential exists for this training to act as a benefit for the trainee, the value can not be reasonably estimated due to the diverse paths a national service participant can follow after completion of the service. It is assumed that only a small portion of volunteers will use the skill they were trained for in the national service program. The values of compensation and benefits will be presented in the analysis section of the thesis.

The estimate of the value of wages and compensation is relatively simple, but the calculation of the individual's foregone wage is more complicated. Essentially, one major assumption is necessary to aid in the simplification of these calculations. It is assumed that the percentages of workers in the labor force in each field will remain at the current level in the future (i.e., the percent of the labor force of each occupation will remain constant over time). While this is not accurate in the long term, it is essentially accurate enough in the short term for the purposes of this study. The current technological advances in the electronics and medical industries, as well as the overall shift of jobs to the service sector, will undoubtedly shift the percentages over time.

To arrive at a value for an individual's forgone wages, the 16-24 year-old age group was used.²⁰ Although this is not the age group of individuals expected to enter the programs, the data is not available for the 18 year-old age group. The net effect of including youth younger and older than the targeted age group should, on the whole, balance out. Although a portion of the group would go to college, and thereby increase their actual wage value, the group was treated as though it were a homogeneous body that would enter the work force soon after graduation from high school. The percentage of people projected to enter each career path was assumed to be equal to the percentages of the current labor force in the respective field. The average wage was calculated using data from the Bureau of the Census. It should be noted that the average wage, as used here, represents the weighted mean wage for 18 year-olds, not the average wage for all workers.

The value of the foregone wages and compensation was calculated as described above. However, simply to compare this to the value for wages and compensation received by the national service volunteers would be to improperly present the implicit costs. Not only does the national service participant pay implicit costs for the two years he or she is in the program, but also for the duration of his or her working life. This is true because a participant's post-service career path will generally not provide the same

wages upon completion of service that would have been obtained if the person had gone straight into the labor force. Since wage increases are made up not only of inflation adjustments, but also of longevity adjustments, the t+2 (present time plus two years) wages of a non-participant will differ from the t+2 wages of a national service participant. An example may help to clarify this point:

Assuming a 3.0-percent annual increase (1.5-percent for increased productivity of labor in general and 1.5-percent for increased productivity as the individual becomes more experienced) occurs in perpetuity, the wages of a non-participant will be 106.1 percent higher at t+2 than at t=0. The same wages for the national service participant will be only 103 percent higher. This pay differential is carried through until retirement.

The following formula was used to encompass this perpetual pay differential and the difference in wages while the participant is completing his or her service:

IMPLICIT COSTS = Present Value of the non-participant's wages (PV_n) minus the Present Value of the national service participant's wages (PV_{ns}).

where:

$$PV_n = W_o + W_o(r) + W_o(r^2) + \dots + W_o(r^{44})$$

and

$$PV_{ns} = W_{ns} + W_{ns}(s) + W_o(s^2) + W_o(s^2)(r) + W_o(s^2)(r^{42})$$

W_o is the 18 year-old average wage

W_{ns} is the national service program wage (dependent on the model)

r is the 3 percent combined productivity adjustment discounted at 10 percent (i.e., $1.03/1.10$)

s is the 1.5 percent general productivity only adjustment discounted at 10 percent (i.e., $1.015/1.10$)

By replacing the words in the implicit cost equation with the above numerical values, the author derived the following equation, used for analysis purposes in Chapter 4.

$$\text{IMPLICIT COSTS} = 2.3128 W_o - 1.9227 W_{ns}$$

The 10 percent real discount rate was chosen since it seems a reasonable rate to use for youth; they tend to have high time preference. This equation takes into account not only the immediate effects of service on wages, but also the lifelong effects on an individual's earning power.

Compensation received by a program participant that exceeds the compensation that he or she would have received by not participating in the program is treated as economic rent. Sjaastad and Hansen wrote that ". . . the government abides by the ethical norm of our society that surpluses . . . are properly the property of the person to whom they normally accrue."²¹ In keeping with accepted practices, the author has chosen to treat economic rents (i.e., "negative implicit costs") as simply a benefit to the individuals who receive them.

Implicit costs are the only costs treated substantially differently in each of the three models. All other cost areas are essentially the same, but use differing assumptions and, therefore, need to be presented separately. Each cost category (i.e., wages, training, etc.) is discussed separately with distinctions made between each model. General model descriptions are presented here to acquaint the reader with the characteristics of each program.

B. GENERAL MODEL DESCRIPTIONS

1. Voluntary Model

The voluntary program, Model One, contains two major differences from the other two models. First, the voluntary model does not include implicit costs in any calculations. The reason for this exclusion: there are no implicit costs when individuals are free to choose the optimal use of their time. The second major difference is in the scope of the program. According to Eberly, a voluntary national service program should be designed to accommodate one million volunteers.²² This differs by greater than a factor of 3 from the over three million inductees that could be expected in either Model Two or Three.²³

Eberly's program, used as the basis for Model One, proposes that wages for volunteers be paid at a rate of 90 percent of the existing minimum wage, currently \$3.35 per hour. Eberly also believes a good program should "emphasize

education and training;" have "training appropriate to the work to be performed and a sort of GI Bill that would offer a year of education for each year of service." Additionally, he believes, as does the author, that full medical benefits should be provided to the volunteers.²⁴

Eberly's program assumes that volunteers will continue to live in their community, not be relocated to perform service, and that they will continue to live with their parents. Since this is a community-based program, it is assumed that all volunteers will be used in their respective communities.

Eberly states that "it would be important not to try to do everything at once."²⁵ He favors a 3-year phase-in of the program to allow for modifications as the size of the program grows. This is completely supported by the author. However, as stated in the assumptions in Chapter 2, the interest of this study is to provide cost estimates at a steady state condition, not in the initial phases of the program when costs are lower.

2. "Coercive-Voluntary" Model

This proposal, Model Two, is essentially the program presented by Danzig and Szanton.²⁶ The major cost difference between this program and the voluntary one is the inclusion of implicit costs. Implicit costs were calculated as described previously, and included to make the cost estimate more accurate.

This program could have over 3.5 million participants. The Bureau of the Census projection of the population of 18-year-olds in 1987 is 3.525 million.²⁷ However, this would be an inaccurate estimate of the actual number of volunteers that could be expected in the program because some would undoubtedly be found either mentally or physically ineligible. In a study prepared for the Department of Defense, approximately 75 percent of American youths would qualify for the Army or Navy on the basis of current minimum aptitude and education criteria.²⁸ This is a very liberal estimate since it does not include physical or moral screening. The actual rate would be lower. Since the military's current requirements for entry are probably more stringent than entry requirements for a national service program might be, the author has decided to use a 90 percent eligibility rate for young people. This assumes that there are a number of national service jobs that could be filled by young people who may not be able to qualify for today's military because of low aptitude scores, physical problems, or a questionable moral background. A number of individuals would still be excused from participating for various reasons. Using this 90 percent eligibility rate, 3.1725 million "volunteers" are expected to participate in this program.

Wages in Danzig and Szanton's program are set at two-thirds of the minimum wage. The remaining one-third is

to be paid upon the successful completion of service. Essentially, for analytical purposes, this means that the wage rate is the minimum wage. A small difference between using the pay schedule supplied by Danzig and Szanton and the one used by the author for analysis surfaces due to the time value of money. Payments received upon completion of service, 2 years from the participant's entry into the program, have a net present value (NPV) lower than the NPV of receiving the extra one-third payment throughout participation in the program. However, this difference is small. Danzig and Szanton state that educational benefits (i.e., GI Bill) would not be effective,²⁹ so none are included in this model. Although, Danzig and Szanton's proposal does not specifically address medical benefits, it is assumed that benefits consistent with the other two programs would be included in their program.

3. Mandatory Model

The last model is patterned after the draft-era military. The program is expected to include the same number of participants as Model Two, 3.1725 million. Implicit costs are a necessary part of this model, as they were in the "coercive-voluntary" model. Full medical benefits are included as well as GI Bill educational benefits. Wages under this model present a problem and, due to several factors, are difficult to determine. To use the draft-era wages paid to junior enlisted personnel, adjusted

for inflation, would be to present an inaccurate value for this cost category. This is true for mainly two reasons. First, although those wages did exist, they were not an accurate measure of the wages junior personnel should have received. As the Gates Commission stated in 1970: "regardless of the fate of the draft, the Commission strongly recommends elimination of this discrimination against first termers."³⁰ Secondly, junior enlisted personnel did not receive any pay increase from 1952 through 1964,³¹ a matter that would not be received well if the same "wage freeze" had applied to the civilian sector. For these reasons, the author believes that military wages would have been raised regardless of the decision to go to an All-Volunteer Force in 1973. To use current wages for an E-2 with less than 2 years of service (\$738.00)³² for a wage rate would be to most likely exaggerate the wages that today's recruits would have received if the draft were still intact. A Department of Defense study points out:

Three-fourths of all cost increases associated with the AVF (All-Volunteer Force) have been the result of pay raises for the most junior personnel, pay raises that would have been justified on the basis of fairness and equity even if the draft had been retained.³³

This estimate by the Department of Defense seems supportable for several reasons. Moreover, if pay had not been raised to an acceptable level, the result would probably have been a higher turnover rate with associatively

higher training costs for new personnel. Wages (monthly rates) used under this model were calculated as follows:

Base Pay for an E-2 (<2 years) in 1987 was:	\$738.00 ³⁴
Base Pay for an E-2 (<2 years) in 1973 was:	\$342.30 ³⁵

Gross pay differential is: \$396.70

The wage rate used for this model, 1973 Base Pay plus 50 percent of the Gross pay differential, is \$541. The author uses 50 percent as a subjective estimate of the raise which would have occurred regardless of the fate of the draft. The 1973 Base Pay would equal \$852 if adjusted for inflation; therefore, using a value over \$300 less per month does not seem unreasonable.

The pay rate of \$214 (\$321 in 1987 dollars) proposed in 1979 by Senator McCloskey in HR 2206 will be analyzed and presented for comparison purposes. The actual value of wages received will have no impact on the final cost of the program, since higher wages paid result in lower implicit costs and vice versa. The only impact is on the budget dollars--the money paid by the government--and on the compensation which the individual will receive.

C. COST CATEGORIES

Each cost category has some aspects that are unique to it and do not apply to other cost categories. These will be

discussed here with distinctions made between each model to aid in readability.

1. Wages

The current minimum wage of \$3.35 per hour, used in Models One and Two, has been in effect since 1981 and is under great pressure for an upward adjustment. If the 1981 minimum wage had been indexed using the Consumer Price Index (CPI), it would now stand at \$4.09 per hour. Senator Edward Kennedy of Massachusetts has presented a bill in the Senate that would cause an incremental raising of the minimum wage as follows: January 1, 1988, to \$3.85 per hour; January 1, 1989 to \$4.25; January 1, 1990, to \$4.65. After December 31, 1990 the minimum wage would be indexed, presumably to adjust for inflation.³⁶ The current minimum wage of \$3.35 per hour will be used for calculations and analysis. Although the current minimum wage is used in this analysis, the reader should note that a raise in the minimum wage is highly probably in the near future, and that any raise will directly effect the costs of the voluntary and coercive-voluntary programs. In fact, California legislators have already passed a raise in the minimum wage paid in California to \$4.25 per hour. although the Governor has vetoed this raise, he has publicly supported a raise in the minimum wage to an hourly rate of \$4.00.

2. Medical Benefits

The value of medical benefits was calculated using the annual cost of group health insurance for youths in the 18-year-old age group. Insurance companies' estimates for group health insurance averaged \$44.70 per month, which amounts to \$536 annually.³⁷ The government estimate for the value of medical coverage is \$702 per year for a member of the armed forces.³⁸ This value is calculated using the Civil Service health plan, which contains essentially the same coverage as does military care. The major problem with using this value is that it is an average value for all age groups. As a person grows older, the cost of health insurance rises. Using this value would essentially inflate the value of health coverage to younger people and would do so in the case of the national service volunteers. Danzig and Szanton use \$500 as a value for medical benefits in their analysis.³⁹ Since the author's medical insurance value and the Danzig/Szanton value are consistent, the \$536 value will be used for analysis purposes.

The value of medical benefits is the same, on an individual basis, regardless of the model and will differ only in relation to the scope of the program and the number of participants.

3. GI Bill Benefits

The exact value of GI Bill benefits is difficult to ascertain. The percentage of individuals who participate in

the program and the cost-per-individual varies dramatically depending on the program involved. The only realistic way to get a value for this benefit is to use participation rates from Veterans Administration (VA) records. There are two factors to be considered. The first factor is the average participation rate of individuals in the program. It is assumed that the GI Bill benefits are one of the primary reasons individuals would enter the program voluntarily and, thus, higher than average participation rates can be expected. The Veterans Administration records indicate an average usage rate of 66 percent for Vietnam War-era veterans.⁴⁰ Although the usage rate for Vietnam veterans is greater than that of veterans of the Korean War or World War II, it is felt that the Vietnam-era rate reflects current trends better than other existing data. The 66 percent usage rate for Vietnam veterans represents individuals who used any portion of their benefits. The percentage of veterans using their full benefits is substantially lower. Since the 66 percent usage rate includes both full-time and part-time use of benefits to use it would be to overestimate the educational benefits available to participants. To adjust the 66 percent rate for partial usage, the author has chosen to use a rate of 50 percent for an estimate of probable use by national service participants. This rate is in agreement with the 50 percent rate used by Sjaastad and Hansen in their estimates for the Gates Commission.⁴¹ The

rate of participation by national service participants, which is expected to be higher, is highly speculative at best. GI Bill benefits are a major factor in recruiting new enlisted personnel,⁴² and can be expected to affect national service volunteers in a like manner. Since educational benefits are a big "drawing card" for the military and a large percentage of national service volunteers are expected to join for the educational benefits, the author has chosen to use the adjusted value of 50 percent for the expected participation rate in this program.

The second consideration is the amount of benefits that each individual would receive for his service. The only government program currently in existence that offers educational benefits consistent with those envisioned for the national service program is the "New GI Bill". In light of this fact, the "New GI Bill" will be used as a model to evaluate educational benefits. It will be assumed that, since educational benefits are a primary reason for joining the national service program, the percentage of youth expected to use their educational benefits will obtain the maximum benefits available. The current payment of benefits to veterans is \$342 per month for veterans with no dependents in a full-time institution.⁴³ The current value of benefits, \$342, was last raised in 1981 and may be raised again in the near future. Eligibility is accrued at a rate of one-and-one-half months per month of military service.⁴⁴

Since any educational benefits earned could not be used until after completion of the participant's service, all values of benefits were discounted for two years at a rate of 10 percent to provide a more accurate estimate of their present value.

4. Administrative Costs

Eberly proposed that administrative costs could be held to 15 percent of wages during the initial stages of the program and then decline to 10 percent as the program matures.⁴⁵ Since the interest of this thesis is to evaluate costs when the program is out of the initial stages and has reached a steady state condition, the value of 10 percent will be used for each model's administration costs. Danzig and Szanton estimated administrative costs at 9 percent of total other costs.⁴⁶ Eberly's estimate is based on 10 percent of wages only. Due to Eberly's experience with ACTION and other organizations and the consistency of the above estimates in this cost area, his estimate of administrative costs will be used in all models analyzed.

5. Training Costs

Eberly proposes that only 2 days of training would be necessary for national service participants. The cost of this training is estimated by Eberly at \$100 in 1979 dollars (\$150 in 1987 dollars).⁴⁷ This cost would cover pre-service orientation and training conducted by the organization receiving the services of the volunteer. This value, in

1987 dollars, will be used in calculations for the voluntary model. It is felt by the author that two days of training is insufficient for this type of activity and that a "mini-basic training camp" covering a period of 4 weeks would be needed. The proposed training would include "health and sanitation, physical conditioning, and the elements of community living."⁴⁸ This type of basic training was proposed by William Kennedy in his February 1979 paper, "National Service as an Alternative to the Draft."⁴⁹ For any national service program to work, it seems necessary that those involved be trained in these basic areas prior to starting their service. It is especially important for volunteers who would service in a group environment or for volunteers in the health and child care fields.

The only currently existing organization that trains large numbers of people in these areas is the military "boot camp" system. It should be noted that the military "boot camp" is currently 8 weeks in duration and the proposed "mini-boot camp" for the national service participants is only 4 weeks. Congressional Budget Office personnel estimated that the cost to train one new recruit was \$6,000 in 1977.⁵⁰ At the time of the CBO estimate, boot camp was 12 weeks in duration. To tailor the training cost of the CBO to a national service program, the author adjusted the CBO estimate for inflation and took one-third of the CBO estimate to compensate for different durations of the

training camps. This estimate, adjusted as described above, is \$3,700 as it would apply to the national service programs. Although military boot camp costs include some costs which would not be found in the national service camps, these costs are generally small and, therefore, no adjustment is made for them.

Some additional or specialized training would be needed for many of the volunteers that could not be received "on-the-job". This specialized training would be needed for those volunteers entering the health care fields primarily and to a lesser degree in some other fields. Since any specialized training is not addressed in the existing models, none is included in the calculation of costs for this study. Readers should note that these costs would increase the overall cost of each program.

6. Operating Costs

Operating costs include items such as the cost of transportation, food and housing for volunteers displaced from their community, and so on. Daily transportation costs to and from the volunteer's place of service, in a community-based plan, would conceivably be covered with the individual's own resources. However, the transportation cost of an individual from his home of record to the basic training camp and to his place of service, in Models Two and Three, should be a cost that either is provided for initially or is

a reimbursable expense item. This is not uncommon and in fact is done in both the military and the Peace Corps.

The remaining subsistence costs, food and shelter, under model One, would be an out-of-pocket expense for the volunteer to be paid for from his or her stipend. Total food, shelter, and transportation costs for the volunteer would consume nearly all of the individual's monthly stipend.

Model One, as presented by Eberly, is a community-based program. Therefore, it is assumed that the vast majority of volunteers would provide service in their community and continue to live at home at no cost to the government or sponsors. The assumption that volunteers will remain in their community and continue to live at home implies that the volunteer's parents will continue to provide food and shelter to their child when in other circumstances they may not have chosen to do so. It appears that this is using the parents to subsidize the costs of the program. However, what is actually occurring is a transfer payment from the parent to the volunteer. If the program were not community-based, the volunteers would pay for food and shelter themselves. However, since this is a community-based program and parents are paying for these expenses, they are actually paying for expenses their child would have incurred anyway. It should be noted that the number of volunteers

would be significantly lower if this were not a community-based program and if additional funds were not provided to the volunteer to pay these expenses.

Models Two and Three do not assume the volunteer will live at home. Presumably, then, the program would provide food and shelter for all participants. The author uses the Basic Allowance for Quarters (BAQ) and Basic Allowance for Subsistence (BAS) provided to members of the military as a surrogate to measure the value of these benefits. BAQ and BAS are given to military members who do not receive government-provided housing and/or food. BAQ and BAS rates are established to compensate the individual for the value of these services and, therefore, can be used as a surrogate measure to accurately determine food and housing costs for a national service program. The current rates for BAQ and BAS are \$155.40 and \$182.10, respectively.⁵¹ These values and all other military wages and benefits are for an E-2 with less than 2 years of service. The E-2 rates apply to individuals with greater than 6 months of service and less than 2 years. The total, \$337.50, will be used to determine the value of operations costs in Models Two and Three.

One additional housing cost, Variable Housing Allowance (VHA), is provided to members of the military who reside in high cost areas of the country. The amount of this allowance is intended to compensate individuals for

excessive housing costs. Since individuals in a national service program would be expected to live in a group environment, not in individual units, this allowance does not apply.

7. Recruiting/Advertising/Testing Costs

Costs of advertising/recruiting for volunteers are another area in which it is relatively difficult to compile specific cost data. The armed forces spent approximately \$400 million in 1979 on advertising and recruiting to enlist 400,000 volunteers.⁵² This averages to \$1,000 per enlistee. The advertising costs alone were \$50 million or \$125 per volunteer⁵³ (\$231 in current dollars). To include all costs in this area would be to overstate the cost for the voluntary program. However, at a minimum, the \$231 per volunteer advertising cost should be included in any credible cost analysis.

Costs would be higher per person under either Model Two or Three due to the inclusion of recruiting costs, which were excluded in the voluntary model. The total cost in the draft era, pre 1973, which most closely resembles Models Two and Three, for recruiting and advertising for the armed forces was approximately \$220 million (1977 dollars) or \$550 per person.⁵⁴ In 1987 dollars this equates to \$1,018 per person.

An additional cost that is treated as a cost of recruiting is the cost of an initial physical examination

and mental testing. Any program on this scale would necessitate an entry physical exam and some paper and pencil testing. The physical examination is necessary to screen out any volunteers with potentially contagious diseases and provide a measure of their basic physical fitness prior to engaging in strenuous work. The mental testing is needed to provide program administrators with a basic gauge of an individual's aptitudes and intellectual abilities.

Physical exam costs would differ for male and for female volunteers, but would average about \$203 per person⁵⁵ (current dollars). The cost of any required testing is relatively low, estimated at \$4.50 per person (current dollars).⁵⁶

8. Miscellaneous Costs

Social Security costs could be a small, but meaningful expense of a national service program. The government, as the employer, would have to match payments received from the individual, which amount to 7.15 percent of a participant's wages. The use of this cost for analysis purposes would probably overstate total costs. In addition use of this cost would be misleading, because it is money that, although collected now from the employer, would be spent later on recipients of social security income. In this sense, it is essentially a transfer payment, not a cost, and is consequently not included in any of the model's cost estimates. If this expense were included, it would

approach \$500 million for Model One and \$1.7 billion for Models Two and Three.

The cost of any lawsuits brought against a national service participant that result from his or her service work is not covered in this analysis. Negligence in the health care field, day-care services, and in other areas could conceivably bring about lawsuits. Since the participants work for the government, it is assumed that any settlement would be paid by the government. There is no realistic means of estimating this cost for a program that has not yet been accurately designed. Some cost in this area would surely exist, which is why it is brought out here, but the cost at this time is considered immeasurable.

The last cost category that could have a significant impact if a large scale program were enacted is the increased cost of labor resulting from a shortage of youths to fill jobs conventionally held by entry-level workers. Assuming an unemployment rate among young people of 17 percent and that there are approximately 3.5 million youths aged 18, there are approximately 595,000 unemployed young people in the nation. The minimum number of individuals involved in any of these proposals is 1 million in the voluntary model. If the full 1 million, or 3.1725 million in the case of Models Two and Three, were active in the program, the result would be an extreme shortage of youths in the civilian labor force. This would cause a one-time

rise in wage rates. The extent of this effect is not known, but it would nonetheless occur.

These miscellaneous costs would be difficult, if not impossible, to calculate or even estimate and for that reason are not included in any calculation. They are simply presented for further thought by the reader.

The reader should keep in mind that some of the costs included in this analysis, such as training costs and expenses on advertising, are not necessarily new costs. To some extent they simply replace expenses which would have occurred under the All-Voluntary Force. If the number of enlistees in the military remains constant, and the cost per enlistee for advertising is the same for the military and national service programs, the net effect would be to offset one cost to the government with another. The actual outcome might be that advertising for a national service program is a cost savings for the government as a whole. Cost savings, however, are defined in this analysis as benefits and treatment of benefits are beyond the scope of this thesis.

III. DATA ANALYSIS AND PRESENTATION

A. INTRODUCTION

Using the methodology described in Chapter 3 and additional data, four program costs are presented and analyzed. These programs are: (1) Voluntary, (2) "Coercive-Voluntary", (3) Mandatory using the author's wage estimates, and (4) Mandatory using the wage estimates of HR 2206. The costs which were included in the analysis were: Wages, Medical and Educational (GI Bill) benefits, Administrative Costs, Training Costs, Operating Costs, Recruiting/Advertising Costs and Initial Testing (including a physical examination) Costs. The only additional costs analyzed are the implicit costs included in the Coercive-Voluntary and Mandatory programs.

Each program is described separately in detail followed by a tabular comparison of results.

All one-time costs (i.e., recruiting, physical examination, and so on) are allocated equally over the two years the individual is involved in the program. All costs are expressed on an annual basis at 1987 levels.

B. VOLUNTARY PROGRAM

For several reasons, the voluntary program, as defined, is the most different among the programs analyzed. GI Bill benefits are calculated according to Eberly's proposal and provide 1 year of educational benefits for each year of service completed. All other programs that provide educational benefits allow 1-1/2 months of benefits for each month of service completed. This is consistent with the existing GI Bill. Training Costs for this program include only 2 days of orientation instead of the 4-week "mini-boot camp" proposed by the other programs. Operating costs do not exist for this program for reasons already noted: the costs are simply a transfer payment. Implicit costs are not included in the cost of the voluntary program for reasons previously presented. The final difference between the voluntary program and all others is in the calculation of recruiting/advertising costs for this model. Since it was assumed that the proposed compensation was adequate to attract sufficient volunteers to the program, it was also assumed that recruiting costs should not be a part of this program. The only expense necessary would be expenditures for advertising needed to inform prospective volunteers of the options available to them, of where to join, and so on. This differs from the other models which include recruiting as well as advertising costs.

An * indicates costs that would have to be budgeted for by the government and/or sponsoring organization.

1. Voluntary Program Analysis

Wages(*): 90 percent of the minimum wage of \$3.35 per hour for 50 40-hour work weeks = \$6,030

Medical Benefits(*): \$44.70 (monthly health insurance average) x 12 months = \$536

Administrative Costs(*): 10 percent of the annual wage cost = \$603

Training Costs(*): Estimated by Eberly at \$150 (adjusted) for a two-day orientation period = \$75

Operating Costs: None included = 0

Educational Benefits(*): Assuming 2 years of service is completed: 2 years of benefits at \$342 per month are accumulated by 50 percent

of program participants: 24 months x
 \$342/month x 50 percent = \$1,696
 (This has been discounted for two
 years at 10 percent.)

Advertising/Physical Exam/Testing

Costs(*)

Advertising =	\$115
Physical Examination =	\$102
Aptitude Testing =	\$2
<hr/>	
Total Cost for One Individual =	\$9,159
x 1 million volunteers =	\$9,159,000,000
Budgeted Cost for One Individual =	\$9,159

C. "COERCIVE-VOLUNTARY" PROGRAM

The Coercive-Voluntary program differs from the voluntary program in several significant ways. The first and most notable is the absence of any educational benefits under this program. Danzig and Szanton state that they do not believe educational benefits have a significant impact on the behavior of individuals and that the existence or lack of benefits affects only the type of educational institution a student attends. The authors assume that students tend toward 2-year schools when educational aid is not available, and that they tend toward 4-year schools when it is. Training costs of this model incorporate the concept of

the "mini-boot camp" and, therefore, are much higher than the training costs under the voluntary model. Operating costs are presented under the assumption that the participants of this program will be paid the military BAQ and BAS rates, or provided equivalent housing and food, and that the program will not necessarily be community-based. Recruiting costs as well as implicit costs are added to this model for reasons previously noted.

The major difference other than the cost categories is the scope of the program. This program assumes full participation by youth, except for the 10 percent determined to be physically or mentally ineligible. This, therefore, assumes that 3.1725 million youth will participate. As stated in Chapter 3, the tax surcharge proposed by Danzig and Szanton is assumed to induce full participation and, therefore, no cost reductions are realized.

1. Coercive-Voluntary Program Analysis

Wages(*): Full minimum wage of
\$3.35 per hour for 50 4-hour work
weeks = \$6,700

Medical Benefits(*): \$44.70
(monthly health insurance average)
x 12 months = \$536

Administrative Costs(*): 10 percent
of annual wages = \$670

Training Costs(*): Costs are calculated using the 4 week "mini-boot camp" concept and CBO estimates of training costs. CBO cost estimates (adjusted for differences in length of training) are \$3,700 per individual = \$1,850

Operating Costs(*): BAQ and BAS rates (combined) of \$337.50 per month x 12 months = \$4,050

Educational Benefits: None provided = 0

Recruiting/Physical Exam/Aptitude

Testing(*):

Recruiting = \$509

Physical Examination = \$102

Aptitude Testing = \$2

Implicit Costs: Calculated in accordance with the formula in Chapter 3.

$W_o = \$11,590^{57}$	$W_{ns} = \$10,750.$	Impli-
cit costs = $2.3128(W_o)$ minus $1.9227(W_{ns})$ =		\$6,136
<hr/>		
Total Cost for One Individual =		\$20,555
x 3.1725 million participants =		\$65,211,000,000
Budgeted cost for one individual =		\$14,419

D. MANDATORY PROGRAM

The only differences between the coercive-voluntary model and the mandatory programs are the wages paid and the existence of GI Bill-type benefits under the mandatory program. Two mandatory models will be compared. The only difference between the two mandatory programs is the wage rates. mandatory program one (M1) assumes a level for base pay equal to 1973 base pay for an E-2, plus 50 percent of the difference between the 1973 and 1987 levels of base pay. Mandatory program two (M2) uses the wage level from HR 2206 adjusted for inflation. The two variations of the mandatory programs are presented side by side to illustrate the effect of wages paid on implicit costs and on the overall cost of the program.

The only other difference between the mandatory programs and the coercive-voluntary program is the reintroduction of educational benefits. Educational benefits under M1 and M2 accrue at a rate of 1-1/2 months of benefits for each month of service completed. This is at a rate greater than

that of the voluntary model, but is consistent with current VA rates.

1. Mandatory Program Analysis

	<u>M1</u>	<u>M2</u>
Wages(*):		
M1 wages of \$541 per month x 12 months =	\$6,492	
M2 wages of \$321 per month x 12 months =		\$3,852
Medical Benefits(*):		
\$44.70 (monthly health insurance average) x 12 months =	\$536	\$536
Administrative Costs(*):		
10 percent of wages =	\$649	\$385
Training Costs(*):		
Costs are calculated using the 4 week "mini-boot camp" concept and CBO estimates of training costs. CBO estimates (adjusted for		

differences in length of training) are \$3,700 per individual =

	\$1,850	\$1,850
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Operating Costs(*): BAQ and BAS rates (combined) of \$337.50 per month x 12 months =

	\$4,050	\$4,050
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Recruiting/Physical Exam/Aptitude Testing(*):

Recruiting =	\$509	\$509
Physical Exam =	\$102	\$102
Aptitude Testing =	\$2	\$2

Educational Benefits(*):

Assuming a 3 for 2 benefits to service ratio and participation by the expected 50 percent =

	\$2,544	\$2,544
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(Discounted at 10 percent for 2 years)

Implicit Costs(*): Calculated in accordance with Chapter 3 $W_o = \$11,590$

$W_{ns\ m1} = \$12,967$; $W_{ns\ m2} =$		
$\$10,446$ Implicit Costs =		
$2.3128 (W_o) - 1.9227 (W_{ns}) =$	$\$1,874$	$\$6,721$
<hr/>		
Total Cost for One Individual =	$\$18,608$	$\$20,551$
x 3.1725 million participants	$\$59,034,000,000$	$\$65,198,000,000$
Budgeted cost for one individual	$\$16,734$	$\$13,830$

E. SUMMARY OF PROGRAM TOTAL COSTS

Voluntary Program	$\$9,159,000,000$
Coercive-Voluntary Program	$\$65,211,000,000$
Mandatory Program M1	$\$59,034,000,000$
Mandatory Program M2	$\$65,198,000,000$

IV. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The estimates calculated in this study provide a more accurate basis for comparing the costs of various types of national service programs than has previously existed. The cost of a program includes not only the budgeted cost, but also the costs borne by the participant, by his family, and by society in general. The inclusion of some costs, thus far ignored, helps to arrive at a better estimate for the cost of each program. Although some costs are only approximations based on assumptions, the basis for those assumptions is sound. The choice of one assumption over another was not biased by self-interest or by political motivation. The assumptions that were made were necessary to allow the calculation of costs.

The estimates yielded two significant findings. First, if only budgeted costs are considered, the only program that is within the budgetary limits of the government is the voluntary program. However, as long as the government has annual budget deficits in excess of \$100 billion, even the more modest costs of the voluntary program are beyond the resources of this country unless the deficit increases. If budget negotiators in the Congress can have difficulty

agreeing on a deficit reduction package to trim just a few billion dollars from the deficit, it seems highly unlikely that they would be able to add any program which increases expenditures by billions of dollars. Any such increase in expenditures would not be politically feasible.

The scope alone of the coercive programs places them outside the realm of realistic alternatives. The cost of the three larger programs range from \$59 billion to over \$65 billion (\$44 billion to \$53 billion budgeted dollars), while that of the voluntary program is a more realistic \$9 billion.

It is true that, if the budgeted costs alone are used as a basis for comparing the programs, the costs are substantially lower. However, the decision to pursue one program over another or to select any program should be based on a comparison of all costs, not selected costs that are easily manipulated.

Second, while the voluntary program is the least costly, it is also unrealistic.

Most young people see the future as a number of days or perhaps a year and make decisions based on that perception. The study at the University of California at Los Angeles, referenced previously, points out that the acquisition of wealth is the top priority of today's youth. In light of that, providing for a wage level below the existing minimum wage would eliminate the serious consideration of national

service as an alternative for the majority of youth. Even though the non-wage benefits of Eberly's program raise the value of total compensation to a level well above the minimum wage, the majority of potential participants would not look past the current benefits, namely their weekly paycheck. Unfortunately, this is a reflection of our society, but one which must be dealt with if a workable program is to be designed.

Training costs used for comparison of the voluntary model are based on a two-day orientation of each participant. Since this program is community-based, two days of orientation to the job may be all that is needed. However, this would amount to little more than showing the volunteer what his or her new job will be and could not possibly generate the feeling of service desired. If the true purpose of the program is not only to provide jobs and to fill the needs of society, but also to instill a sense of service in our youth, something more than a two-day orientation lecture would be needed.

The educational benefits provided by the voluntary model would barely cover one year's expenses at a public university. If one goal of the program is to provide meaningful educational benefits to the participant, more benefits are needed. Although education is costly, the benefits to society would more than return the monies invested. Higher taxable wages alone would probably return the cost of

educational benefits to the country's coffers, not to mention the additional services and technological breakthroughs provided for society in general.

Many participants in a national service program will almost assuredly be members of the lower class and members of minority groups. Although national service is not intended to create a jobs program for poor young people, "The wealthy simply do not participate."⁵⁸ As Timothy Noah noted, wealthy, and most upper-middle class young people will not "voluntarily rush off to the nearest recruiting office to sign up for a couple of years of low paying regimented service cleaning bedpans and painting bridges."⁵⁹ They have better, and certainly more profitable, things to do. Since the upper half of society will likely not participate voluntarily without some special incentive or significant penalty, the lower half would disproportionately fill the ranks of any such program. A truly voluntary program would not include any special incentives or penalties, but programs could certainly be designed to attract a representative group. Once such coercive measure currently being advocated is to add participation in a national service program to the requirements for a college degree. The program analyzed is a truly voluntary program since it does not coerce any particular group in participation.

If the purpose is utopian and solely to change the service ethic of society, it will probably not succeed.

However, if the purpose is more realistic and would be satisfied with providing poor youth with a job, a chance at an education, and much needed services to society, it stands a better chance of success.

B. RECOMMENDATIONS

The voluntary program is the least costly, has the best chance of passage in Congress and is probably the least controversial. The fact remains that it is not designed to obtain the number of volunteers desired, nor does it present the costs of the program in their entirety. My own feeling is that to increase participation to desired levels, to improve the sense of service of participants, and to meet the majority of the program's stated objectives, the following program should be used for comparison purposes.

The wage level of participants should be set equal to the existing minimum wage, \$3.35 for analysis purposes. Assuming the same 50 40-hour work weeks as under Model One, this would equate to \$6,700 per year.

Medical benefits and administrative costs are assumed to be the same as under the voluntary program presented by Eberly. Their values would be \$536 and \$670, respectively.

Training should not be for two days, but for the four-week "mini-boot camp" described for the coercive and mandatory programs. This would instill the feeling of being a part of a group working toward a common goal instead of an

orientation to a new job. The cost of this type of training would be \$1,850, just as it would be in the case of the other programs.

Educational benefits, to be truly a benefit, must be perceived as being of substantial value. Working two years for the equivalent of one year of educational benefits would not be perceived as a real benefit. To "sweeten the pot," educational benefits based on the current 3 months eligibility for every 2 months of service ratio of the GI Bill should be incorporated in the program. These benefits would cost \$2,544 annually.

The advertising, physical examination, and "paper and pencil" testing would all be included in the program and amount to approximately \$219 per year.

Operating costs are dependent on the nature of the program. In a community-based plan, Eberly's "live at home" idea seems to best serve the program. To provide youth with the equivalent of BAS and BAQ while they will most likely reside at their parents' house would defeat the purpose of the payment. In the community-based program, the parents of the participants would be expected to reach an agreement with their sons and daughters on living and eating accommodations. The community-based plan has both positive and negative aspects. The young people may be more interested in the condition of their own communities than in that of others. However, if they were relocated while providing

their service, any negative environmental influences (such as negative peer pressure, drugs, family problems, and so on) on them would disappear. The cost to their parents would be greater under a community-based plan, although the participants could pay for food and lodging, but the cost to the government or sponsor would be greater if volunteers were relocated.

Although there are benefits to both a community-based and a noncommunity-based plan, and in all likelihood the resulting plan would incorporate some of each, the fact remains that the budgeted cost of the community-based plan is less and, therefore, it has a better chance of gaining the legislative support necessary for passage.

Since I believe the community-based plan would receive the greatest legislative support, no operating costs are used for analysis purposes.

The total cost of the author's program would be \$12,519 per year per individual.

Although the annual cost of this program is \$3 billion more than Eberly's program, it could achieve the desired results, while Model One would probably not.

I think that if any voluntary national service program is instituted in this country it should be modeled along the lines of the program described in this chapter. However, although the idea of solving many of the country's problems

by adding another government program is appealing to some, it is not appealing to, nor supported by, the author.

As Danzig and Szanton noted, "National service is an ideal, not a program."⁶⁰ National service in it's purest sense does not translate well into a realistic program. The more that the coercive measures, benefits, and even wages are relied upon to gather volunteers, the more that the actual program will differ from a true service program in which people volunteer to provide service because they feel it is the right thing to do. Service is not voluntary in the traditional sense of that word if it is entered because it pays the best or is the only way to avoid paying extra taxes.

ENDNOTES

1. James, William, The Moral Equivalent of War, pp. 13-14.
2. National Service Secretariat, National Service Newsletter, Number 50, April 1987, p. 1.
3. Noah, Timothy, "We Need You: National Service An Idea Whose Time Has Come," The Washington Monthly, November 1986, pp. 39-40.
4. National Service Secretariat, National Service Newsletter, Number 50, p. 4.
5. Telephone conversations and correspondence with Representative Leon Panetta and staff.
6. Committee for the Study of National Service, Youth and the Needs of the Nation, The Potomac Institute, January 1979, p. 125.
7. America's Volunteers, A Report on the All-Volunteer Armed Force, December 31, 1978, Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics).
8. Committee for the Study of National Service, p. 125.
9. Montgomery, Peter, "Serving Time: Should the U.S. Require National Service?", Common Cause Magazine, March/April 1987, p. 1.
10. Ibid, p. 3.
11. Noah, p. 41.
12. Eberly, Donald J., "A Universal Youth Service" (UYS) Social Policy, January/ February 1977, p. 2.
13. Committee for the Study of National Service, p. 139.
14. The Monterey Herald, Monterey, California, Sunday, June 14, 1987, pp. 4B.
15. Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics), America's Volunteers: A Report on the All-Volunteer Forces, December 31, 1978, p. 339.

16. Ibid, p. 54.
17. The Effects of Military Personnel Requirements on the Future Supply of Scientists and Engineers in the U.S., papers and a conference report, Commission on Human Resources, Washington D.C., October 1981, p. 20.
18. Assistant Secretary of Defense, All-Volunteer Force, p. 54.
19. Good, David H. and Pirog-Good, Maureen A., "Employment, Crime, and Race", September 8, 1987, Edition 2, p. 1.
20. Department of Labor, Bureau of the Census, Employment and Earnings, January 1981, p. 81.
21. "Studies Prepared for the President's Commission on an All-Volunteer Armed Force", November 1970, pp. IV-1-2.
22. Committee for the Study of National Service, p. 103.
23. Ibid, p. 103.
24. Raspberry, William, "National Youth Service", The Washington Post, May 22, 1987.
25. Ibid.
26. National Service: What Would It Mean?, Danzig, Richard and Szanton, peter, Lexington Books, Lexington, MA, 1986.
27. Committee for the Study of National Service, p. 99.
28. Eitelberg, Mark J., et al., Screening for Service: Aptitude and Education Criteria for Military Entry (Washington D.C. Office of the Assistant Secretary of Defense for Manpower, Installations and Logistics), September 1984, pp. 71-74.
29. Danzig and Szanton, p. 232.
30. President's Commission on an All-Volunteer Armed Force, p. 7.
31. Assistant Secretary of Defense, All-Volunteer Force, p. 20.
32. Department of Defense Military Pay and Allowances, Entitlements Manual, March 9, 1987.

33. Assistant Secretary of Defense, All-Volunteer Force, p. 3.
34. Entitlements Manual, 1987.
35. Navy Times, December 6, 1972, p. 1.
36. Senator Edward Kennedy, Senate Bill 837.
37. Telephone conversations with private insurance companies.
38. Department of the Navy, "Personal Statement of Military Compensation", p. 2.
39. Danzig and Szanton, p. 165.
40. Veterans Administration News Feature, July 1987, "Facts About the Veterans Administration," p. 2.
41. President's Commission on an All-Volunteer Armed Force, pp. IV-1-56.
42. Kennedy, William V., "National Service as an Alternative to the Draft", Strategic Studies Institute, U.S. Army War College, Carlisle Barracks, Pennsylvania, 20 February 1979, p. 8.
43. Veterans Administration News Release, June 11, 1987, p. 3.
44. Ibid, p. 3.
45. Eberly, p. 4.
46. Danzig and Szanton, p. 165.
47. Eberly, p. 4.
48. Kennedy, p. 7.
49. Ibid, p. 7.
50. Committee for the Study of National Service, p. 124.
51. Entitlements Manual, 1987.
52. Assistant Secretary of Defense, All-Volunteer Force, p. 24.

53. Ibid, p. 24.
54. Ibid, p. 24.
55. Ibid, p. 167.
56. Ibid, p. 167.
57. Bureau of the Census, p. 81.
58. Noah, p. 35.
59. Noah, p. 39.
60. Danzig and Szanton, p. 265.

BIBLIOGRAPHY

A Plan for National Service: Submitted by the National Service Secretariat, November 1966.

American Volunteers: A report on the All-Volunteer Armed Force, December 31, 1978, Office of the AS of D (Manpower, Reserve Affairs, Logistics).

America's Paychecks, "Who Makes What," David Harrop, facts on file (publication), New York, 1980.

Borcherding, Thomas E., "A Neglected Social Cost of a Vol Mil", Am Ec Rev, Volume 61, March 1971, pp. 195-196.

Committee for the Study of National Service, Youth and the Needs of the Nation, The Potomac Institute, January 1979.

Consumer Price Index Detailed Report, January 1987, U.S. Department of Labor, Bureau of Labor Statistics, pp. 16-19.

Danzig, Richard and Szanton, Peter, National Service: What Would It Mean?, Lexington Books, Lexington, MA, 1986.

Department of Defense Military Pay and Allowances, Entitlements Manual, March 9, 1987

Eitelberg, Mark J., et al., Screening for Service: Aptitude and Education Criteria for Military Entry (Washington D.C. Office of the Assistant Secretary of Defense for Manpower, Installations and Logistics, September 1984).

Employment, Crime and Race, Good, David H. and Pirog-Good, Maureen A., September 1987.

HR 2206, McCloskey.

Montgomery, Peter, Serving Time: Should the U.S. Require National Service?, Common Cause Magazine, March/April 1987.

National Service as an Alternative to the Draft, William V. Kennedy, February 20, 1979, Strategic Studies Institute, U.S. Army War college, Carlisle Barracks, PA.

National Service Newsletter, published by the National Service Secretariat, Incorporated, Washington D.C., Number 49, October 1986.

National Service Newsletter, published by the National Service Secretariat, Incorporated, Washington D.C., Number 50, April 1987.

National Service Newsletter, published by the National Service Secretariat, Incorporated, Washington D.C., Number 51, September 1987.

Rappoport, Peter, Blame Labor Shortage for Inflation in Services, Wall Street Journal, June 11, 1987, p. 24.

Raspberry, William, National Youth Service: Is It Possible?, The Washington Post, May 22, 1987.

The Effect of Military Personnel Requirements on the Future Supply of Scientists and Engineers in the U.S., papers and a conference report, (U.S.) National Research Council, Commission on Human Resources, Washington D.C., October 1981.

The Naval Postgraduate School Thesis Manual.

The Student Guide for the Thesis, Naval Postgraduate School.

Wattenberg, Ben J., The Birth Dearth: Dangers Ahead?, U.S. News and World Report, June 22, 1987, pp. 56-65.

What Every Vet Should Know (About Veterans Benefits) 1987, 50th Revised Edition, Murphy, Patrick L., Director/Publisher, P.O. Box 111, E. Moline, IL 61244.

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