MEMORANDUM ON FEDERAL SUPPORT OF GRADUATE EDUCATION
-- A PROPOSED POSITION FOR HARVARD

I. INTRODUCTION -- THE DILEMMA OF GRADUATE EDUCATION

A. OVERVIEW -- THE DEFENSIBLE BASIS FOR FEDERAL SUPPORT

In a period of extreme stress for the whole American educational enterprise, graduate education, its institutions, support, objectives and effectiveness, is being scrutinized with particular severity. Soaring growth in the past decade has generated adverse reactions which already threaten to undermine the excellence and vitality of American scholarship. Given a climate of conflicting demands for resources, the response to these threats must be based on arguments which have validity outside of the scholarly community itself. Since the institutions of higher education make diverse contributions to the quality of national life, it is appropriate that the sources of support, within both the public and private sectors, should exhibit comparable diversity. However, any large scale, federally supported program to aid post-baccalaureate education must be based on ascertainable national needs for highly trained manpower. Sizable efforts will be required to develop the programs, policy tools and supportive climate necessary to successfully effectuate a manpower-needs based point of view. Prudence dictates that Harvard should take the lead in such efforts. (In fiscal 1969, Harvard received the largest share of federal manpower development funds -- $12 million.)
B. A CONFLUENCE OF FORCES MAKES IMPERATIVE THE DEVELOPMENT OF NATIONAL MANPOWER OBJECTIVES FOR GRADUATE EDUCATION

1. SUPPLY / DEMAND PROJECTIONS: Widely publicized dire predictions of high supply/demand rates in the decade ahead coupled with some current unemployment of certain highly trained personnel have caused alarm in government and academic circles.

a.) SUPPLY PROJECTIONS:

In 1960, some 10,000 Ph.D. degrees were conferred by American graduate schools while in 1970 the number rose to 29,400. Projections for 1980 range from 45,000 to 78,000.

b.) DEMAND PROJECTIONS:

Predicting a saturation and decline of college enrollments in the 1980's, Cartter has projected that only 11% of the Ph.D. projection will be needed for faculty positions in the early 1980's. The most recent NSF manpower report projects an oversupply in 1980 of about 40,000 Ph.D.'s in science, engineering and social science.

c.) UNEMPLOYMENT:

Ph.D.'s in the natural and social sciences were experiencing 1.4% unemployment rate in 1971 as compared with 0.9% in 1970. The rates in political science, sociology, physics and chemistry were more than double the overall averages. No comparable data seems to be available for the humanities, but
the impressionistic view is consistent.

d.) QUALIFICATIONS:
The supply/demand projections described above give little weight to market forces. A recent BLS study, based on a rather elaborate econometric model, projects a reasonably good balance in the 1980's, but with some notable imbalances. Freeman, using a salary-sensitive manpower model, projects a declining rate of Ph.D. production in the physical sciences through the 1970's which may yield "shortages" in this area by 1980.

2. DRASTIC REDUCTIONS IN FEDERAL SUPPORT OF GRADUATE EDUCATION:
In a governmental environment made hostile by campus disruptions and in a period of budgetary stringency, the reaction to the predicted "oversupplies" has been a gross erosion of the aid programs which played such a key role in the growth of graduate education during the 1960's. The erosion has been largely budgetary and in most cases the influence of the OMB has been decisive. In numerical terms, the total number of federal fellowships dropped to 30,000 ($157 million) in 1971 from a peak of 51,500 ($262 million) in 1968.

a.) NSF: The traineeship program is to be completely phased out by the end of academic year 1973-74. The fellowship program has been drastically reduced and there are persistent rumors that the program will be eventually eliminated.
b.) NDEA: The NDEA Title IV Fellowships have not been funded for the coming year and the Title VI program has been reduced.

c.) NASA: The NASA Fellowships have been eliminated.

d.) NIH and NIMH: The NIH fellowship program is to be completely phased out by the end of academic year 1973-74. The fate of the massive NIH and NIMH traineeship programs has been the subject of almost daily conjecture.

3. REDUCTIONS IN PRIVATE SUPPORT: The elimination of the Woodrow Wilson Fellowships and the phase-out of the Ford Foundation's support of graduate fellows adds to the gravity of the situation.

4. THE GENERAL FINANCIAL PLIGHT OF INSTITUTIONS OF HIGHER EDUCATION: There is considerable internal and external pressure on the universities to emphasize undergraduate education and to involve itself in a wider range of community responsibilities. Given the financial plight of most universities, it will be difficult to meet these new demands for resources without significant cuts in the graduate-oriented programs.

5. RISING EDUCATIONAL EXPECTATION OF MINORITY AND DISADVANTAGED GROUPS: In meeting a pressing national need, universities have found it necessary to commit appreciable resources to make available opportunities for graduate study to members of
minority or disadvantaged groups.

6. IMPLICATIONS OF PENDING FEDERAL LEGISLATION: The disposition of the high education bills currently pending in the Congress will doubtless strongly influence patterns of graduate education in this decade.

C. THE MANAGEMENT OF AN EFFECTIVE MANPOWER POLICY IS MADE DIFFICULT BY THE DECENTRALIZATION AND CONFLICTING OBJECTIVES OF POLICY DETERMINING ELEMENTS

1. FEDERAL POLICY DETERMINANTS: The several agencies which have influence on graduate manpower policies have conflicting responsibilities since they are usually charged with both research oversight and manpower development. The accomplishment of short-term research objectives may not be consistent with long-term manpower development -- the training of high energy physicists might be cited as a canonical example. The coordination between agencies has been poor and been based on rather ad hoc budgetary decisions within the OMB.

2. INSTITUTIONAL POLICY DETERMINANTS: In 1969, 271 universities conferred 26,189 doctorates, but 20% of these institutions awarded 70% of the degrees. Most of the leading institutions have individually taken steps to reduce their graduate enrollments. However, the national enrollment figures for 1969-70
demonstrate the instability inherent in the laissez-faire approach. In the natural and social sciences there was an average net 6.3% decrease in first-year graduate enrollments in the ten leading institutions (ACE ratings) as compared with a 2.6% decrease in all other institutions. Without incentives, it is unlikely that the majority of the graduate institutions will initiate policies of restraint when faced by local pressures for expansion. In many of the larger state institutions, the need for teaching personnel at the undergraduate level dictates the size of the graduate enrollment. In "emerging" institutions, matters of prestige will strongly influence departmental and administrative policies. Underlying all this there is a very real feeling in the scholarly communities that restraints on enrollment imply an abridgement of opportunity and free inquiry.

II. NECESSARY ELEMENTS OF A NATIONAL POLICY FOR HIGHLY TRAINED MANPOWER

A. MANPOWER INFORMATION AND ANALYSIS: Considerable emphasis must be given to the improvement of the techniques for making manpower-needs projections. Projections must be constantly updated, so that we have available a "rolling" 5-year projection of generally accepted credibility. Such an effort will require better information resources and improved econometric models.

B. LEGISLATIVE MANDATE AND POLICY TOOLS: The Congress should be
encouraged to set forth a broad mandate that ascertainable manpower needs govern the federal support of graduate education and should authorize programs which are pursuant to this objective. It should charge the Office of Management and Budget with the primary responsibility for coordinating these programs. In discharging its responsibilities, the OMB should call upon federal agencies, professional societies, academic leadership and panels of experts from outside of government to prepare argumentation for the manpower needs in particular fields. Based on an evaluation of this argumentation, the OMB should then bring before Congress an appropriate budgetary request.

C. FORM OF FEDERAL AID TO GRADUATE EDUCATION: Except in exceptional circumstances, federal aid to graduate education should flow through the support of individual students. Federal fellowships, work-study stipends and loans should be awarded to students who have demonstrated exceptional competence in areas of projected manpower needs. The OMB would be required to set the number of people to be supported within each field. The students would bring to the institutions that they select for study cost-of-education grants. The obvious advantage of the concept of the federally aided student is that it keeps market forces in play and encourages institutions towards standards of excellence.

In detail, student-support programs should include the following elements: 1) Selection of students qualifying for
federal support should be based on national competition judged by panels of academic leaders. In their deliberations these panels should be sensitive to the needs for equitable regional distribution and the special circumstances of various disadvantaged groups. 2) In order to encourage the most gifted people into areas of opportunity, a small fraction of the federal fellowships should be awarded on a needs-independent basis. 3) Most of the federal grants would be awarded on a needs-dependent basis with the student assuming some of the burden of his support through work-study and loan options. The effective use of loan options would be greatly enhanced if the government were to institute a contingent educational loan system under an Educational Opportunity Bank, as has been so frequently proposed.

D. LIMITED NUMBERS OF INSTITUTIONAL GRANTS FOR HIGHER EDUCATION:
Direct grants to institutions for new graduate programs should only be used as an incentive in those rare instances where there may be serious gaps in the national educational offerings.

III. COMMENTS ON PENDING HIGHER EDUCATION LEGISLATION
The two higher education bills currently before Congress, H.R. 7248 (the "Green Bill") and S. 659 (the "Pell Bill") are both rather extensive pieces of legislation. The comments here relate specifically to those provisions having greatest impact on the patterns of graduate education. In general terms, the Pell Bill
sets forth a form of graduate support which is more consistent with
the kind of manpower policy described above. It adopts the federally-
supported student concept (Title IX, Part B). In contrast, the Green
Bill embraces the concept of institutional support based upon enroll-
ment (Title XII, Part A) and would tend to encourage the expansion
of graduate programs across the country. Unfortunately, the Pell
Bill authorizes specific numbers of fellowship awards and leaves the
determination of the priorities for these awards in the hands of the
Commissioner of Education. These provisions seem politically unreal-
istic and would give little impetus to manpower planning objectives.

More detailed comments follow: 1) Both bills extend the authori-
zation for the NDEA Title IV and VI programs. 2) Both bills extend
the authorization for the student loan insurance program and raise
the annual ceiling to $2,500. Both bills also authorize the establish-
ment of a Student Loan Marketing Association to serve as a secondary
market for insured student loans. 3) A commendable feature of the
Green Bill (Title VII, Part B) is the establishment of a National
Commission on Financing of Post-Secondary Education to study and
evaluate the whole system of college and university financing. Such
a commission would be a useful component in an overall national man-
power policy. 4) An unnecessary provision of the Pell Bill (Title IX,
Part A) authorizes $100 million for the development of new graduate
programs in the United States.