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ABSTRACT

The results of a seven-year program designed to reform graduate education in the humanities and social sciences sponsored by the Ford Foundation and 10 leading university graduate schools are reported. Evaluation focused on the Ford Foundation Graduate Program, original proposals submitted by the 10 universities, annual reports and data submitted by each university, and interviews with presidents, deans, and faculty from the 10 universities participating in the program. Chapter I, (The Program), discusses the development of the program, the experimental design employed, and procedures followed at the Ford Foundation. In Chapter II, (The Outcomes: Data Analysis), the statistical results of the program are examined drawing on the annual reports submitted to the Ford Foundation and on the separate analyses performed using Doctorate Records File data. Chapter III, (The Outcomes: Site Visits), presents findings from site visits conducted at each of the 10 supported universities. The final chapter offers major conclusions drawn from the study as well as an evaluation of where and why the program went wrong. Among the several conclusions are: the weakened academic labor market undermined the program rationale in the eyes of most faculty and students; staff changes during the program added instability; and the differences of the 10 universities participating in the program made it difficult to form broad generalizations. Appendices provide comparisons of proposed budgets and actual expenditures under the program by university, and lists of individuals interviewed on site visits at the 10 universities. (LC)

EFFICIENCY IN GRADUATE EDUCATION: AN ATTEMPTED REFORM

A Report to The Ford Foundation
by
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Revised
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* The views expressed in this report are those of the author and do not necessarily reflect the views of the officers, staff, or trustees of the Brookings Institution.

Preface

"New York, April 9 -- A major experimental program aimed at reforming doctoral education in the social sciences and the humanities was announced today by ten leading university graduate schools* and the Ford Foundation. The program will extend over the next seven academic years, with the assistance of $41.5 million from the Ford Foundation, and $160 million of the universities' own resources and government funds available to them.'

'The key to the reform will be the establisment of patterns of continuous full-time study and apprentice teaching, in most cases by a regular four-year program leading to the Ph.D. degree."

So began the lengthy press release issued by the Ford Foundation in 1967, announcing a major new program designed to reform graduate education in the humanities and social sciences. The seven year program has now ended; its results are the subject of this report.

In conducting an evaluation of the Ford Foundation Graduate Program (FFGP), I had access to the original proposals submitted by the 10 universities and to the annual reports and accompanying data submitted by each university; I did not, however, review the Foundation files covering the interal discussion and review that preceded the program. Comments on aspect of FFGP will be

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* The Universities of California (Berkeley), Chicago, Michigan, Pennsylvania, Wisconsin, and Cornell, Harvard, Princeton, Stanford, and Yale Universities.

limited primarily to observations based on interviews at the 10 universities.

The data provided by the universities was uneven in quality and coverage, and was insufficient for a comprehensive evaluation; it was supplemented, therefore, with data from the National Research Council DoctoratedRecords File. Use of this file made it possible to produce time series data for 15 years (1959-1974) on median time-to-degree in both funded universities and in a group of comparable, but non-funded, institutions.

In addition to the data analyses, Mr. James W. Armsey of the Ford Foundation and I visited the 10 universities during the period October 1975 - March 1976. We met with the current graduate dean and often with past deans who had been in office during the program, with the president in most instances, and with one or more faculty members in each of six supported departments. Our departmental interviews generally lasted an hour, and are the source of our interpretations of how the program worked on each campus. Since we encountered very few individuals who thought that the program had achieved its major objective of establishing a four year norm for PhD completion, the interviews were largely devoted to discussion of what went wrong and why, not to a defense of the program.

Several people contributed generously of their time in making this study possible. Mariam Chamberlain, Program Officer of The Ford Foundation who administered FEGP, shared her experience with us through several discussions, provided extensive files and data, and clarified many aspects of the program. James Armsey provided invaluable background on the program, and was a genial companion on the site visits. His interview notes were a valuable

addition to my own, adding perspective and insights that I often missed.

The graduate deans of the 10 universities organized schedules for our visits, often made lodging and luncheon arrangements for us, and were most cordial hosts. They also provided additional data in several instances, and generally did everything in their power to see that our questions were answered. More than one hundred faculty members also gave generously of their time to help us reconstruct events and better understand the program's strengths and weaknesses.

The idea behind the program was, to some degree, inspired by Dr. Bernard Berelson, who identified the need to rationalize PhD programs in the humanities and social sciences in his book, Graduate Education in the United States. During the planning phase of the program, Dr.Berelson worked for several months with Foundation staff in developing the program design. A lengthy interview with him in August 1975 was very helpful in both explaining the thinking that went into the program and in suggesting directions that the evaluation should take.

Valuable research assistance was provided by Ellie Winninghoff of Brookings and Vera Bauer of the Ford Foundation. The data file at the National Research Council was prepared by Herb Soldz, George Boyce, and Muriel Quinones, with the cooperation of Dorothy Gilford and William C. Kelly of the National Research Council, Commission on Human Resources. Chris Harrison, Marinus van der Have, and Lenard S. Starks did the programming. Without the valuable resources of the Doctorate Records File, a thorough evaluation of the program would not have been possible.

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Chapter I THE PROGRAM

The Ford Foundation Graduate Program (FFGP) was marked by numerous unexpected developments in the course of its seven year duration; indeed, the ironies abound. Although many of the unanticipated events occurred in the early years of the program (for example, the turn-around in the PhD labor market and the abrupt shift in federal policy toward reducing graduate student support), one can find interesting twists related to the program as far back as Bernard Berelson's 1960 study, Graduate Education in the United States.[1] Since Berelson's analysis and recommendations contributed importantly to the development of the program, our discussion begins there.

[1] Bernard Berelson, Graduate Education in the United States (New York: McGraw-Hill, 1960).

In his book, Berelson discussed the duration of doctoral study at length, pointing out the differences by discipline and the ambiguity in the various measures of time to degree (pp. 156-167). Although he argued that the "PhD stretch-out" had been somewhat exaggerated -- often by confusing elapsed time from Bachelors to PhD with the actual time spent in working for the degree -- he did highlight the need to rationalize doctoral programs in the humanities and social sciences so that students could proceed expeditiously to the degree. Citing several reasons for the stretch-out, Berelson argued that lack of financial support was the most important, leading to interruptions in continuous, full-time study (p. 163).

In his concluding section, Berelson's first three recommendations were:

> "The norm of a four-year doctorate should be enforced by the universities." (p.234)
>
> "The program for doctoral training should be tightened ." (p. 235)
>
> "The dissertation should be shorter." (p.239)

The Ford Foundation Graduate Program clearly had its roots in these recommendations.

With regard to financial support, however, Berelson did not recommend a program similar to that supported by the Foundation:

> "The support of doctoral students should be regularized and they should be expected to pay more of their own way." p. 242)

As an illustration, Berelson endorsed a program of graduate support similar to that developed by Robert Lumiansky while graduate dean at Tulane: a fellowship the first year, research and teaching assistantships the second and third years, a loan the fourth. Other patterns were clearly possible, however, as Berelson noted in his concluding comments:

> "Whatever the particulars, these are the essentials: it is highly desirable that doctoral programs be full-time, continuous, and expeditious, similar to those of medicine and law; the only way for that to happen is to put more of the burden for financing the program on the student (and that is just, since he will directly benefit.")(p. 244) (emphasis added)

In light of subsequent developments, this summary observation is indeed remarkable, for FFGP went a long way toward lightening the financial burden on selected students. Berelson clearly did not foresee the rapid growth of federal fellowships and traineeships, nor the possibility that a major foundation might provide support for a program designed to achieve the four year norm. It is particularly interesting to note, therefore, that he thought the four year degree could be achieved without large increases

in fellowship support. Ambiguity regarding the role of financial support versus the role of program reform and rationalization in producing the four year PhD -- in short, ambiguity regarding how FFGP was supposed to work -- was present throughout the program's life. Berelson's 1960 observations are not altogether clear or definite either, but it is significant that his recommendation for the four year degree norm was made without an accompanying recommendation for a major fellowship program. One must conclude that he assumed that program reform (his first three recommendations) would produce much of the desired effect.

Motivation for the Program

Several factors seem to have been important in explaining why the Ford Foundation decided to launch the $41.5 million effort to implement Berelson's recommendations. During the early and middle 1960's, there was widespread concern nationally about a PhD shortage, and many observors argued that the inefficiency of extended doctoral programs served to reduce the potential supply. Unnecessarily long courses of study kept the output of departments low and contributed to attrition from the programs. At a time of severe national need for additional professors to staff both new and expanding colleges and universities, the graduate schools simply had to become more efficient in production; as Don Cameron Allen observed in The PhD in English and American Literature: "There is, consequently, something wrong with a system that keeps 90 percent of the males and 92 percent of the females in pupil status so long."_/ Allen's book, sponsored by the Modern

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_/ Don Cameron Allen, The PhD in English and American Literature (New York: Holt, Rinehart and Winston, 1968), p. 105

Language Association and published in 1968, is indicative of the spirit of that time: "The prime recommendation, now blessed by the Ford and Danforth Foundations, is that the PhD in English be regarded as a four-year (in-course) degree." (p. 105)

A second factor determining the Foundation's course was a decision to shift its emphasis in graduate education from student recruitment to program reform. Between 1958 and 1967, the Foundation spent $52 million through grants to the Woodrow Wilson National Fellowship program, for the purpose of attracting able college seniors who were interested in college teaching into graduate school. A decision was made in 1966-67 to phase out support for the Woodrow Wilson program and to allocate approximately the same amount of annual fellowship support directly to 10 universities as part of an explicit program to reform graduate education in the humanities and social sciences. Whereas recruitment was viewed as the major need in the late 1950's - early 1960's, improved efficienty in graduate education was seen as the highest priority for the late 1960's - early 1970's.

The rapid growth of federal fellowship support in the sciences and in engineering during the 1960's also suggested a need for greater support in humanistic fields to balance the heavy outlay in the sciences. The Woodrow Wilson program had included students in the natural sciences; FFGP explicitly excluded students in those fields.

Assumptions at the Program's Start

Several critical assumptions were made by those who planned the program:

(1) It was assumed that the demand for new PhD's to serve as college teachers would remain strong for the foreseeable future, and certainly for the period covered by the program.

(2) Continuing growth of federal fellowships was assumed, particularly NDEA Title IV and Title VI awards for students in humanities, language, and social science disciplines. Consequently, it was thought that federal dollars would replace Foundation dollars as FFGP was phased out, thereby not causing any transitional difficulties for the participating universities. The Foundation money was viewed as catalytic, in that it could be used as an incentive for program reform, with benefits spilling over to students supported on federal and other grants.

(3) It was assumed that if the four-year degree became the norm at 10 leading universities, this would produce comprable reforms in other universities, as departments elsewhere mimicked the pacesetters.

(4) Although unstated, there appears to have been a presumption that the efficiency of PhD production in the humanities and social sciences could (and should) be brought into line with that achieved by physical science disciplines. A common theme in much of the discussion about graduate education in the 1960's was the argument that differences in production efficiency could be traced to differences in amount and stability of graduate student financial support. For example, a 1966 study at Berkeley concluded that: "Put in common-sense terms the conclusion forced by these data is that if you support an historian as well as you support a chemist, he is as likely as the chemist to succeed in graduate school."[1/]

1/ Rodney Stark, "Graduate Study at Berkeley: An Assessment of Attrition and Duration" unpublished paper, Graduate Division, University of California at Berkeley, p.32.

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(5) Finally, it was assumed that full financial support for four years, coupled with curricular reform, would be sufficient to produce the four year norm (or in a few instances, at least a five year norm).

Events rapidly refuted assumptions (1) and (2), for the PhD labor market was clearly weakening by 1970 -- the December 1969 M.L.A. meeting in Denver was noted for the large number of job applicants scrambling around convention hotels in search of scarce interviews -- and the federal government moved forcefully to eliminate a wide range of fellowship programs, including NDEA Title IV awards. In our August 1975 discussion, Bernard Berelson observed that assumption (3), in retrospect, was naive, for the sheer number of graduate institutions in existence by the 1970's made it highly unlikely that a pattern set by 10 universities would exercise much influence over 150 or more additional ones. In Berelson's view, that strategy might have been successful in the period immediately following World War II when graduate departments were smaller in number and more closely linked by personal contacts, but was too late by 1967 for this form of mimicry to have succeeded. Assumptions (4) and (5) go to the heart of the program, and their validity will be evaluated at length in later sections of this report.

Procedures Followed at the Ford Foundation

A brief description of the discussion and development of the program within the Foundation and the principal steps towards its implementation is essential background for later chapters. McGeorge Bundy joined the Foundation as President in 1966, and one of his top priorities was a desire to reform and improve

graduate education. (I was told that Bundy heard Berelson speak at Harvard in 1960 about his study of graduate education, and the suggestions for needed reform impressed Bundy greatly.) Soon after his arrival, Bundy hired Berelson for several months as a consultant to work with other Foundation staff in developing a program that would replace the grants to the Woodrow Wilson Foundation. Numerous visits were made to the university campuses to discuss the proposed program, and Berelson prepared detailed recommendations regarding the structure of the program, the selection of participants, and the close monitoring that he believed would be essential to the program's success. Foundation staff members were far from unanimous in their enthusiasm for the program, and numerous objections were raised that had the effect of complicating and slowing down the grant making. Finally, in December 1966 a decision was made to present the program proposal at the next Trustees meeting, and the grants were authorized at the March 1967 meeting of the Board. The speed with which the final decision was made meant that many of Berelson's procedural recommendations were swept aside, and the participating universities had to scramble on sudden notice to prepare proposals for Foundation action. As a consequence, the formal proposals for grants averaging over $4 million per university are woefully inadequate documents, in some cases being little more than long letters from the university president with a budget tacked on. As an indication of the suddenness with which the grants were made, one

university (Chicago) was unable to implement the program in Fall 1967, and had to use funds in the first year on an ad-hoc basis negotiated with the Foundation. The decision to move ahead rapidly in early 1967 got the program launched, but with substantial costs; many of Berelson's recommendations for implementing the program were ignored, the program's aims and procedures had not been thoroughly discussed and debated with faculty members on most of the campuses, and thoughtful, well-specified proposals were not prepared. The program was not begun, therefore, in a fashion designed to create much confidence in its ultimate success.

The 10 universities were selected by Foundation staff and asked to submit proposals; there was no open competition for awards. The funded universities were chosen for the quality and size of their graduate programs, since the Foundation's strategy was to implement the program in leading institutions in the hope that others would emulate them. In addition, the selected universities had been major beneficiaries under the Woodrow Wilson Fellowship program, and by supporting them, the Ford Foundation minimized the disruption caused by ending support for Woodrow Wilson Fellows. Table 1 lists the top 15 universities in number of Woodrow Wilson Fellows enrolled over the period 1958-67. Had the Ford Foundation simply selected the 10 universities that enrolled the most W.W. Fellows, the list would have been identical to that actually selected with only one change -- Columbia would have been included instead of Pennsylvania. Columbia was excluded because the Foundation had recently made a large general support grant to the university and did not want to bless that institution so soon with a

Table 1

Number of Woodrow Wilson Fellows Enrolled, by University, 1958-1967

University	Number
Harvard	1321
Yale	932
Columbia	818
Berkeley	682
Chicago	509
Princeton	497
Stanford	491
Wisconsin	342
Michigan	328
Cornell	299
Johns Hopkins	195
MIT	183
Pennsylvania	182
Indiana	167
North Carolina	162

Source: Bearers of the Touch, unpublished history of the Woodrow Wilson Fellowship porgram, Woodrow Wilson National Fellowship Foundation, Princeton, New Jersey.

second large award. The reasons for including Pennsylvania are less clear, since several universities would have had a legitimate claim based on the number of W.W. Fellows (see Table 1).

After the initial grants were made, several of the staff members who participated in the planning either left the Foundation or were transferred to other divisions. Administration of the grants was assigned to Mariam Chamberlain, Program Officer in the Division of Education and Research, and she coordinated the program for the entire seven years.[/] Dr. Chamberlain,

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[/] Richard Sheldon, who had previously been involved in the development of the graduate education program, worked with Chamberlain over the transitional period during the first few months of 1967 before joining the Foundation's Humanities program.

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however, had not participated in the earlier planning, and thus inherited a program that she had no role in developing.

Whereas Berelson had recommended that the Foundation develop strict guidelines for the program, and allocate a substantial portion of a staff member's time to close monitoring activities, these steps were not taken. The grant letters stipulated only two requirements: that the supported students not be identified as Ford Foundation Fellows and that their stipends not exceed amounts paid under the NDEA IV program. There was a general understanding mentioned in each proposal that the purpose of the grant was to institutionalize a four year degree norm for the PhD and to improve the preparation of college teachers, but each university was given substantial

flexibility in pursuing these goals.

During the seven years of the program, the universities submitted annual reports to the Foundation and four meetings of graduate deans and Foundation staff were held in New York City from 1968 through 1971. The annual reports contained, in addition to financial information, considerable data on the program itself; Mariam Chamberlain and Richard Sheldon developed a standard reporting form so that the program could be monitored and tentative judgments formed regarding its effects. (Data collected by the Foundation are used and discussed in the analytical section of this report.) Apart from these annual reports, routine correspondence, a few campus visits, and the four meetings with deans, no further monitoring of the program by Foundation staff was done.

The "Non-Experimental" Nature of the Program

Although many of the faculty we interviewed referred to the "Ford Foundation experiment," this use of language is inaccurate, even allowing a loose definition of the term "experiment." [1] Indeed, I found no evidence

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[1] See James A. Caporaso and Leslie L. Roos, Jr. (eds.), Quasi-Experimental Approaches (Evanston, Illinois: Northwestern University Press, 1973), pp. 7-8, for discussion of this term.

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that the staff of the Ford Foundation viewed the program as an experiment; instead, FFGP was a clear attempt to change the behavior of academic departments permanently with the hope that comparable reforms would be

adopted by other universities once the pacesetting institutions showed the way. The program violated virtually every canon of good experimental design, as a listing of its principal features makes clear:

1. non-random selection of universities
2. non-random selection of students to be supported within departments
3. absence of control groups
4. absence of standardized procedures among universities
5. absence of an evaluation plan specified at the beginning
6. absence of a clear statement of the hypothesis being tested (or even a clear conception of exactly how the program was supposed to achieve its goals)

Since the program was not intended to be an experiment, it cannot properly be criticized for not having been designed as one; however, the six features listed above sharply reduce the value of the ex post statistical evaluation that can be done. Were one seriously interested in determining the effect of financial support on graduate completion experimentally, the design would differ markedly from the Ford Foundation Graduate Program.

Chapter II THE OUTCOMES: DATA ANALYSES

In this chapter, statistical results of the program are examined, drawing on the annual reports submitted to the Ford Foundation and on the separate analyses performed using Doctorate Records File data. The following chapter interprets the statistical findings in the light of information gathered on site visits at the 10 participating universites.

Budget Analyses

In our August 1975 interview, Bernard Berelson raised a critical question about the validity of evaluating FFGP -- he wondered whether, in light of reduced federal support for graduate students in the late 1960's - early 1970's, the program had actually had a fair trial. He had not followed the program after it was started, but was aware that the number of federal fellowships had declined rather than grown as assumed, and he urged that the budget figures be checked carefully.

Table 2 compares the 10 university budgets submitted to the Foundation in 1967 with the actual expenditures under the program through 1975. The 10 budgets projected expenditures of $201 million, while actual outlays totaled $152.5 million, 24 percent less than planned. All but $1.5 million of the Foundation grants were spent -- Pennsylvania returned $1.0 million and Berkeley $0.5 million -- so the shortfall can be traced to reduced outside fellowships and, in some instances, to reduced university support. (See Appendix A for more detailed budget figures for each of the 10 universities.) The table also shows, however, substantial variation among the universities in the deviation of actual from projected figures; in two instances (Chicago and Stanford) outlays exceeded the original budgets,

Table 2. Comparison of Projected Budgets and Actual Expenditures under the Fellowship Program

	Projected Budget* ($ millions)			Actual Expenditures** ($ millions)			
	University and Government sources	Ford Foundation	Total	University and Government sources	Ford Foundation	Total	Percent change in Total
Berkeley	$8.3	$4.3	$12.6	$3.3	$3.8	$7.1	-44%
Chicago	5.1	4.0	9.1	5.3	4.0	9.3	+ 2
Cornell	12.8	4.0	16.8	8.7	4.0	12.7	-24
Harvard	9.6	4.4	14.0	4.4	4.4	8.8	-37
Michigan	4.6	4.0	8.6	4.4	4.0	8.4	- 2
Pennsylvania	8.8	4.0	12.8	4.4	3.0	7.4	-42
Princeton	23.0	4.0	27.0	15.7	4.0	19.7	-27
Stanford	9.5	4.0	13.5	12.0	4.0	16.0	+19
Wisconsin[a/]	57.2	4.4	61.6	41.9	4.4	46.3	-25
Yale	20.6	4.4	25.0	12.4	4.4	16.8	-33
Total	$159.5	$41.5	$201.0	$112.5	$40.0	$152.5	-24%

Source: University reports to the Ford Foundation.

* Figures taken from proposals to Ford Foundation, 1967.

** Figures from final reports to Ford Foundation, 1974-1975.

a/ See explanation for Wisconsin's large university and governmental outlays in footnote, bottom of p. 19.

while the shortfalls ranged from an insignificant 2 percent at Michigan to a high of 44 percent at Berkeley.

In interpreting Table 2, however, we must note that several events of the late 1960's, including the cutbacks in federal fellowships, the sudden deterioration in the labor market for PhD's, and the financial squeeze that hit the universities, caused several of the participating institutions to abandon plans to expand graduate enrollments, and in some instances, led to actual enrollment cuts. The budgets and enrollment projections made in 1967 reflected expansionary expectations that turned out to be highly unrealistic; Table 3 compares the number of supported student years projected under FFGP in 1967 with the actual number supported. Note that the 24 percent drop in expenditures (Table 2) was accompanied by a 28 percent reduction in the number of supported student years (Table 3). In short, the unanticipated decline in support was roughly matched by a scaling down of planned graduate enrollments and by a reduction in the number of students participating in the program. For those students who were supported, the terms and conditions of the program were not altered, and no university opted out of the program on the grounds that reductions in outside support or in number of students participating invalidated the effort. The environment in which the program was conducted was far from ideal, and differed radically from that foreseen by its planners; however, an average reduction of approximately 25 percent from the effort planned in 1967 did not undermine the program or render an evaluation pointless. Despite difficult circumstances, the program (and the hypotheses on which it was based) did receive a fair trial.[1]

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[1] In later sections of the report I will discuss the data and unique

Table 3. Comparison of Projected and Actual Student Years Supported Under the Fellowship Program

	Projected	Actual	Percent Change
Berkeley	3,110	2,056	-34%
Chicago	1,864	1,846	- 1
Cornell	2,800	2,195	-18
Harvard	3,114	2,245	-28
Michigan	1,800	2,268[a/]	+26
Pennsylvania	2,976	1,626	-45
Princeton	4,937	4,283	-13
Stanford	3,360	3,941	+17
Wisconsin	31,475	17,744	-44
Yale	5,672	5,481	- 3
Total	60,976	43,685	-28%

Source: University reports to the Ford Foundation

a/ Michigan did not report a final figure for total student years supported. An estimate was made on the basis of their report that 567 students were supported on the program for an average of four years each.

circumstances of individual universities. Two comments on Tables 2 and 3 should be made now, however. First, the University of Wisconsin administered and interpreted the program very differently from the other institutions, and this fact accounts for the disproportionately large numbers reported by Wisconsin. Whereas most of the large universities reported on only a subset of their enrollments and financial support, Wisconsin included every graduate student and every support dollar in its figures.

Second, the budgets and enrollments projected in the 1967 proposals should not be given undue stress, for in most cases they were thrown together hastily and were not very precise or carefully estimated. In one instance, the enrollment projections assumed zero attrition from the program, a completely unrealistic expectation. In another case, the university requested $7 million from the Foundation, and when only $4 million was granted, no revised budget was submitted reflecting that change. One reason for this lack of precision (in addition to the speed with which proposals were requested) was the absence of an explicit matching requirement of university money to Foundation money; as Table 2 shows, the ratio of other sources to Foundation grants in the original budgets varied from roughly 1 to 1 at Michigan and Chicago, to approximately 5 to 1 at Yale and Princeton, to Wisconsin's peculiar 12 to 1. As far as I can tell, these ratios were arbitrary, and therefore the budget projections were not subjected to searching scrutiny by either the university or the Foundation.

Measures of Time to Degree

Before we turn to statistical analyses, we must define precisely the measure that will be reported. There are several ways to measure time-to-degree, and as Berelson observed in 1960, these are often confused in discussion.

The drawing below identifies the various measures graphically. The axis represents years, and the points noted are defined as follows:

BA = date that undergraduate degree is awarded

GE_1 = date of entry in first graduate school attended

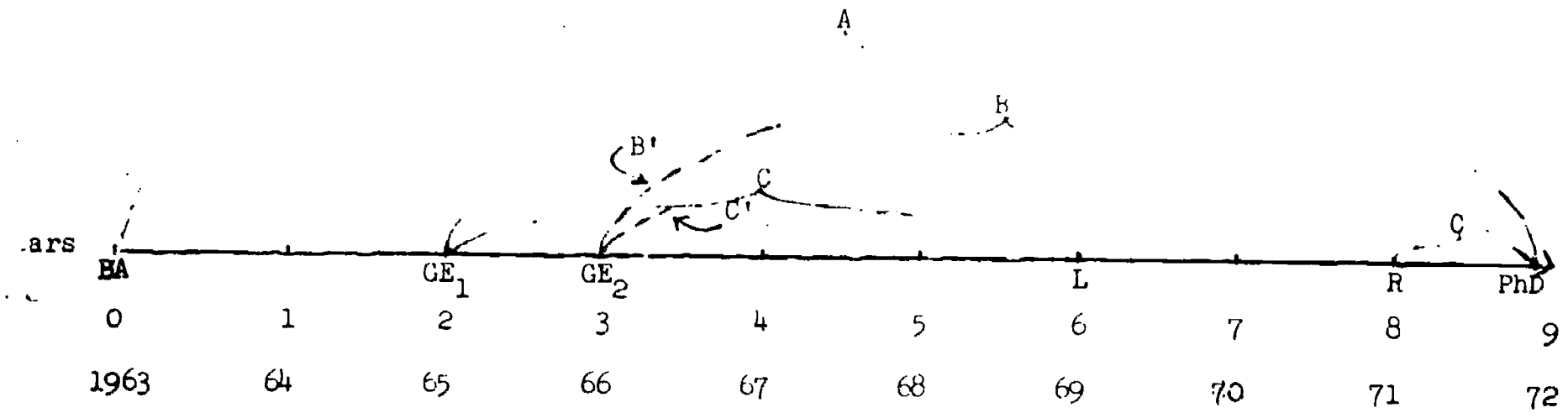
GE_2 = date of entry in second graduate school attended

L = date at which a student ceases to be formally registered

R = date at which a student is formally re-registered

PhD = date that PhD degree is awarded.

Measures of time to PhD degree



The example depicted in the drawing describes a student who received a BA degree in 1963 and a PhD in 1972 (months are omitted for simplicity, although the data files used in this study are broken down by months). The total elapsed time from BA to PhD (distance A) is 9 years, a measure commonly cited in the literature, but not used at all in this report. The Foundation program was not designed to reduce this measure of time to degree.

Our hypothetical student did not enroll in graduate school until 1965, noted by GE_1. After one year of study, he transferred to a second university (GE_2), and was a full-time student until 1969, at which time he left (L), perhaps to take a teaching job, before the dissertation was finished. After teaching for two years, he returned to campus in 1971 (R) to complete the dissertation, and the doctorate was conferred in 1972 (PhD). This reasonably common pattern of attendance yields four additional measures of time to degree: (1) the distance marked B on the drawing, equal to 7 years, which is total elapsed time from first graduate school entry to PhD; (2) the 6 year period marked B', from date of entry at the second university to the award of PhD; (3) the two segments marked C, equal to 5 years, that measure enrolled time from first graduate school entry to PhD; and (4) the segment marked C' plus the final year marked C, equal to 4 years, and measuring the enrolled time in the university awarding the PhD. Note that the first two are <u>elapsed time</u> measures and the last two are <u>enrolled time</u> measures. The measure that FFGP sought to reduce to four years was distance B, the total elapsed time from graduate school entry to PhD. Students who had undertaken graduate work at any other university before enrolling at one of the 10 institutions were to be excluded from the program if they could not complete a degree in a total of four-five years, measured from the beginning of graduate study. In terms of the

drawing, a successful program would have reduced the time from GE_1 to PhD to 4 years by eliminating any non-enrolled time and by excluding transfer students who were not on a four-year track; elapsed time and enrolled time would become identical and equal to 4 years.

In practice, it was not possible to exclude all students who had done graduate work elsewhere from the program. At three of the universities (Princeton, Stanford, and Yale), all graduate students enrolled during the years of FFGP were guaranteed four years of support; since the Foundation insisted that individual students not be designated as Ford Fellows, Foundation support could not be earmarked and all students were viewed by the universities as on the program, even if they had done graduate work elsewhere. In these instances, the universities tended to ignore the earlier graduate work, reporting only time at their own institution to the Foundation.

A different problem arose at Michigan and Wisconsin where the Foundation money was used to support fellowships in the third and fourth years of graduate study, awarded on a competitive basis to students who were "on-track" after the first two years at the institutions. Since awards were made to third year students, the exclusion of candidates who had studied elsewhere but who had established excellent records at Michigan or Wisconsin was considered unjust, and this regulation became a sore point between the Foundation and faculty members. (At Wisconsin, this rule was a major reason for the English department's withdrawal from the program after two years, one of the few cases where a department acutally dropped out.)

The Problem of Determining the Correct "Experimental" Group

The two sets of problems noted above are specific examples of a general problem that plagued FFGP -- the difficulty of specifying exactly which graduate students were (or were not) on the program, and the related difficulty of determining what set of statistics should be examined to evaluate it. At the three universities that guaranteed support to all entering students, this problem was minimized, subject only to the difficulty with transfer students noted above. At Wisconsin, the program was viewed as involving every humanities and social science graduate student, although none were guaranteed four years of support upon enrollment, and a majority did not receive such support. Michigan followed a pattern similar to Wisconsin's (i.e., special two-year fellowships awarded to third year students) but carefully limited the reported data to the sub-set of students that received those awards. At the other five institutions, a sub-set of the entering classes received guaranteed four year support (subject to satisfactory performance), and in these cases, only data on that sub-set of students were reported. In my 1975 interview with Berelson, I asked him whether an evaluation true to the spirit of the program should examine only the sub-set of fully supported students, or whether the performance of entire graduate cohorts should be assessed. He was quite outspoken in urging that the evaluation be made of all the department's students, not just the sub-set with guaranteed support. In his view, the significance of the program lay not just in picking winners and guaranteeing their support but rather in institutionalizing a new pattern of behavior within the department, so that all students would be expected to complete in four years, even if that meant substantial borrowing.

(Remember that his 1960 recommendations for a four-year degree did not rely on full fellowship support.) He described the fellowship money made available under FFGP as a "bribe" to interest the faculty in curricular reform and to encourage them to insist on four-year degree completion. The money was also supposed to make it possible for a large number of students to study full-time and complete their degrees expeditiously, thereby demonstrating to both faculty and students that high quality work can be done in four years. To allow the universities to concentrate solely on the performance of the fellowship students would miss the purpose of the program entirely, for in that case, once the fellowships were gone, the departments could simply lapse back into their former behavior patterns. The irony is that the majority of universities <u>did</u> concentrate on just the fully supported students, and at most of the universities, the end of the program did mark the end of faculty interest in the four year degree, just as Berelson feared.[/]

[/] One of the reasons the Foundation did not want a sub-set of students singled out and identified as Ford Fellows was to avoid precisely the problem that Berelson mentioned. Unfortunately, the annual report form developed at the Foundation did allow universities to report on just those students who were identified by the university as being in the program. Consequently, for those universities where only a sub-set of students were guaranteed four-year support, data were reported for only that fraction of the entering cohort; information on the full cohort is not available, a severe loss to the evaluation effort. (In some instances, the universities refused, or were unable, to provide data on all of the enrolled students.)

One cannot evaluate the program properly by analyzing the experience of the fully-supported students alone because of the obvious bias in such a procedure. In those universities where only a percentage of students were supported, awards were made to the strongest applicants, not randomly. To compare the performance of the strongest students with Ford support to the average performance in the department prior to the grant would be inaccurate and misleading, and yet that is what most departments did in their reports to the Foundation.

The Evaluation Design

No fully satisfactory solution to the problems sketched above was possible. In addition to requiring data on the performance of entire entering cohorts, comparable data for several years before the Ford intervention was essential as a check against falsely attributing to the program changes that may have simply been continuations of an earlier trend.[1] Furthermore, a set

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[1] The methodological problems encountered in this type of evaluation research are discussed in the literature under the heading "quasi-experimental research designs." Excellent survey articles on the most common errors in evaluation research are found in James A. Caporaso and Leslie L. Roos, Jr. (eds.), Quasi-Experimental Approaches (Evanston, Illinois: Northwestern University Press, 1973), particularly the articles by Caporaso, "Quasi-Experimental Approaches to Social Science," pp. 3-38; and by Donald T. Campbell, "Reforms as Experiments," pp. 187-225. In the present research, I have followed the approach recommended by these authors insofar as the data allow.

of control institutions was necessary, again as a check against inaccurate attribution of effects to the program. The data reported to the Foundation were inadequate for a proper evaluation for reasons noted above; fortunately, the National Research Council Doctorate Records File made it possible to overcome some of the limitations, and I relied primarily on that source for the statistical analyses that follow.

A proper evaluation requires:

(1) data on the relevant measure of time to degree (GE_1 to PhD) for all of the doctoral recipients of the departments supported under FFGP;

(2) comparable data from a set of universities not supported under the program (a control group); and

(3) data on time to degree in both funded and control groups for several years prior to the program and extending through its completion.

The Doctorate Records File (DRF) met these requirements. A sub-tape was created from the DRF covering all PhD's awarded in 10 humanities and social science disciplines in funded and control universities for the 15 year period, 1960-1974. The 10 disciplines -- English and American Literature, Romance Languages, Philosophy, German, Classics, Anthropolgy, Sociology, Economics, Political Science, and History -- provided good coverage of humanities and social science disciplines, and virtually all of these fields were included in FFGP at the 10 supported universities. Control groups were created for each of the 10 disciplines by selecting the 12 highest rated departments in each field that were not in participating universities.[1] Since most of the

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[1] The ratings were taken from Kenneth Roose and Charles Andersen, A Rating of Graduate Programs (Washington, D.C.: American Council on Education, 1970).

FFGP departments were rated in the top 20 by Roose-Andersen, the controls were selected to be as similar in rated quality to them as possible.[/]

[/] The non-random selection of participating universities made it impossible to select a group of control institutions that were similar in most respects to the supported universities.

In computing the median time to degree for the graduates of a department in a given year, two methods are possible. The first focuses on the entering cohort of graduate students, following each student through to completion and computing the median time for the cohort, while the second focuses on all PhD degrees awarded in a given year, tracing each recipient back to his or her year of entry and computing a median for the group who received PhD's in the same year.[/] The entry-cohort approach is the correct

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[/] An excellent discussion of these two approaches is contained in an unpublished paper by W. Lee Hansen and Judith S. Craig entitled "Trends and Patterns in PhD Completion: the University of Wisconsin -- Economics Program," Madison, Wisconsin, 1975.

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method for evaluating FFGP, provided one could collect such information for several entering cohorts prior to the program and then for those cohorts entering under the program. Such data simply do not exist, however, and would be prohibitively expensive to collect, particularly considering the large number of departments participating in FFGP. The degree-award approach is

distinctly inferior for our purposes, since it is a measure based on students from several entering cohorts (e.g., the group receiving PhD's in 1974 will include students who began in 1970, 1969, 1968, and so forth), but time trends in this measure will reflect any noticeable drop in median time to degree associated with a major intervention, such as FFGP.[/] No feasible alternative

[/] The median computed in this fashion is effected not only by changes in the distribution of times to degree, but also by enrollment changes. If no change occurs in the distribution of times to degree; but enrollment expands, the median will decline with a lag of 4-5 years; similarly, a reduction in enrollments will cause the median to increase (all else equal) 4-5 years later. The effect is transitory, vanishing when enrollments stabilize at the new level. Since most graduate departments expanded in the early 1960's, we would expect medians in the middle and late 1960's to be lowered by this enrollment effect. Simulations indicate that the effect is small (less than ½ year) for plausible enrollment changes, but the slight U shape visible in many of the following figures is partly attributable to this enrollment effect.

to the use of DRF data existed, for the data have been centrally collected, are in machine-readable form, and all of the computations could be made by computer. Wherever possible, the DRF results are cross-checked with the universities' own data based on entry cohorts to be certain that the findings are not dependent upon the particular measurement used.

Statistical Findings

Even by limiting our investigation to 10 disciplines, it is impractical to present data for each discipline in each university, since that would require 100 separate panels. Instead, in this chapter we present the data aggregated in two ways, by discipline and by university. Figures 1 - 10 chart the elapsed time (GE_1 to PhD) for each of the 10 disciplines from 1960 to 1974, with the 10 participating universities aggregated into a single group of funded institutions, and the control departments aggregated into a single group of control institutions. The contrast between the ten humanities and social science disciplines and three physical science fields is demonstrated by Figure 11, which presents median time-to-degree data from the 10 universities for physics, chemistry, and mathematics. In Figures 12-20, the disciplines supported at each participating university are aggregated, and the median lapsed time (GE_1 to PhD) for each university is compared with that of Princeton University. (Princeton was selected as the standard for comparison because it had the shortest time to degree of the 10 institutions.) Data on individual department performance will be introduced sparingly in the following chapter when we discuss the site visit findings.

In interpreting the figures, the last three years (1972, 73, and 74) are of most interest since the effect of the program would be apparent for the first time during those years. (The first group of students supported under FFGP began graduate study in 1967. If the program were successful, and a sharp discontinuity in time to degree began with that cohort, the change would show up in our data as a reduction in median time to degree for PhD's awarded 4-5 years later, or from roughly 1972 onward.)

Findings in the Disciplines

Figure 1: English and American Literature.

Median time-to-degree in the funded universities reached its lowest point in 1967, at 6.5 years, reflecting the experience of entering cohorts from the early 1960's. After holding steady at about 6.8 years through 1972, the median increased to over 7 years in 1973 and 1974, just the opposite of what should have happened had FFGP been successful. In both funded and control departments, a general decline in time to degree occurred between 1960 and 1970, years that preceded FFGP. Both funded and control institutions show the increased time-to-degree in later years, suggesting an influence unrelated to the Ford program.

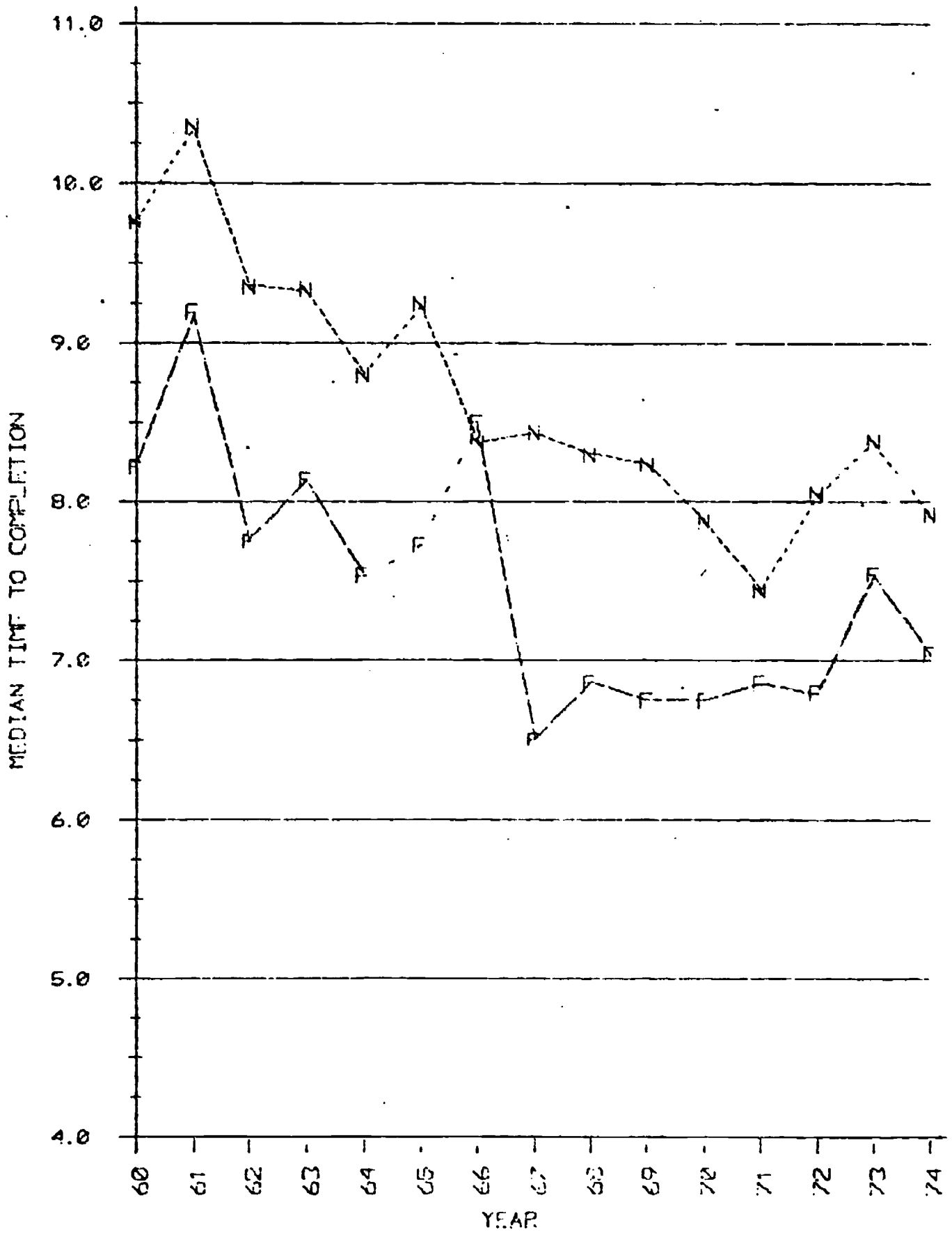
Figure 2: Classics.

Large oscillations are the dominant pattern in this discipline, caused primarily by the small number of degrees awarded annually. Although the median hit its low point in 1972 at slightly below 6 years, it rose in both successive years, reaching a point in 1974 higher than in any year since 1966. These results run counter to what FFGP should have produced.

Figure 3: German

The value of an extended time series is clearly demonstrated in this case. The figures for the last three years in the funded universities are simply a continuation of the zig-zag pattern that marks the entire 15 year period, while the control universities show a steady increase each year since 1968. Had one only compared funded and control institutions from 1971 forward, one might have concluded that the program had been a limited success; however, in the context of the longer time series, one must conclude that FFGP had little, if any, effect.

Figure 1: Median Time to Degree (Graduate Entry to PhD), in English and American Literature, 1960-1974



F Funded Institutions

N Non-Funded Institutions

Figure 2: Median Time to Degree (Graduate Entry to PhD), in Classics, 1960-1974

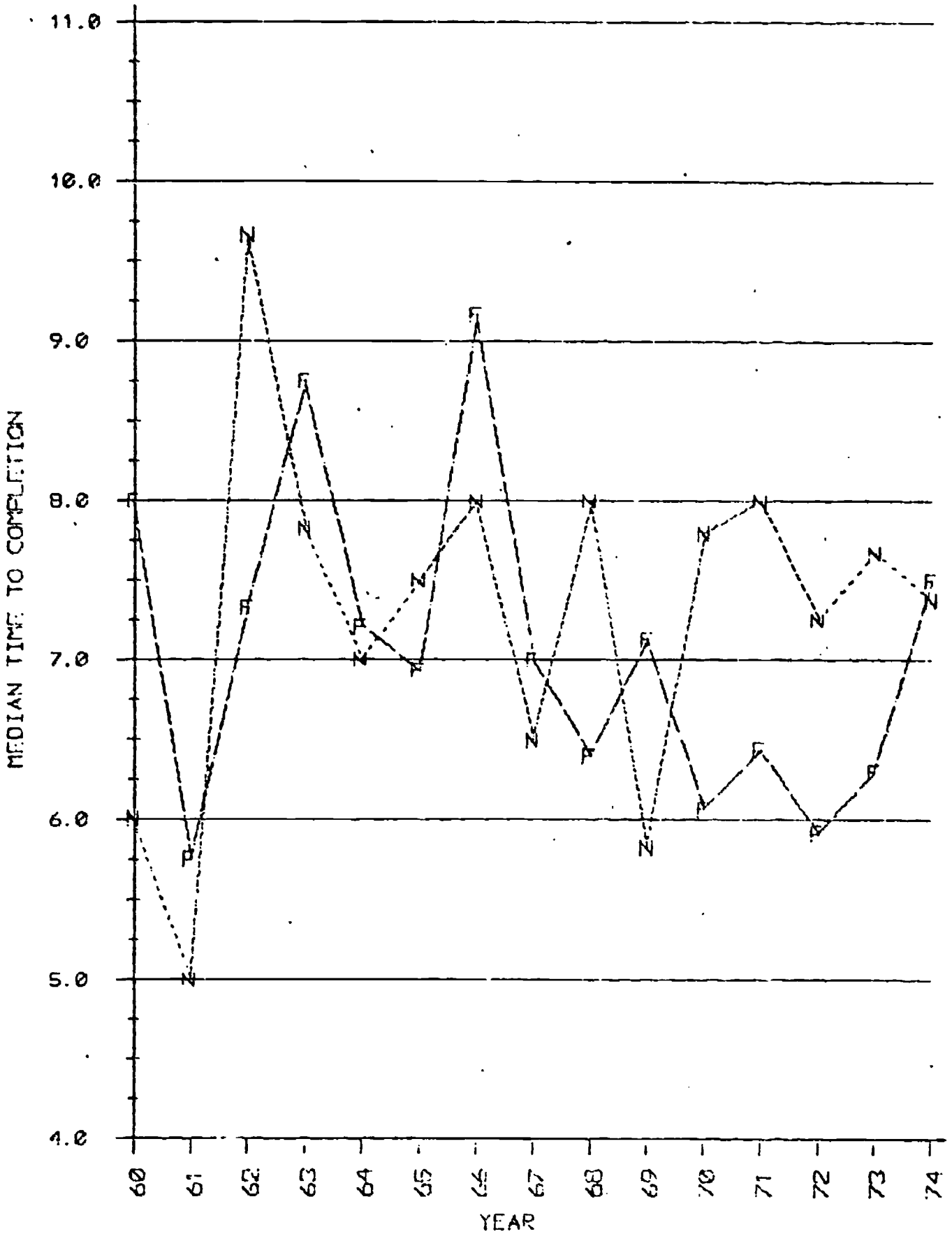
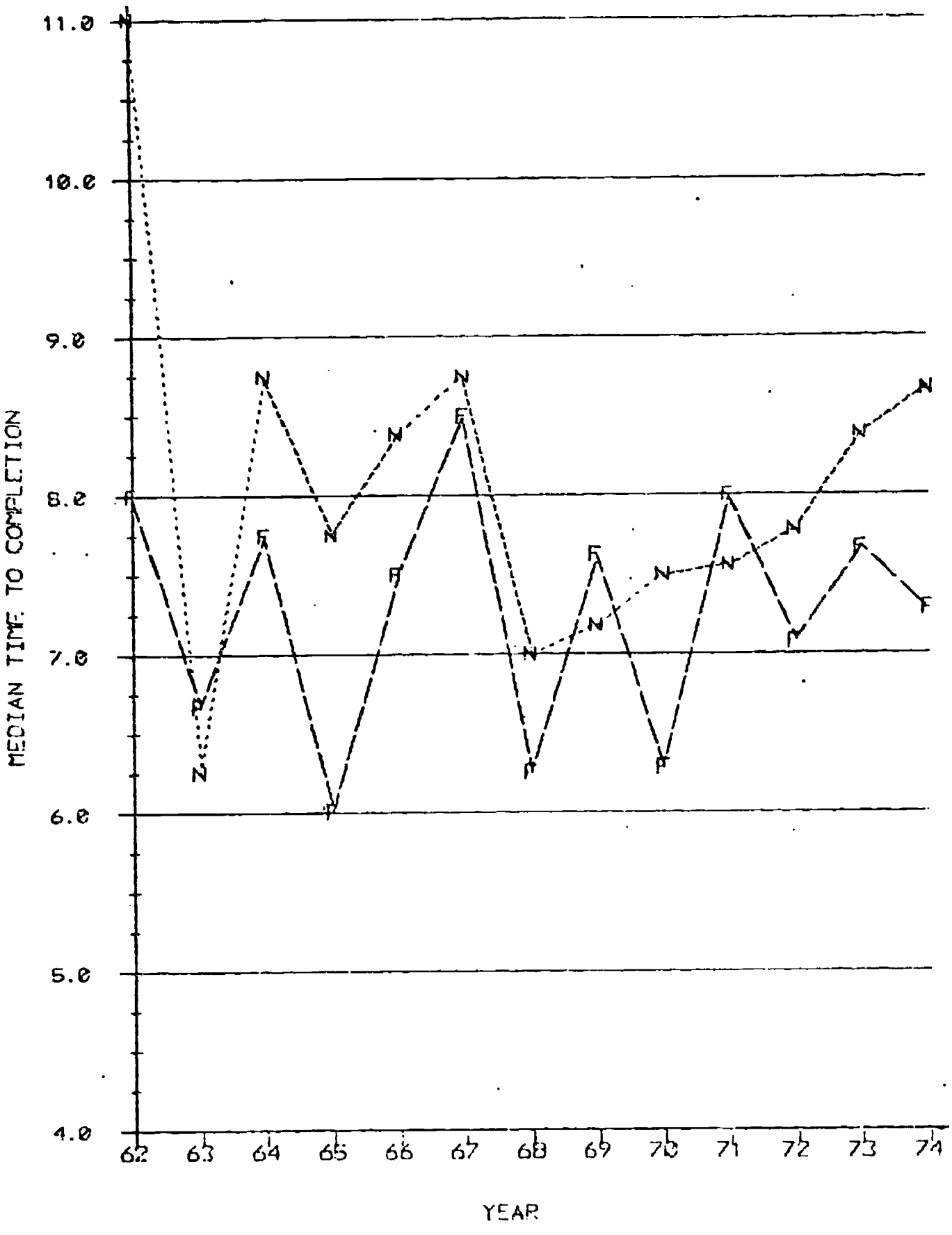


Figure 3: Median Time to Degree (Graduate Entry to PhD), in German, 1960-1974



F Funded Institutions

N Non-Funded Institutions

Figure 4: Philosophy

This figure requires little comment. The steady rise in time to degree from 6.0 years in 1971 to over 8.0 years in 1974 in the FFGP departments is striking evidence of program failure. Ironically, the rate of increase in time-to-degree in funded universities was much sharper than in the controls.

Figure 5: Romance Languages

Here is the first evidence that is consistent with the hypothesis that FFGP had an effect in reducing time to degree. The zig-zag pattern that marked the 10 years prior to 1970 was followed by a steady decline in the median time through 1974, a pattern not present in the control departments. At 7.2 years, however, the median was still far above the level sought under FFGP.

Figure 6: Anthropology

From 1967 forward, the median times show very little change, ranging between 7 and 8 years, with no obvious pattern to the movements. No separate effect of FFGP is apparent.

Figure 7: Economics

One might attribute a small effect to FFGP in this discipline, since the median time in the funded institutions dropped slightly in the last three years, more so than in the controls. The declining time to degree, however, seems to be a long run trend, visible over the full 15 years. The trend in both funded and control institutions is similar over the period, indicating that most economics departments have shifted toward more rapid degrees in recent years.

Figure 4: Median Time to Degree (Graduate Entry to PhD), in Philosophy 1960-1974

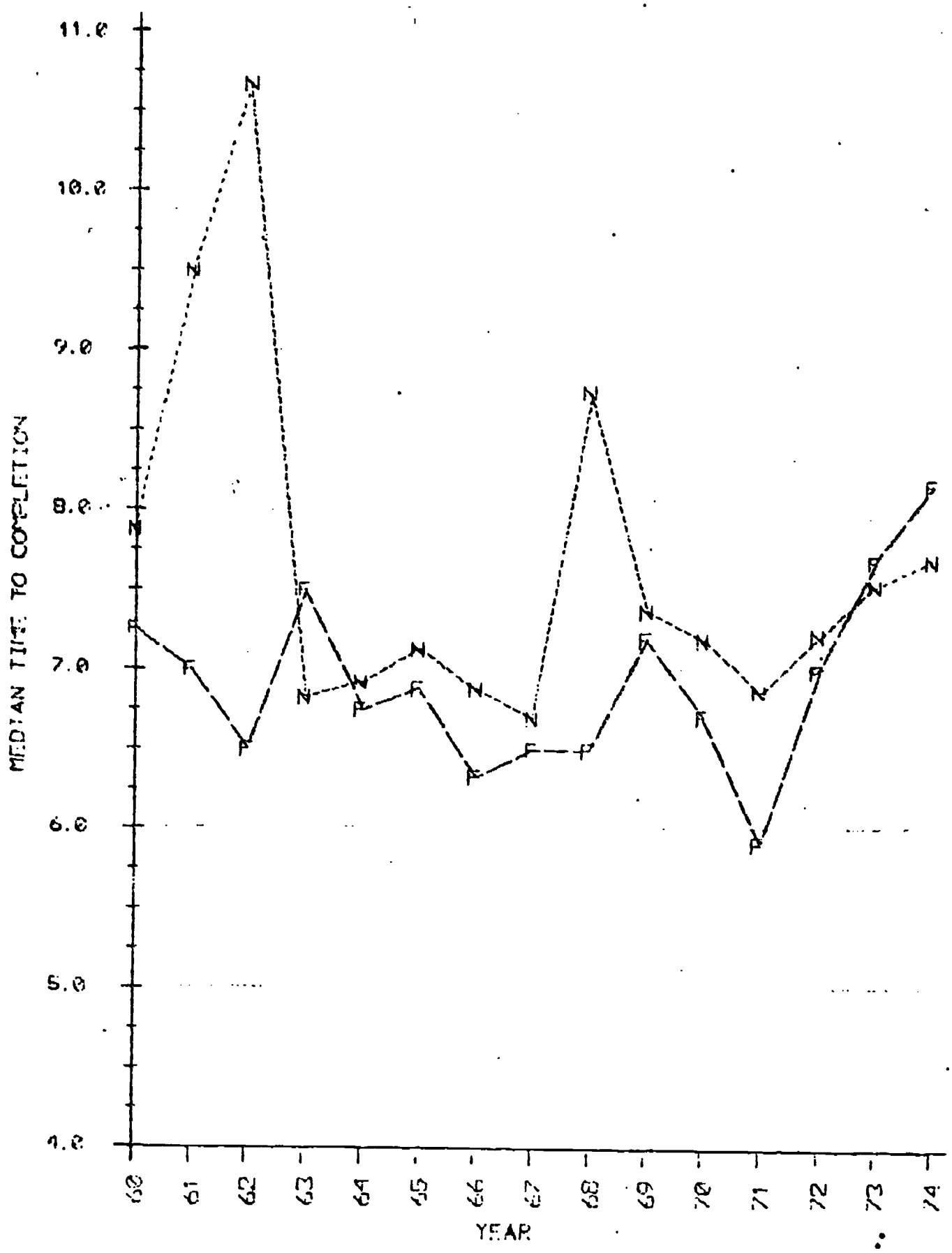
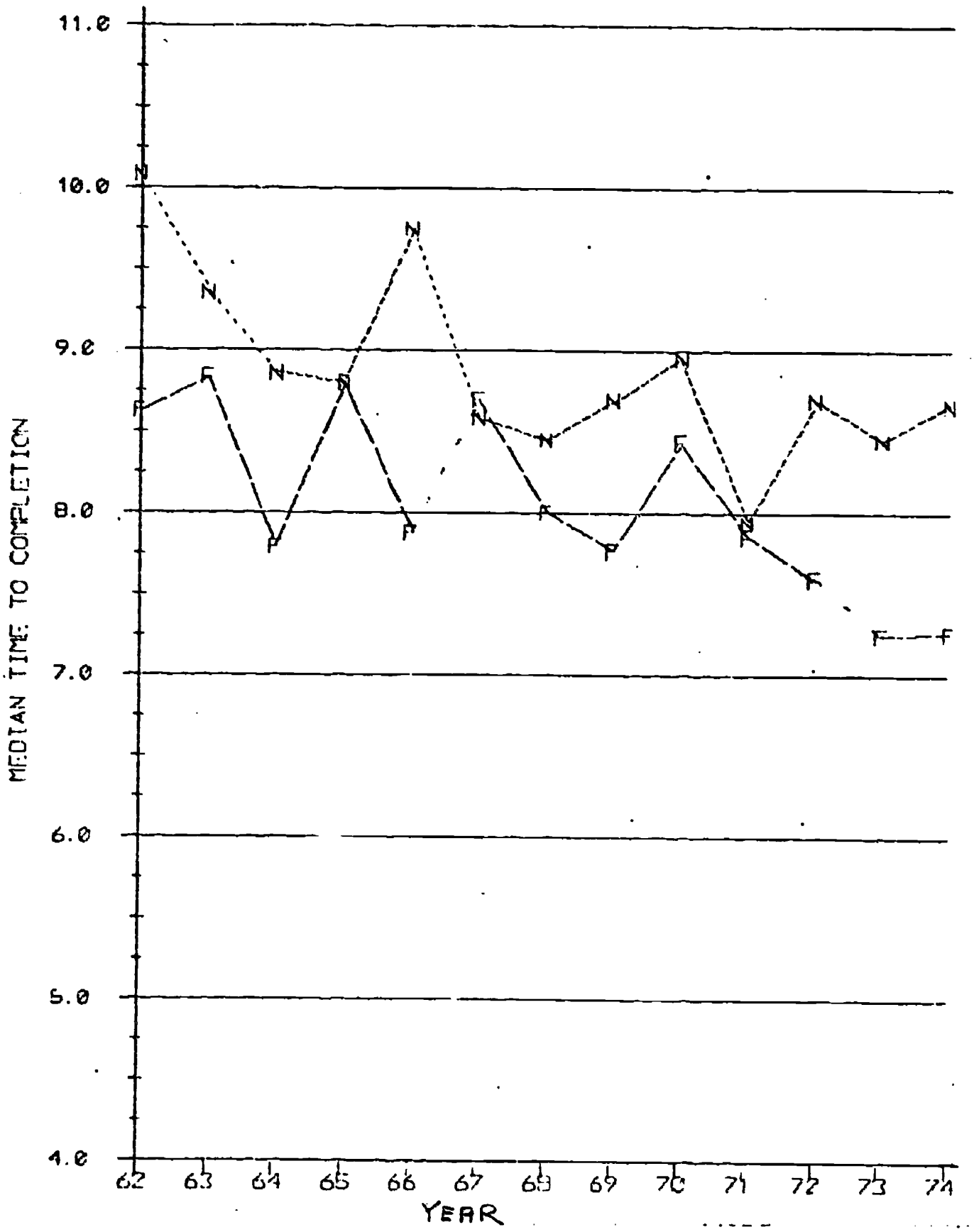


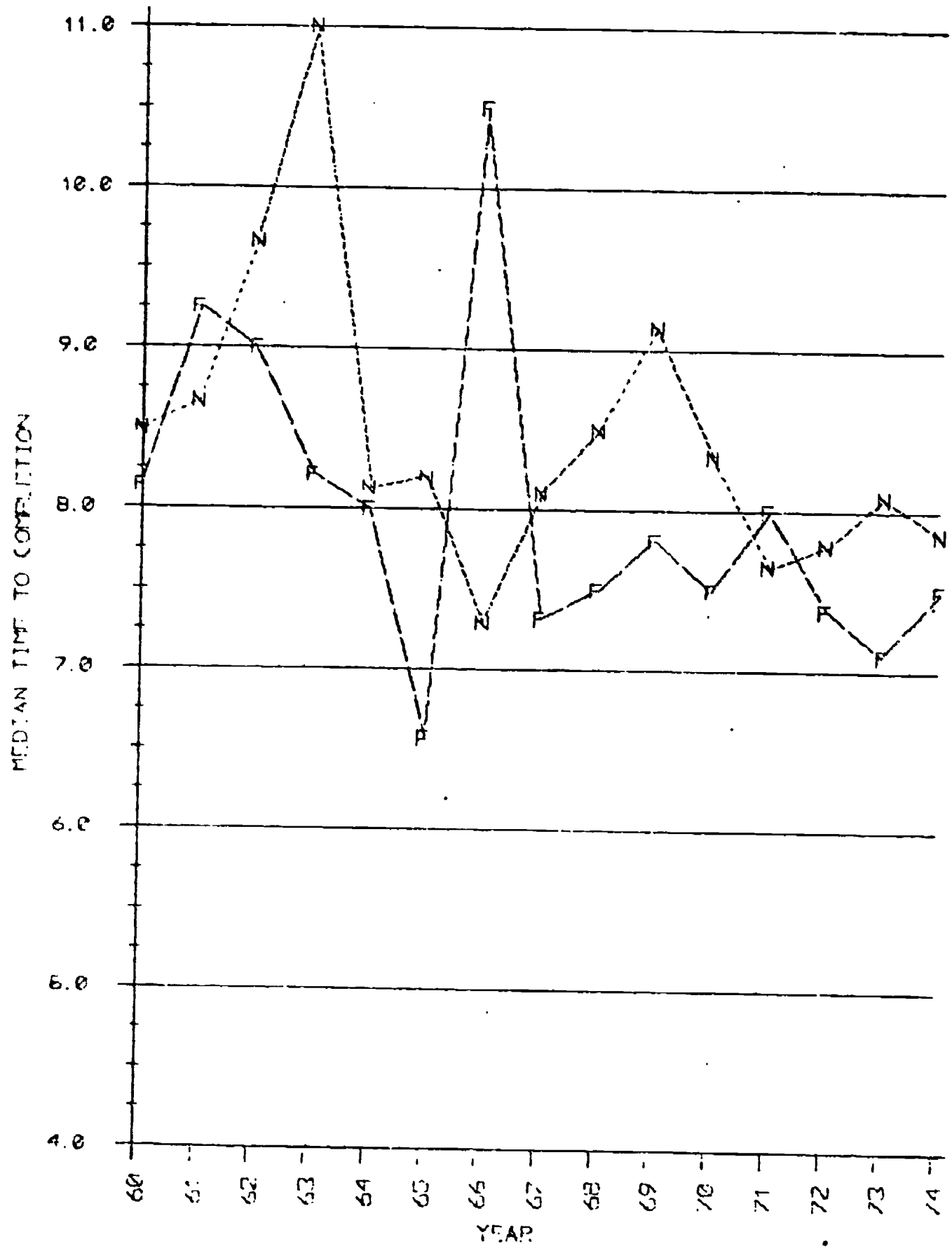
Figure 5: Median Time to Degree (Graduate Entry to PhD), in Romance Languages, 1960-1974



F Funded Institutions

N Non-Funded Institutions

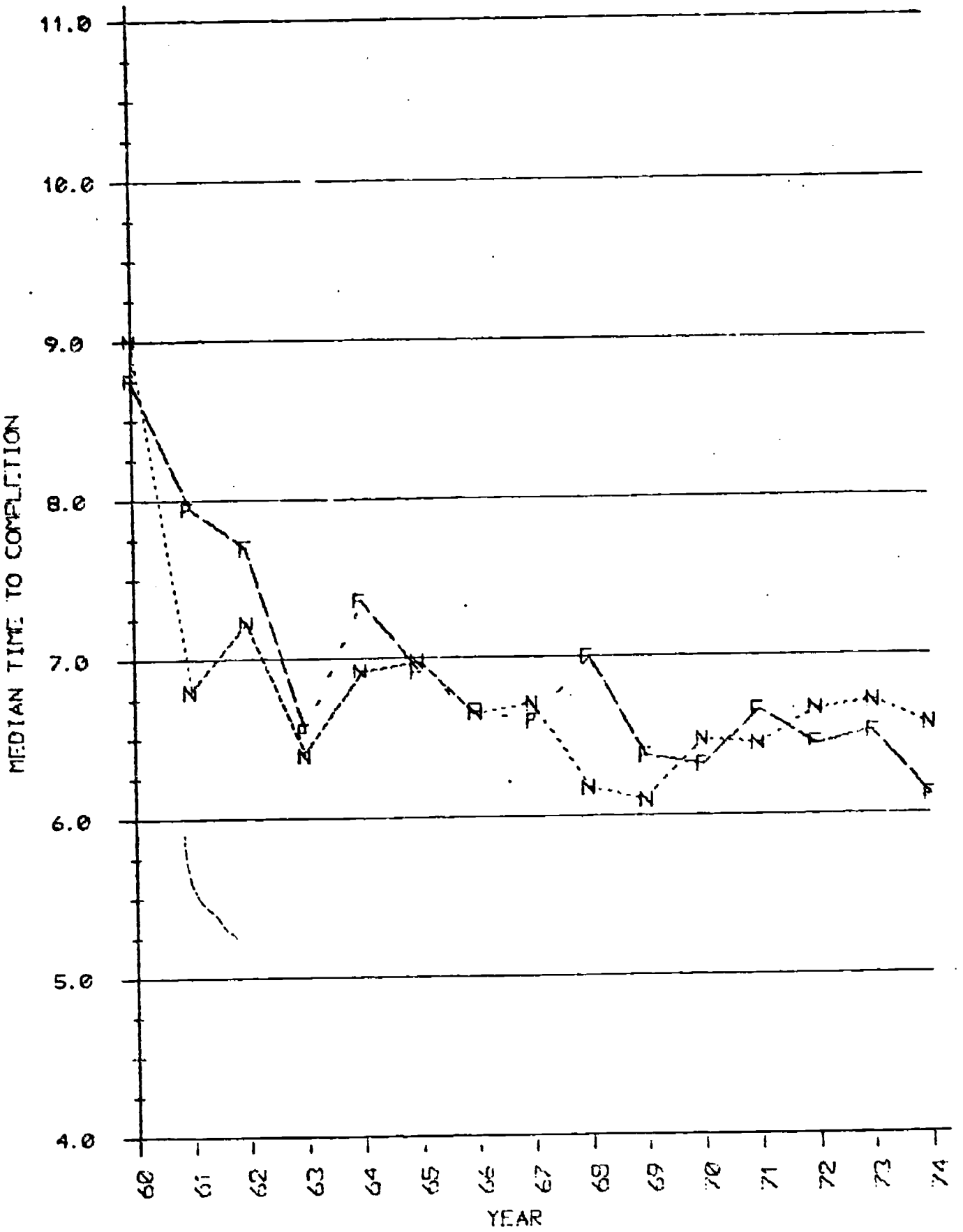
Figure 6: Median Time to Degree (Graduate Entry to PhD), in Anthropology, 1960 1974



F Funded Institutions

N Non-Funded Institutions

Figure 7: Median Time to Degree (Graduate Entry to PhD), in Economics, 1960-1974



F Funded Institutions

N Non-Funded Institutions

Figure 8: History

This field displays a relatively stable pattern over the 15 years, moving randomly between 7 and 8 years in median time to degree in the funded institutions, and slightly higher in the controls. No independent effect of FFGP is discernible.

Figure 9: Political Science

The median time to degree in both funded and control departments has moved steadily upward since 1968, with minor exceptions, rising to more than 8 years in the funded institutions by 1974. FFGP clearly did not have the intended effect in this discipline.

Figure 10: Sociology

This discipline displays a highly erratic pattern in the early 1960's, attributable in part to the relatively small number of degrees awarded in those years. Since 1967, median times in both funded and control institutions have fluctuated between 7 and 8 years, and were on the increase in the final years of FFGP.

Figure 11: Physics, Mathematics, and Chemistry

This figure is included to show the vivid contrast between time to degree performance in the physical sciences and in the disciplines supported under FFGP. One can readily understand why the sciences were taken as the model for the Ford program.

Figure 8: Median Time to Degree (Graduate Entry to PhD), in History, 1960-1974

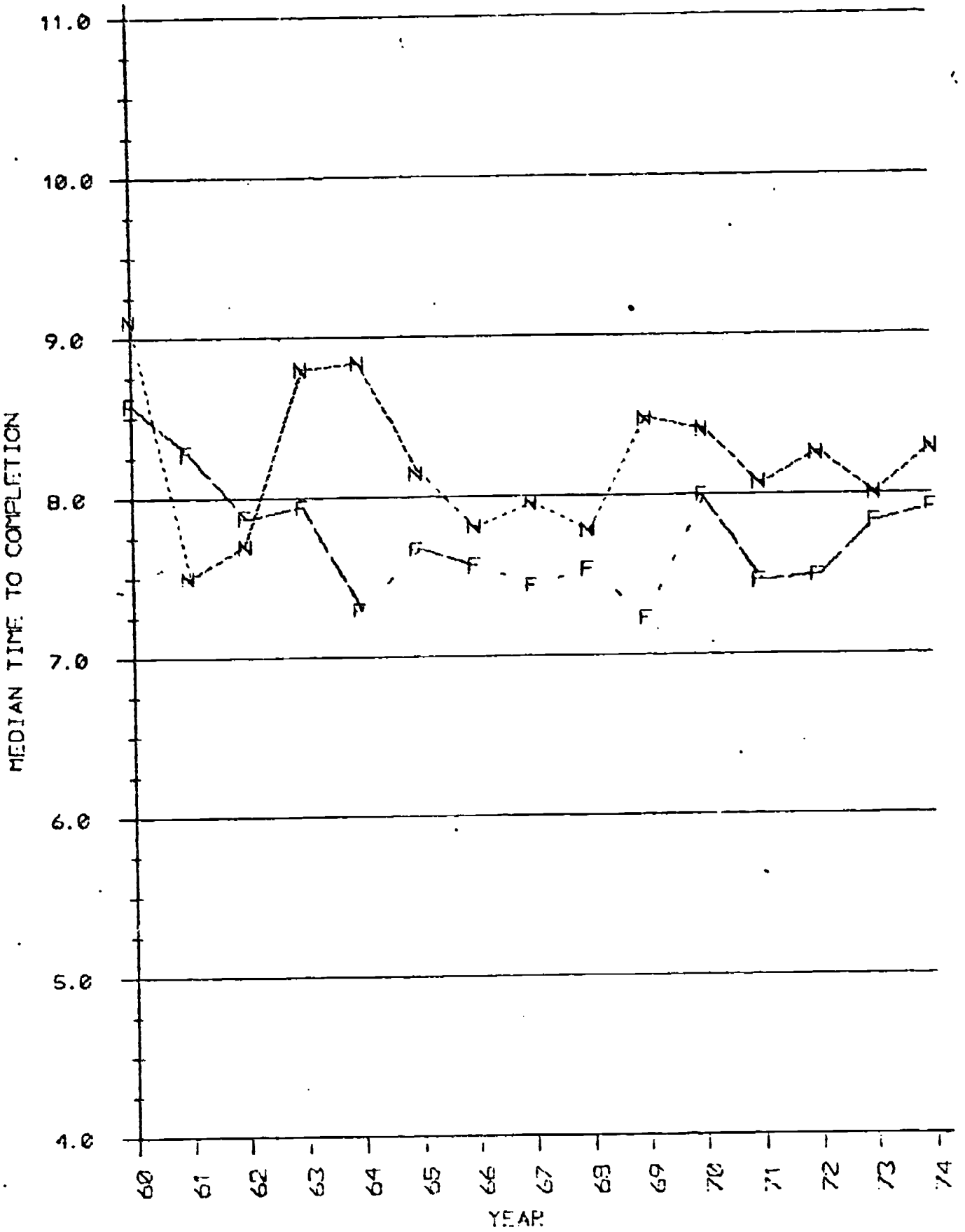


Figure 9: Median Time to Degree (Graduate Entry to PhD), in Political Sciences, 1960-1974

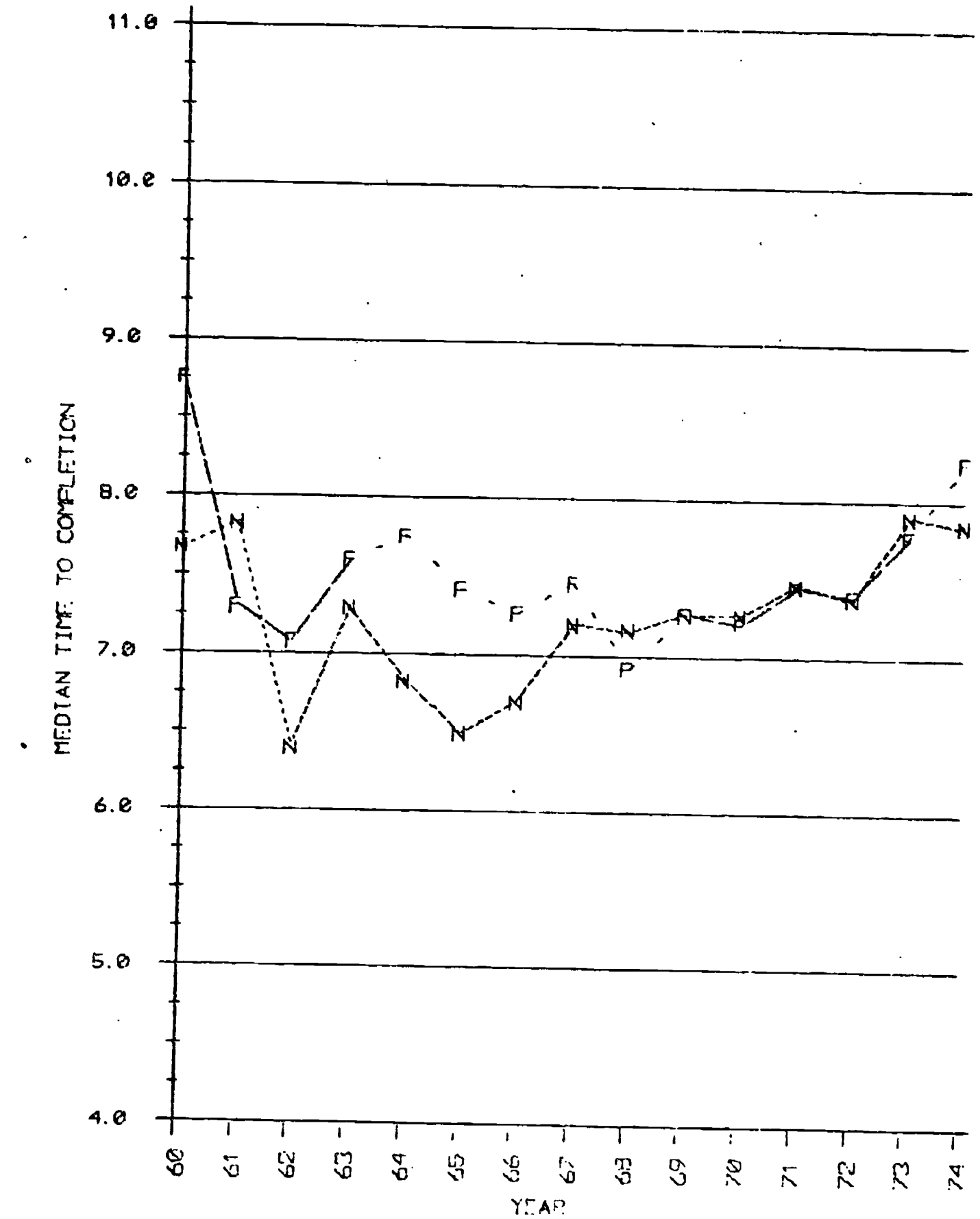
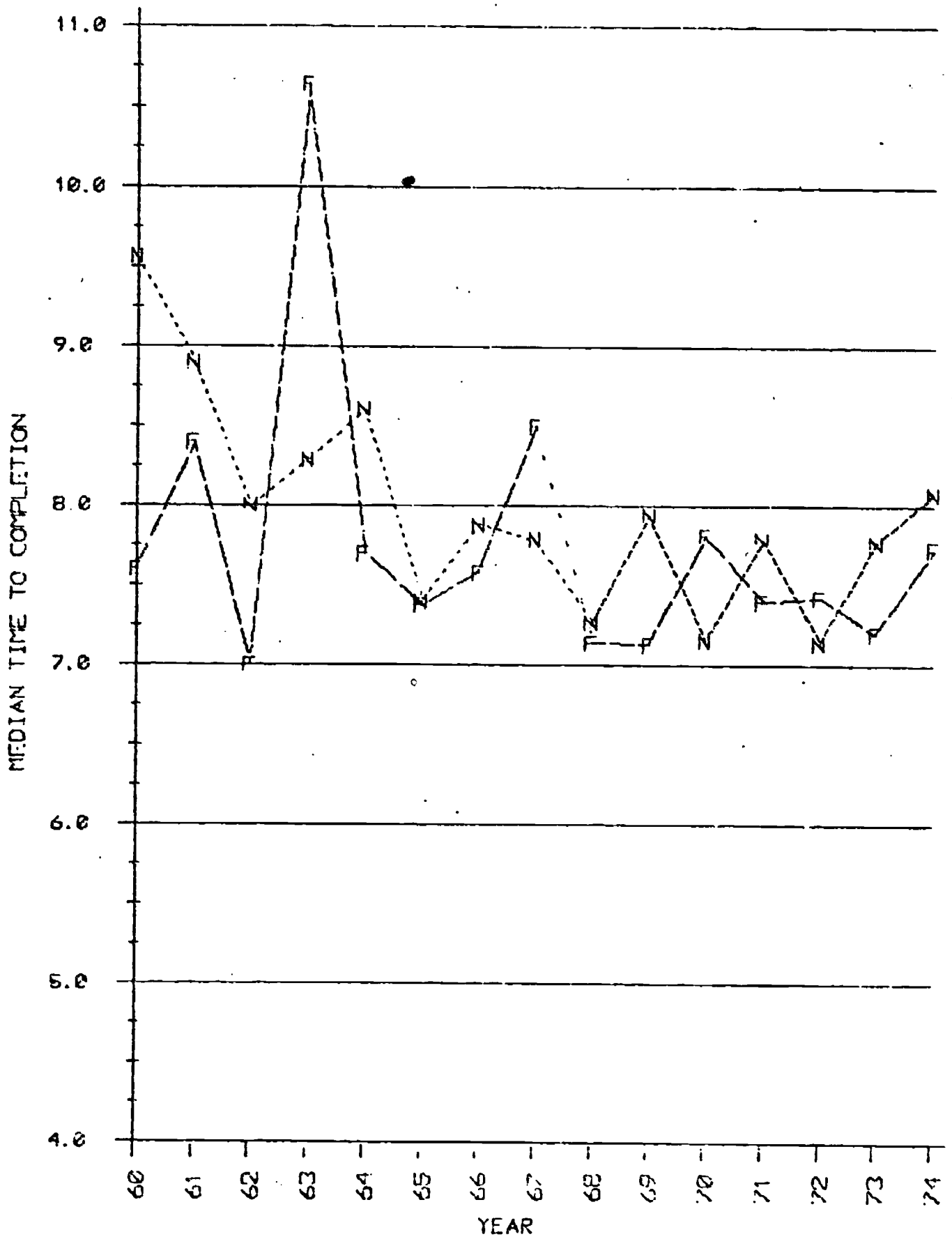


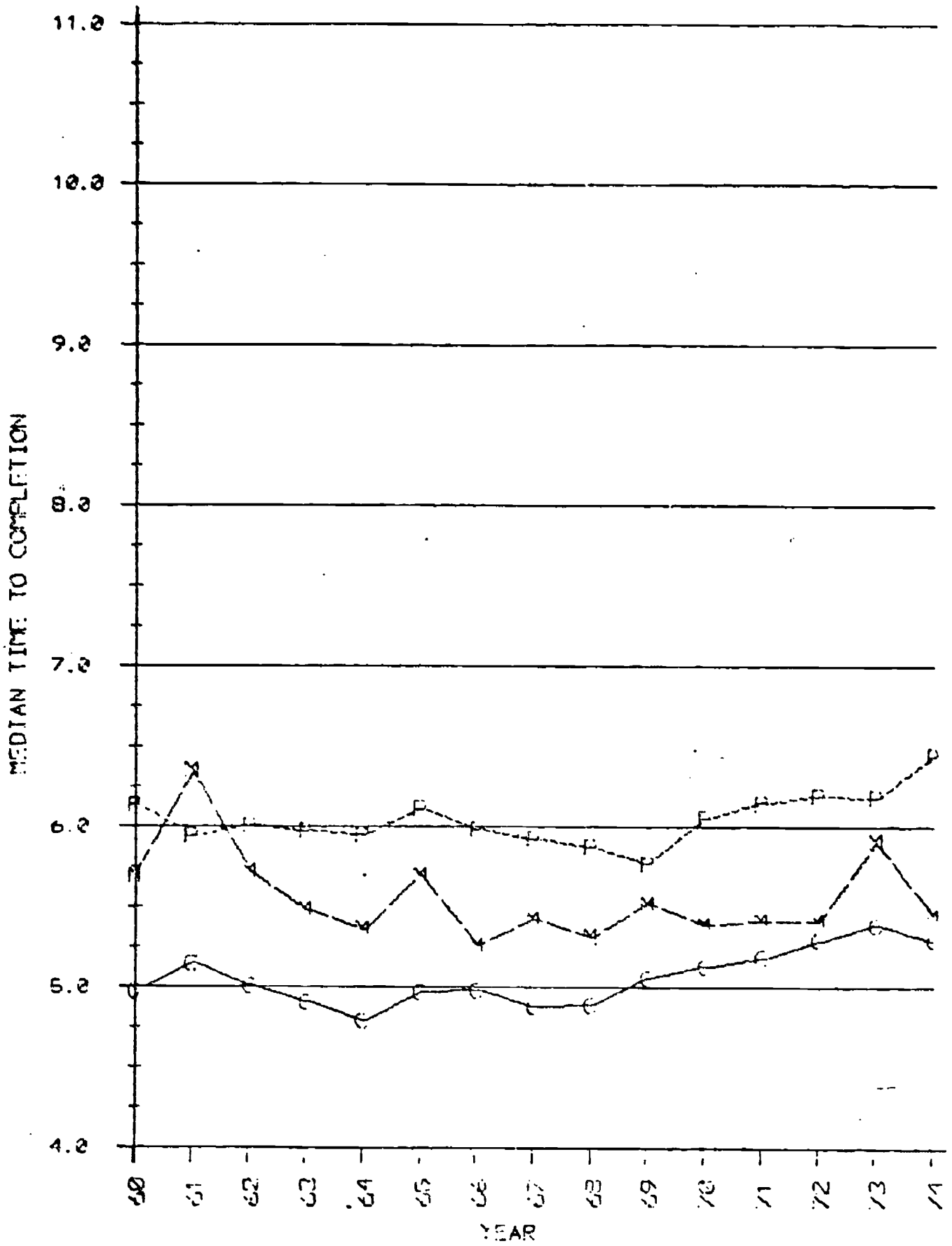
Figure 10: Median Time to Degree (Graduate Entry to PhD), in Sociology, 1960-1974



F Funded Institutions

N Non-Funded Institutions

Figure 11: Median Time to Degree (Graduate Entry to PhD), in Mathematics, Physics, and Chemistry, 1960-1974.



---------- Mathematics (M)

---------- Physics (P)

———————— Chemistry (C)

Summary of Results in 10 Di lnes

In only two fields (Romance Languages and Economics) was there any evidence consistent with the hypothesis that FFGP had reduced the time to degree; in the other eight disciplines, the program clearly failed when measured against that criterion. Even in the two instances where a modest effect of FFGP is suggested, the median time remained high -- in excess of seven years in Ronance Languages and six in Economics. Futhermore, no field besides Economics had a median time below seven years by 1974, and in several cases the median remained above eight years.[/] The data will not even

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[/] It is obvious that a median time to degree of 4 years should not have been expected, since that would have required half the students to complete in 4 years or less. A median time of 4.5-5.0 years would have been a reasonable expectation for a successful outcome, since in that case, at least half the students would have completed in the 4 to 5 year range. Medians of 7-8 years are hardly consistent with the program's objectives, particularly when the pattern shows little change over the 15 years studied, and increasing time to degree in the later years.

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support a modest claim that the results are ambiguous; the program's central objective was clearly not achieved.

Findings in the Universities

As noted earlier, the following nine figures trace the median lapsed time (GE_1 to PhD) in each of the participating universities, with Princeton's data used as a common standard for comparison. For each

university, aggregate data for all 10 disciplines are reported (unless, of course, a particular field was not included in FFGP at a university, in which case that field was excluded).

Figure 12: Princeton and Berekeley

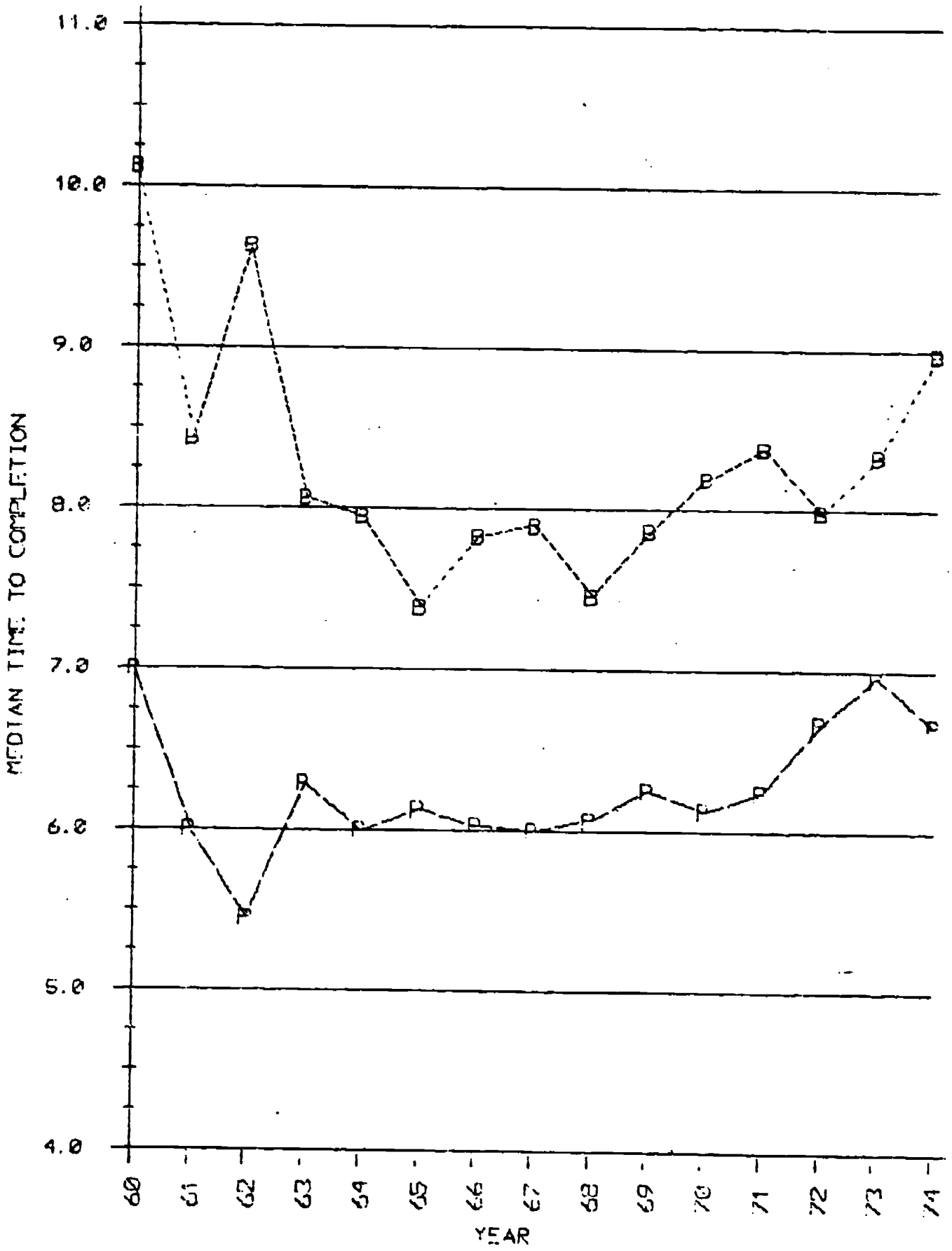
As remarked earlier, Princeton University consistently displayed the shortest time to degree of any participating university over the 15 years. Rapid PhD completion has been the goal at Princeton for many years, reflecting a policy laid down by Sir Hugh Taylor when he served as graduate dean. Even at Princeton, however, the median elapsed time from first graduate school entry anywhere to receipt of PhD rarely fell below 6 years, and ironically, this measure of elapsed time increased during the FFGP years.

Median elapsed time at Berkeley was generally about two years longer than at Princeton over this period, and the Berkeley data have a definite U shape -- declining substantially from the early to middle 1960's, then rising steadily after 1968. By 1974, the median elapsed time in the 8 disciplines supported by FFGP at Berkeley was 9 years, the highest that figure had been since 1962.

Figure 13: Chicago

A regression line fit to the Chicago data would show a steady decline in median time from the early 1960's through 1972, followed by increases in 1973 and 1974, years when FFGP should have had a decided impact in the other direction. Median time in the supported fields at Chicago was just under 8 years in 1974.

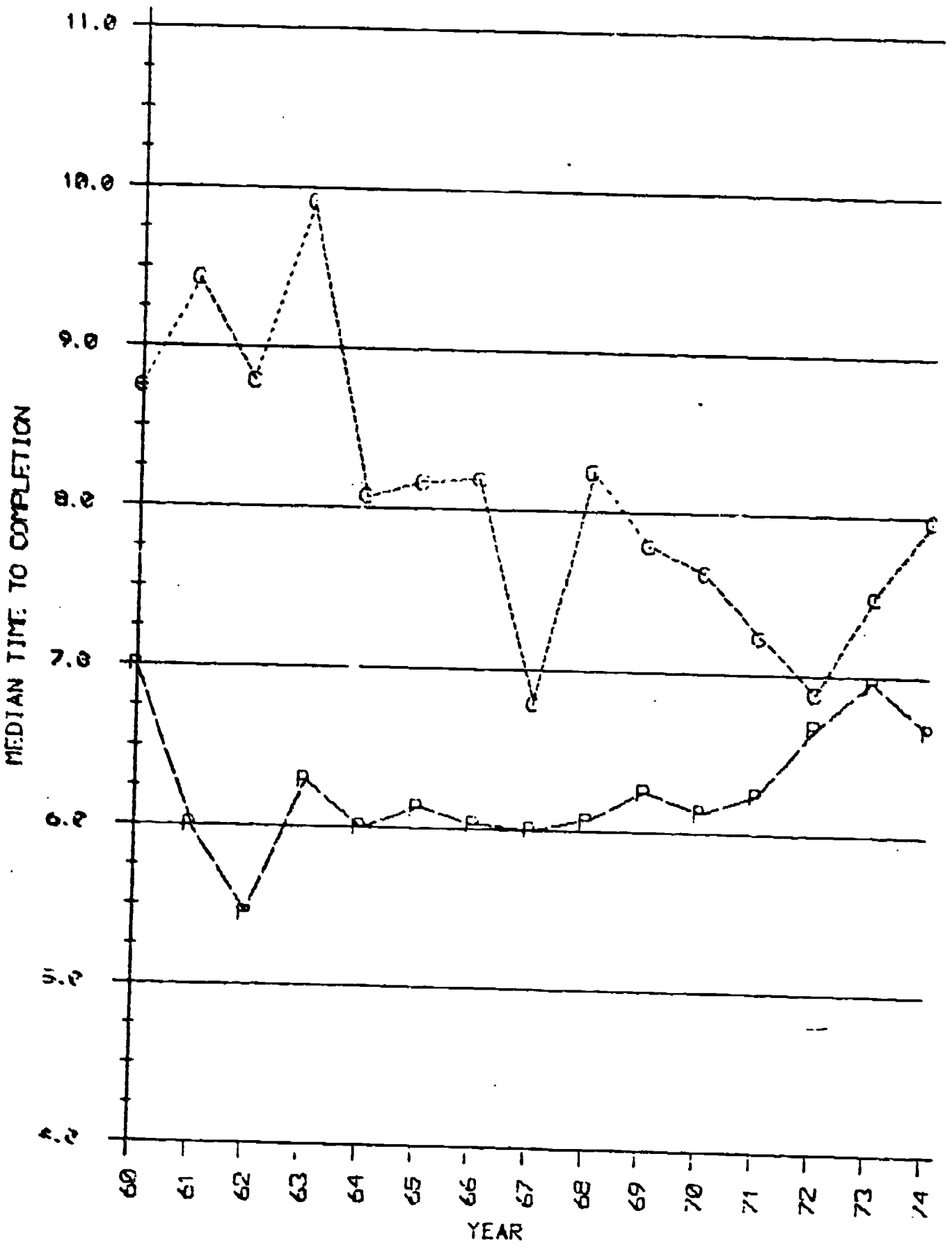
Figure 12: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Berkeley, 1960-1974.



---------- Princeton (P)

---------- Berkeley (B)

Figure 13: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Chicago, 1960-74



(P) Princeton

(C) Chicago

Figure 14: Cornell

Cornell cut its median time from over 8 years in the early 1960's to over 6 years by 1968, with subsequent data moving randomly between medians of 6 to 7 years. The major change in time to degree clearly predated FFGP, and the most one can say is that FFGP helped to maintain the lower time. No additional effect of FFGP is apparent. By the late 1960's - early 1970's, Cornell's performance was very close to Princeton's.

Figure 15: Harvard

Data for Harvard display considerable stability over the 15 years, moving randomly between 7 and 8 years. No unique effect of FFGP is revealed (or suggested) by the data.

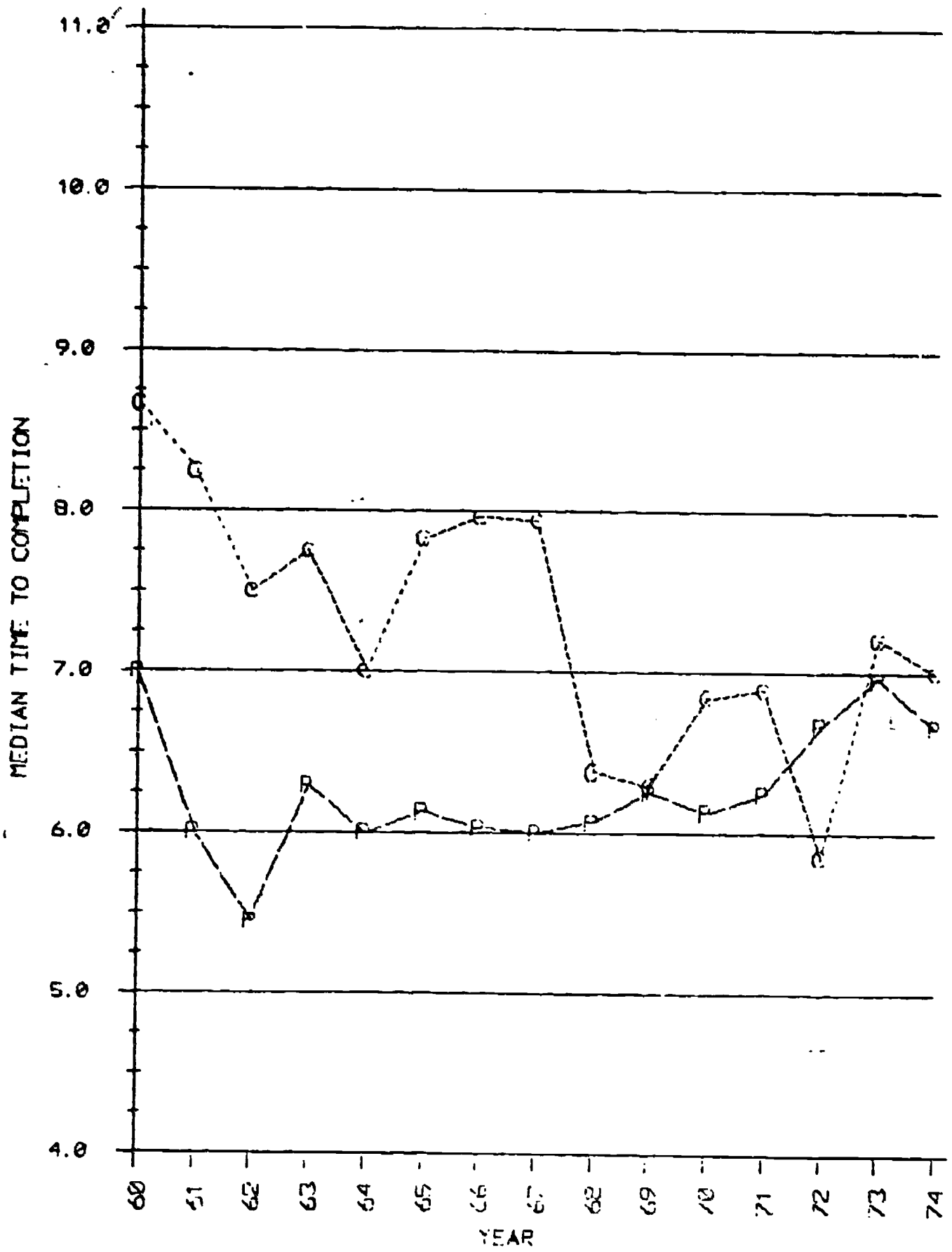
Figure 16: Michigan

The major change at Michigan occurred in the 1960's, as median time to degree was cut from over 9 years to roughly 7 years. During the FFGP years, no further decline occurred, and by 1973-74, the median had increased to nearly 8 years in the supported disciplines.

Figure 17: Pennsylvania

Pennsylvania displays a persistent tendency over the 15 years toward a reduced time to degree, the median falling from over 10 years in the early 1960's, to over 7 years by 1974. Data for the last 5 years (1970-1974) do show a steady drop in median time, a finding that suggests FFGP had an effect in the right direction, even if a 4.5 - 5.0 year norm was not achieved.

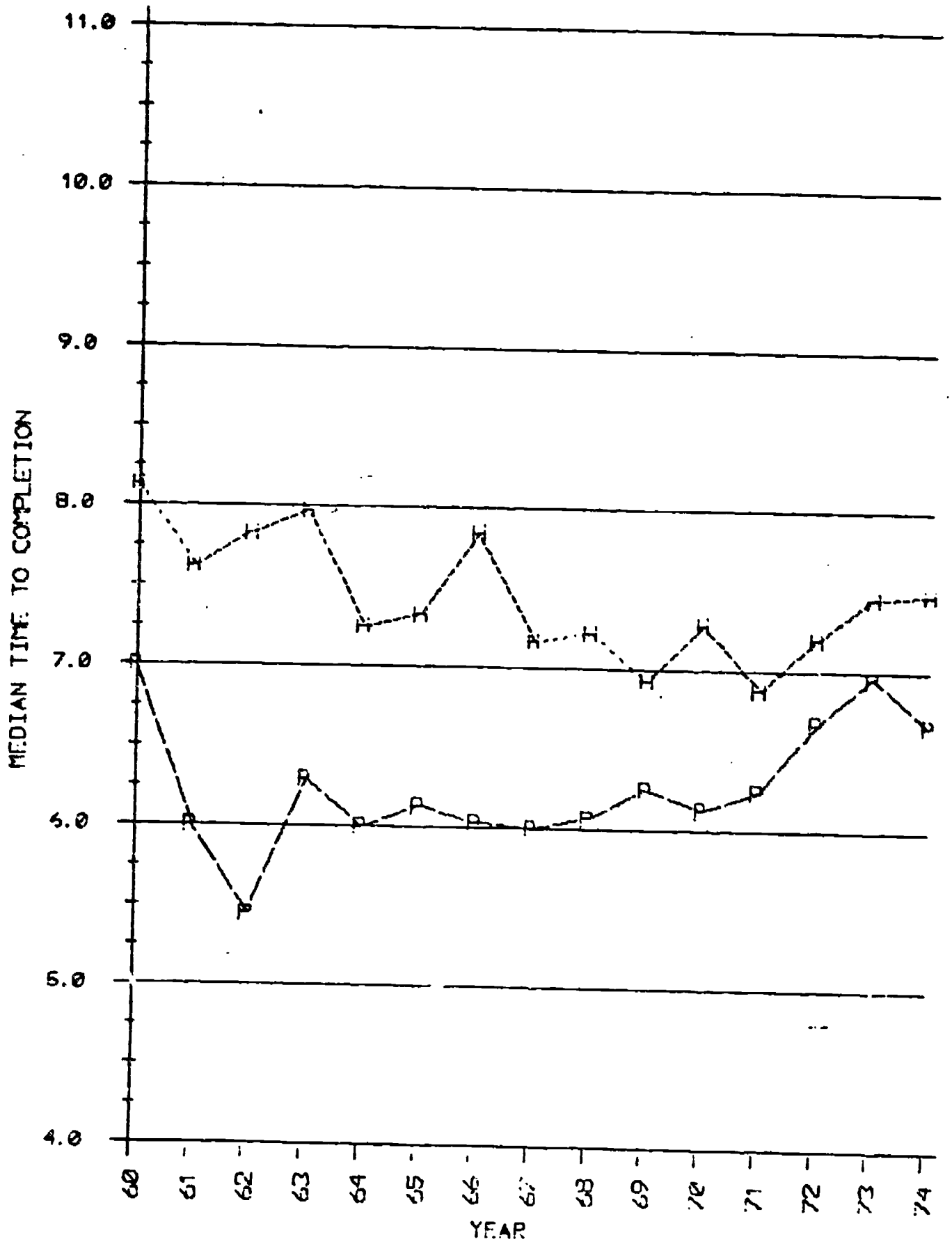
Figure 14: Median Time to Degree (Graduate Entry to PhD), FFCP-Supported Disciplines, Princeton and Cornell, 1960-74



---------- (P) Princeton

---------- (C) Cornell

Figure 15: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Harvard, 1960-1974



(P) Princeton

(H) Harvard

Figure 16: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Michigan, 1960-1974

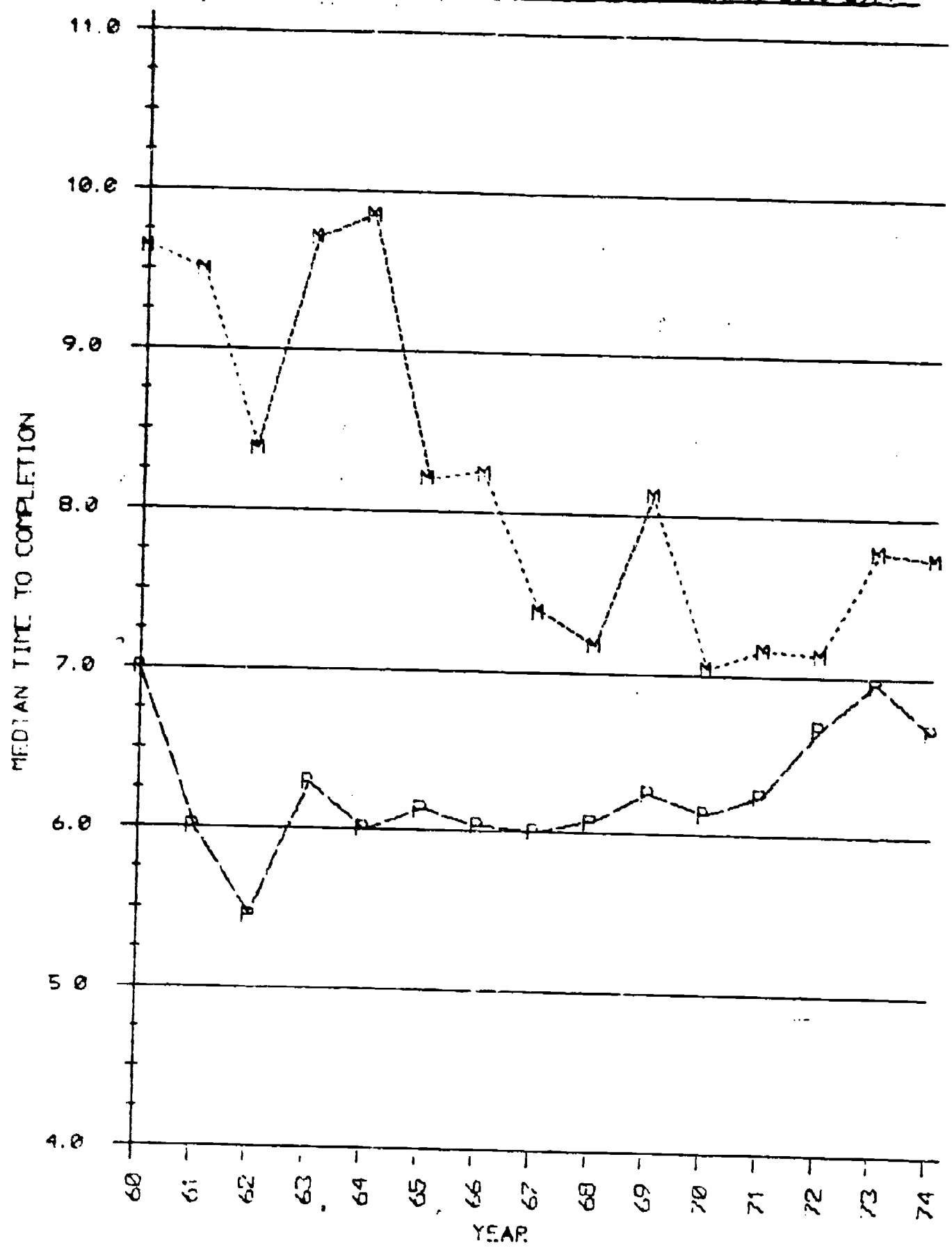
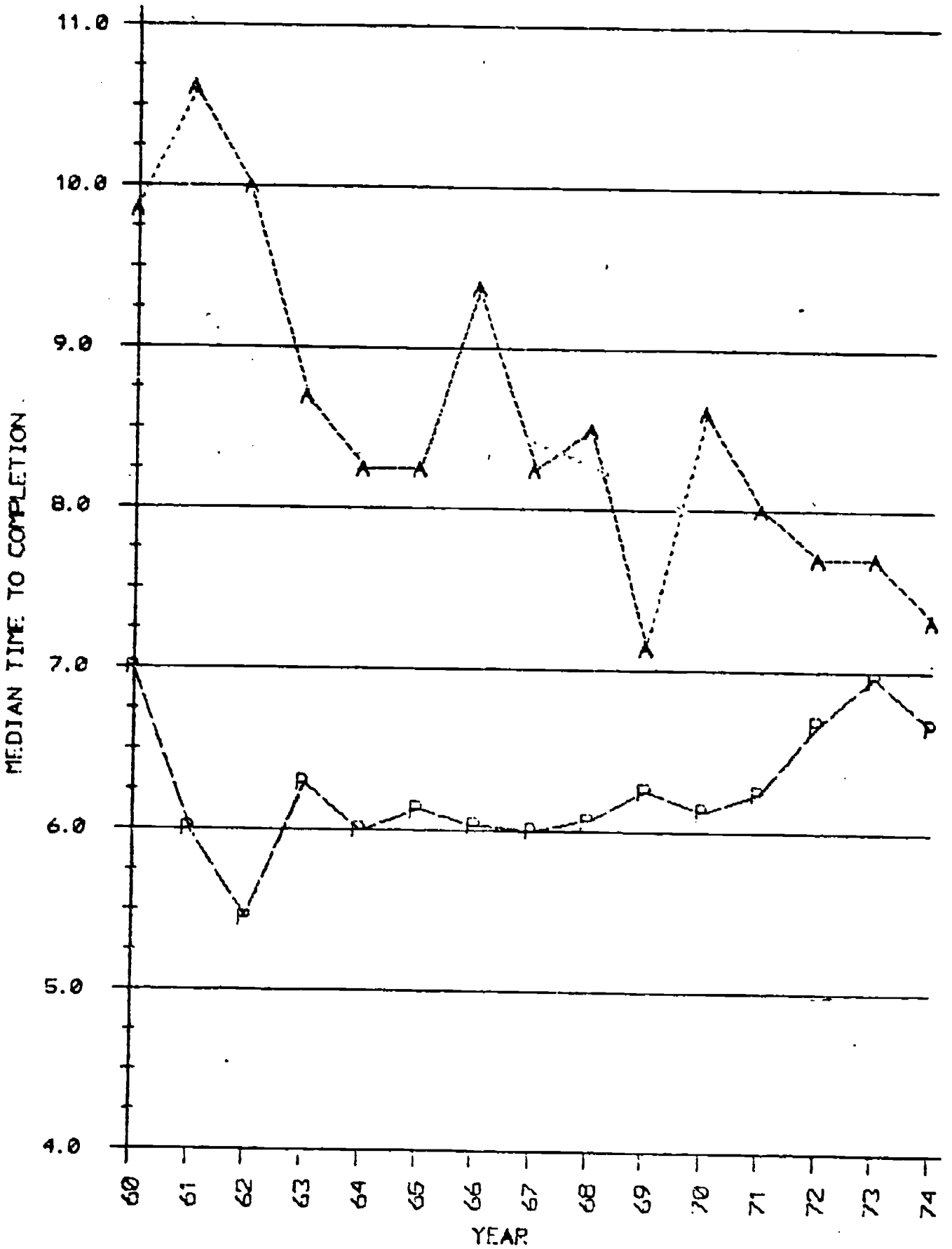


Figure 17: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Pennsylvania, 1960-1974.



---------- (P) Princeton

---------- (A) Pennsylvania

Figure 18: Stanford

The major change in performance at Stanford was complete by 1964, when the median fell to a level of 7 years, having been over 9 years in 1960. Since 1964, little change is evident, with the median zig-zagging between 7 and 7.5 years. The most one can say about the effect of FFGP on median time to degree is that Stanford's performance did not grow worse, as it did at several other universities in the early 1970's.

Figure 19: Wisconsin

In only one year (1966) did Wisconsin's performance fall outside a band of 7-8 years as the median time to PhD. No effect of FFGP can be read into these data.

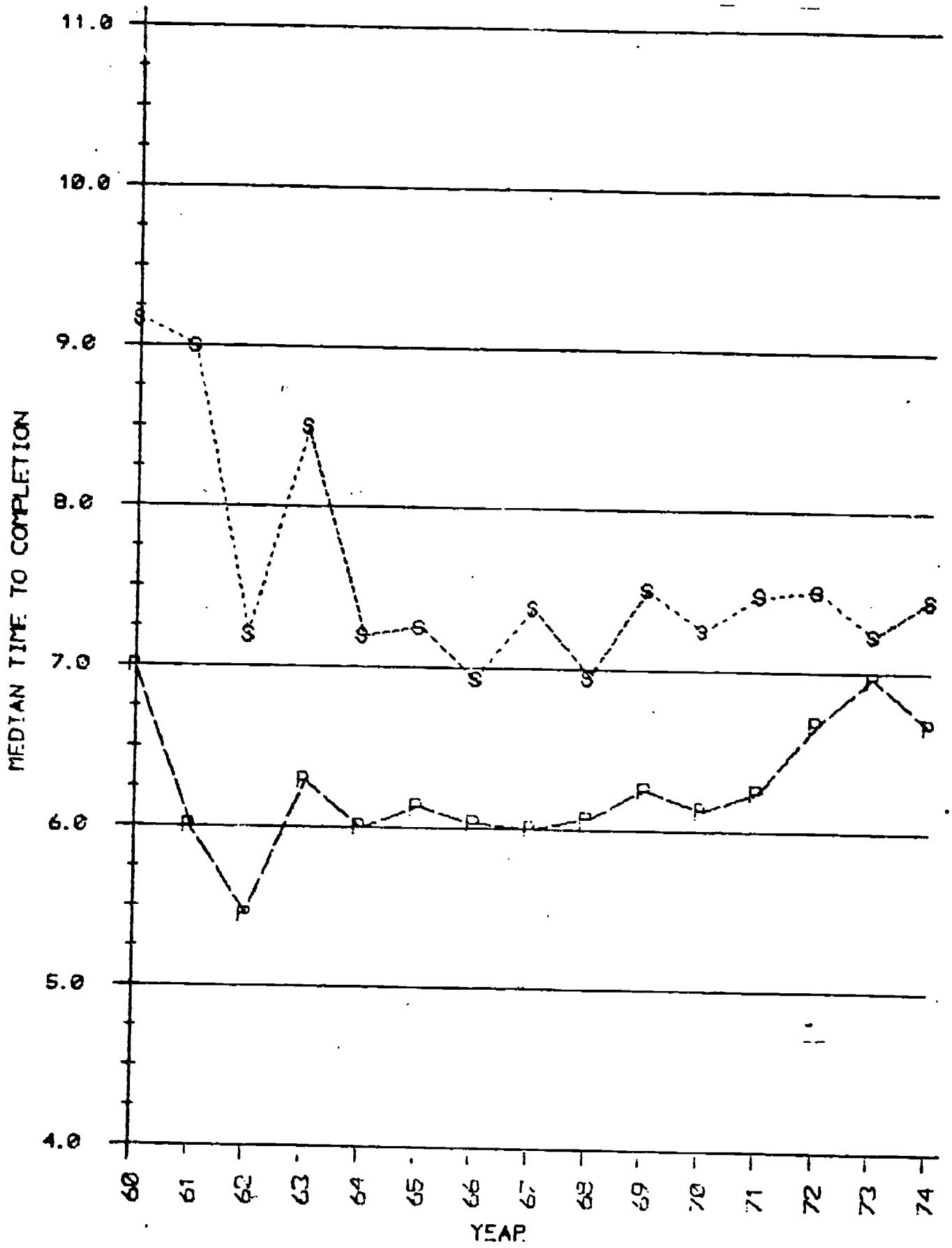
Figure 20: Yale

Yale's performance over the 15 years is the closest to Princeton's, with the median time consistently falling between 6 and 7 years. From 1968 forward, the two universities have very similar performance profiles on this measure. To the extent that any change can be noted at Yale, it would be that the last seven years (1968-74) were marked by a median of roughly 6.5 years, while the preceding eight years averaged slightly higher; however, no independent effect of FFGP is apparent.

Summary of Results in the 10 Universities

Analyzing the data by university revealed no clear successes with the program. To the extent any general pattern emerged, it was one of substantial reduction in time to degree occurring in the early and mid 1960's - well before FFGP -- followed by a tendency for median times to increase slightly in the early 1970's, when FFGP should have produced the opposite effect.

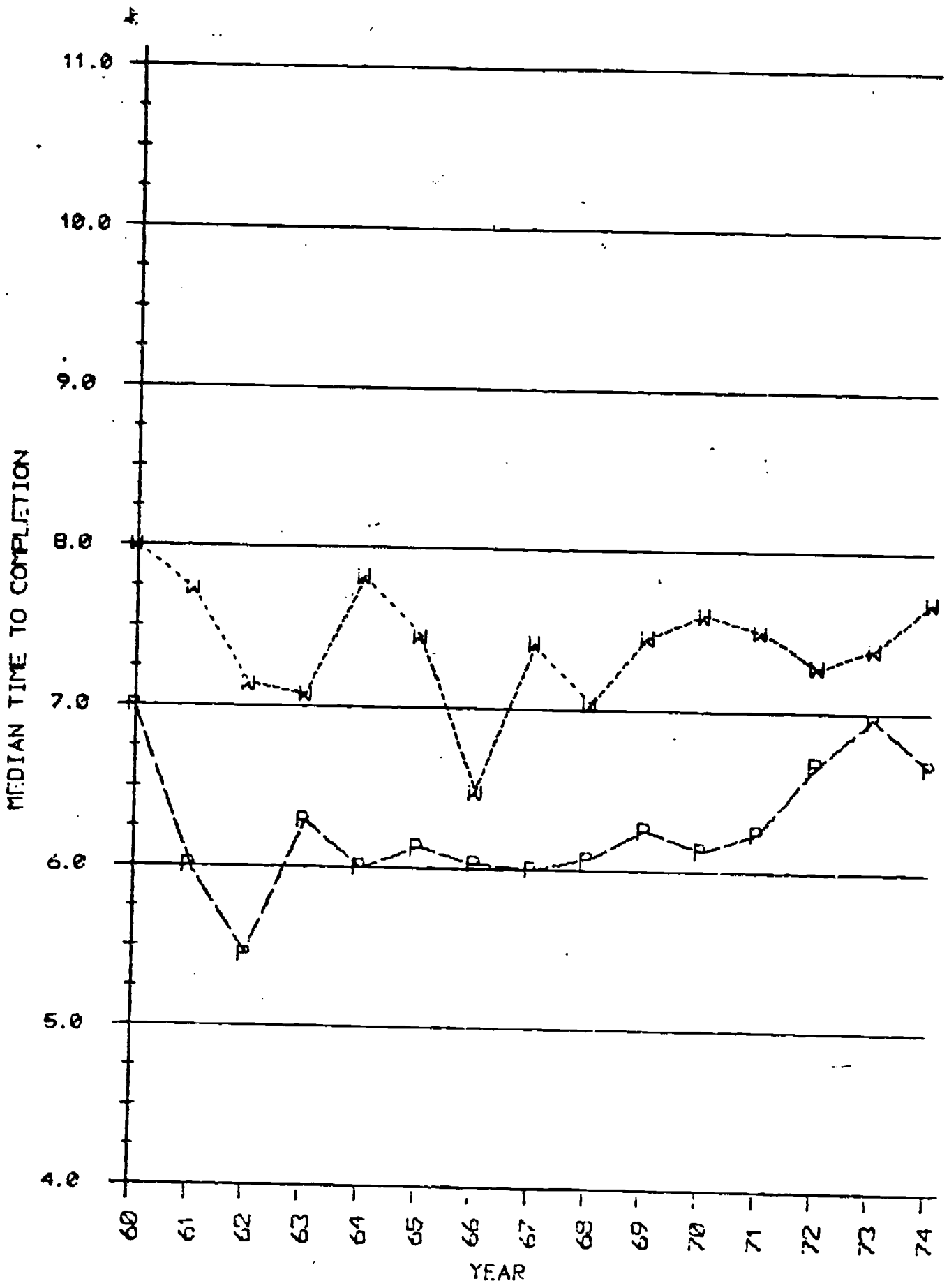
Figure 18: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Stanford, 1960-1974



(P) Princeton

(S) Stanford

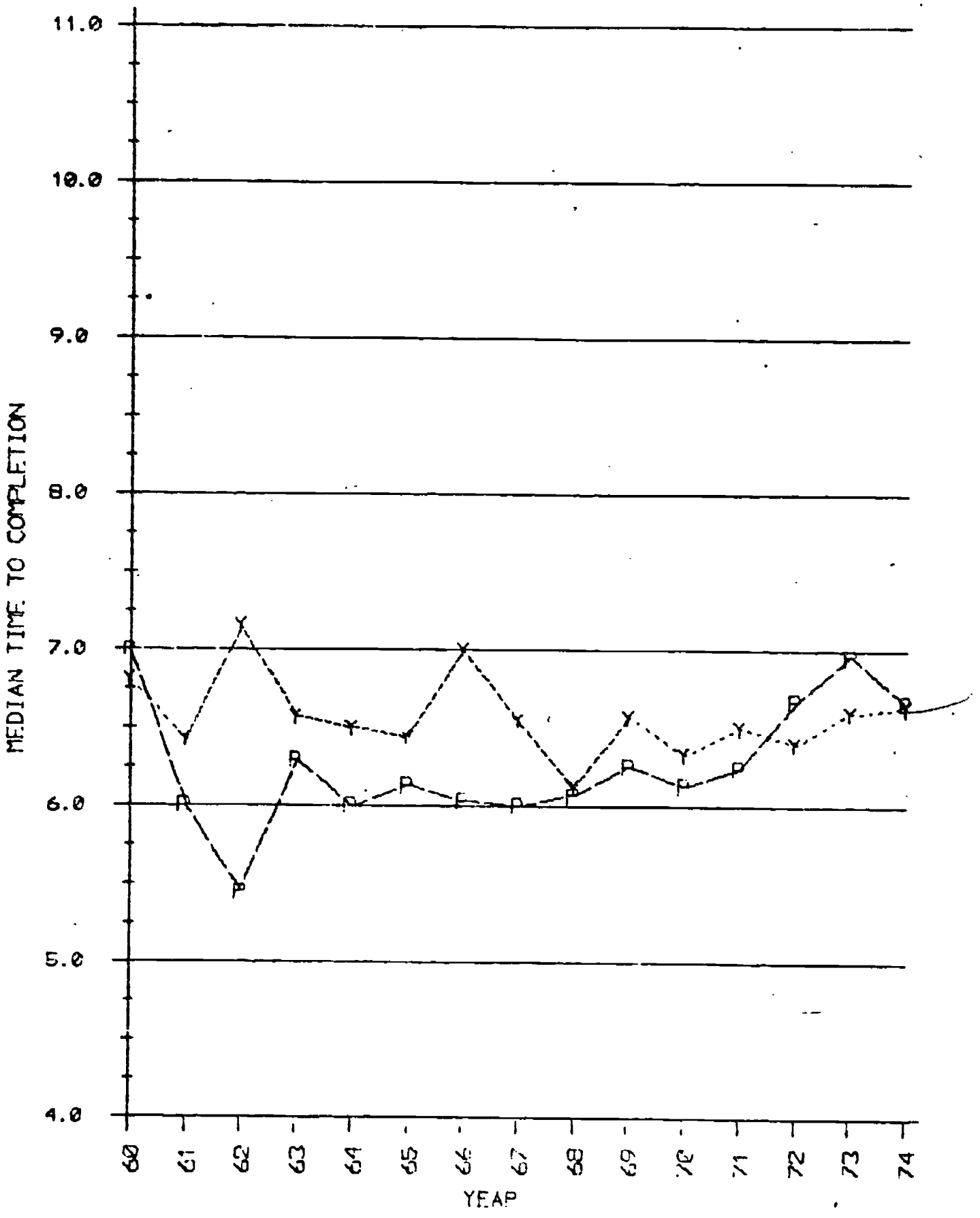
Figure 19: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Wisconsin, 1964-70



---------- (P) Princeton

---------- (W) Wisconsin

Figure 20: Median Time to Degree (Graduate Entry to PhD), FFGP-Supported Disciplines, Princeton and Yale, 1964-1970



---------- (P) Princeton

---------- (Y) Yale

Striking differences among universities were also apparent, a subject to be pursued in the next chapter.

* * * *

Three additional analyses end this chapter. First, data provided by the universities to the Ford Foundation are presented, since these cohort data provide a second assessment of the program's effects. Second, the relationships between elapsed and enrolled time are explored through simple regression techniques. Finally, attrition rates from the program are briefly discussed.

Cohort Analyses. University reports to the Foundation are the only source of cohort data on students supported under FFGP; unfortunately, the quality and accuracy of these data were not uniform, and in some instances it was not possible to make sense of the data. (The main problem seems to have been uncertainty regarding which students were actually on the program.) Data from five of the universities are presented below, in order to compare cohort results with the DRF analyses.

Stanford. Every entering student in the relevant disciplines at Stanford was considered to be on the program since all students were guaranteed four years of support upon admission. The status of 1967, 1968, and 1969 entering cohorts in November 1975 is presented in Table 4. Of the 346 entering students in the 1967 cohort, 36 percent had received a PhD eight years later, 35 percent had abondaned the program, while 29 percent still expected to receive the degree. The median time to degree for the cohort cannot be computed until the 101 students who still expected to receive degrees as of November 1975 have

Table 4: Status (in November 1975) of 1967, 1968, and 1969 Entering Graduate Cohorts Supported under FFCP at Stanford University

1967 Cohort	Time to Degree
125 Earned the PhD	29 PhD's in 4 years
120 Abandoned Degree	34 PhD's in 5 years
26 Registered 1974-75	24 PhD's in 6 years
75 Expected to get Degree but not registered in 1974-75	22 PhD's in 7 years
	16 PhD's in 8 years
346 in entering cohort	125 PhD's

1968 Cohort	Time to Degree
112 Earned the PhD	1 PhD in 2 years
109 Abandoned Degree	8 PhD's in 3 years
33 Registered 1974-75	30 PhD's in 4 years
75 Expected to get Degree but not registered in 1974-75	21 PhD's in 5 years
	34 PhD's in 6 years
	18 PhD's in 7 years
330 in entering cohort	112 PhD's

1969 Cohort	Time to Degree
88 Earned the PhD	1 PhD in 2 years
88 Abondoned Degree	9 PhD's in 3 years
53 Registered 1974-75	17 PhD's in 4 years
95 Expected to get degree but not registered in 1974-75	36 PhD's in 5 years
	25 PhD's in 6 years
324 in entering cohort	88 PhD's

either earned them or dropped out; we can, however, bracket the possibilities. If all 101 earn PhD's, then the total degrees earned by the cohort would equal 226, making the 113th degree awarded the median. Since 125 degrees had been awarded by November 1975, the median time to degree for the cohort would be 8 years. (From Table 4, we can see that the 113th degree was awarded in the 8th year.) Following the same reasoning, if between 50 and 93 additional degrees are earned, the cohort median will be 7 years, and if less than 50, the median will be 6 years. It seems highly likely that at least 50 more degrees will be awarded to members of this cohort (a total of 175 degrees from an entering group of 346 would represent a "yield" of roughly 50 percent); consequently, our best estimate of the median time to degree for this cohort would be 7 years, a figure that is consistent with the recent DRF data for Stanford (see Figure 18).

For the 1968 cohort, a median of 7 years would occur if at least 189 degrees are ultimately awarded, a "yield" of 57 percent. Similarly, for the 1969 cohort, a 7 year median would occur if at least 177 degrees are ultimately awarded, a "yield" of 55 percent. Both of these outcomes seem likely, suggesting that the DRF data serve as a reasonable proxy for cohort data at Stanford.

A more direct test of the effectiveness of FFGP is the percentage of entering students who had earned the degree within four years. At Stanford, this percentage for each of the first three cohorts was 8 percent, 12 percent, and 8 percent, while the percentage

completing within five years was 18 percent, 18 percent, and 19 percent. Clearly, the four year PhD remains an ideal achieved by very few, even with guaranteed support.

Cornell. Cohort data from Cornell were only provided through November 1973 (Table 5). From the 1967 cohort, 14 percent had earned the PhD within 4 years, and 25 percent had the degree within 5 years, higher proportions than at Stanford. The median for the cohort cannot exceed 6 years, since the number of potential degree recipients remaining is less than 72; a median of approximately 6 years seems likely. This estimate is consistent with recent median times computed for Cornell from DRF data (Figure 14), indicating that the two methods for computing median times to degree yield roughly similar figures at Cornell.

The 1968 cohort also produced 14 percent and 25 percent with degrees in four and five years respectively. With 69 students from this cohort still pursuing the degree as of November 1973, the cohort median will probably be about 6 years.

Yale. Data for the 1967, 1968, and 1969 entering cohorts at Yale are presented in Table 6. Unfortunately, Yale did not provide complete information on time to degree for its PhD recipients; for example, 122 students who entered in 1967 received degrees within 6 years, but of that number, the university did not report how many were earned in 4 and 5 years time. Based on the data, however, final cohort medians for all three groups are virtually certain to fall below 7 years, and will probably be about 6 years. The DRF data for Yale report a median of roughly 6.5 years since 1969 (Figure 20),

Table 5. Status (in November 1973) of 1967 and 1968 Entering Graduate Cohorts Supported under FFGP at Cornell University

1967 Cohort	Time to Degree
72 Awarded PhD	8 PhD's in 3 years
56 All but Dissertation	23 PhD's in 4 years
5 Enrolled	23 PhD's in 5 years
83 Abandoned Degree	18 PhD's in 6 years
216 in entering cohort	72 PhD's

1968 Cohort	Time to Degree
47 Awarded PhD	1 PhD in 2½ years
54 All but Dissertation	6 PhD's in 3 years
15 Enrolled	20 PhD's in 4 years
74 Abandoned Degree	20 PhD's in 5 years
190 in entering cohort	47 PhD's

Table 6. Status (in January 1975) of 1967, 1968, and 1969 Entering Graduate Cohorts Supported under FFGP at Yale University

1967 Cohort	Time to Degree
164 PhD's	
11 Now enrolled, working on degree	
84 Not registered but w king on degree	122 PhD's in 6 years
13 Transferred to other graduate and professional schools	42 PhD's in 7 years
82 Have given up graduate study	
354 in entering cohort	164 PhD's

1968 Cohort	Time to Degree
160 PhD's	
29 Now enrolled, working on degree	
147 Not registered, but working on degree	93 PhD's in 5 years
12 Transferred to other graduate and professional schools	67 PhD's in 6 years
91 Have given up graduate study	
439 in entering cohort	160 PhD's

1969 Cohort	Time to Degree
100 PhD's	
70 Now enrolled, working on degree	
105 Not registered, but working on degree	100 PhD's in 5 years
11 Transferred to other graduate and professional schools	
88 Have given up graduate study	
374 in entering cohort	

and thus may overstate the cohort median by approximately ½ year.

The 1968 and 1969 cohort data indicate that 21 percent and 27 percent of the respective entering groups at Yale earned the PhD within 5 years.

Michigan. Students at Michigan were not guaranteed 4 year support upon admission; instead, funds were awarded competitively to third years students who had completed the first two years "on-track." The status of the 567 FFGP awards at Michigan is reported in Table 7. The university did not report a distribution of time for those behind schedule, but these data do highlight a major stumbling block to rapid degree completion -- the dissertation. Under the Michigan program, awards were made to students who had completed their course work on schedule, and who were recommended for dissertation support by faculty who had observed the students' performance for two years. Uncertainty associated with the selection process should be much reduced when dealing with third year rather than first year students, and yet a majority were behind schedul The ability to predict which students will be able to produce ssertation in a reasonable amount of time is apparently subject to considerable uncertainty.

Pennsylvania. The data for Pennsylvania (Table 8) provide a good example of the problems confronting statistical evaluation of FFGP, given the non-experimental nature of the program. Unlike Stanford and Yale, where all entering students were supported, or Cornell, where over 80 percent were supported, at Pennsylvania, less

Table 7. Status (in Fall 1975) of Students Supported under FFGP at the University of Michigan

Number of PhD's awarded		246
on schedule	115	
behind schedule	131	
Number currently enrolled		304
on schedule	83	
behind schedule	221	
Abondoned program		17
Total awards		567

Table 8. Status (in November 1975) of the 1967 and 1968 Entering Graduate Cohorts Supported under FFGP at Pennsylvania

1967 Cohort	Time to Degree
70 PhD's awarded	18 PhD's within 4 years
38 Actively working on degree	17 PnD's within 5 years
97 Abandoned program	17 PhD's within 6 years
	14 PhD's within 7 years
	4 PhD's within 8 years
205 in entering cohort	70 PhD's

1968 Cohort	Time to Degree
40 PhD's awarded	23 PhD's within 4 years
23 Actively working on degree	11 PhD's within 5 years
53 Abandoned program	5 PhD's within 6 years
	1 PhD within 7 years
116 in entering cohort	40 PhD's

than 50 percent of each entering class were supported, and only data for that subset of students were reported to the Foundation. We have seen earlier (Figure 17) that median times to degree at Pennsylvania from the DRF never dropped below 7 years; however, cohort medians based on the subset of supported students (Table 8) will clearly be lower, probably 6 years for the 1967 cohort, and 5 years for the 1968 cohort. Since the DRF data diverge markedly from the cohort data for the subset of supported students, what are we to conclude?

First, where only a percentage of the entering class is fully supported, with awards distributed not randomly but on the basis of merit, the experience of that subset alone tells us very little about the impact of financial support on time to degree. Some humanities and social science graduate students have always managed to complete the degree in 4 to 5 years; where only a percentage of the entering class was supported (as at Pennsylvania), the necessary experimental design would have required comparable data on that same quality-ordered percentage of prior entering classes as the relevant comparison group. (Alternatively, the awards could have been distributed randomly among the entering class, allowing comparisons between supported and non-supported students.) In the absence of a proper experimental design, one cannot say anything definitive about the impact of financial support on time to degree, based on the data in Table 8. What one can say is that in 1967 the departments at Pennsylvania identified 205 "best-bets," put money on their heads, and eight years

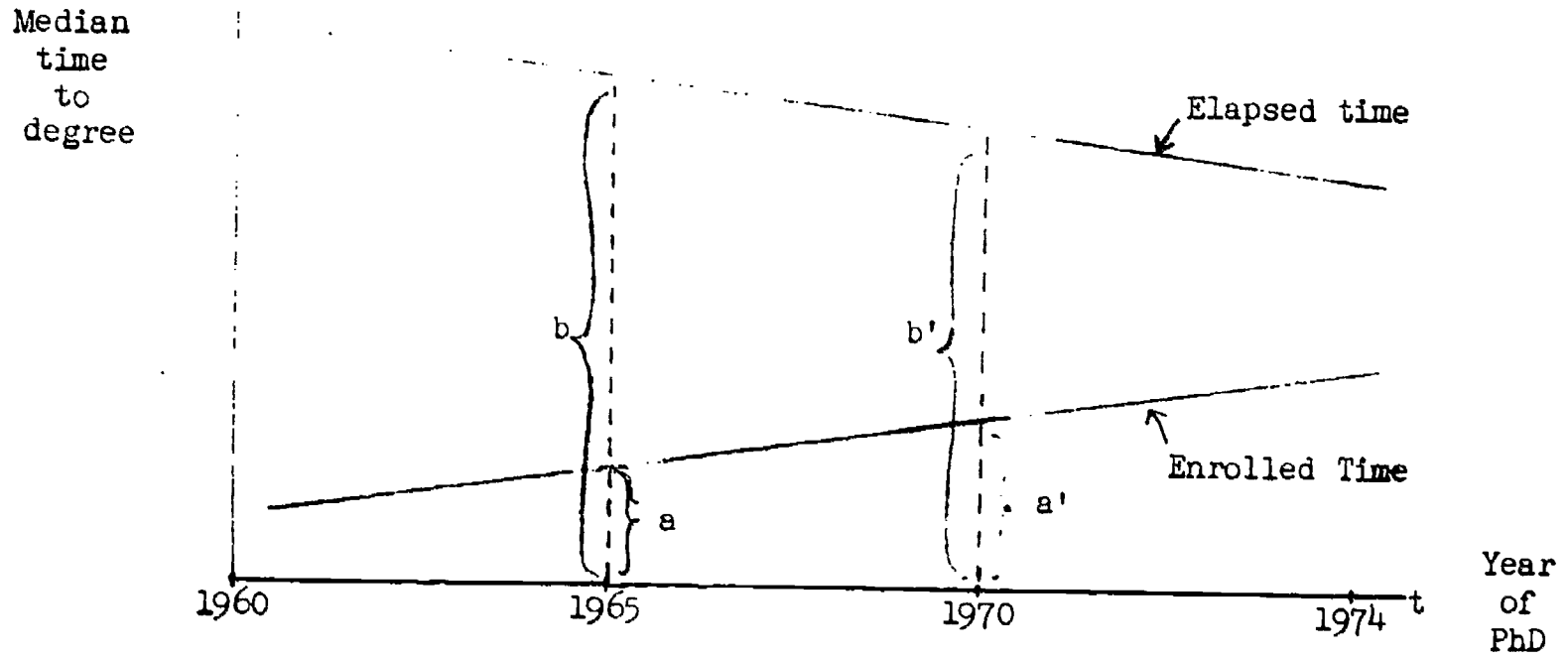
later, 35 of those students (17 percent) had earned degrees in 5 years or less, 70 students in all (34 percent) had earned degrees, 38 were still working, and nearly half of this select group -- 97 students -- had dropped out.

Second, given the selection bias and absence of an experimental design in those cases where only a subset of students was supported, the best test of the program is found in those universities where all students were guaranteed support -- Stanford, Yale, and Princeton. Usable cohort data from Princeton were not available, but we have examined the outcome of full, four-year support at Stanford and Yale (Tables 4 and 6). The results at these two universities should permanently put to rest the view that humanities and social science disciplines can become as efficient as the sciences in PhD production simply by providing them with equivalent amounts of graduate student financial support.

Third, it must be remembered that the Ford Foundation did not spend $41 million on an experiment; instead, the Foundation wanted to effect a permanent change in the performance and approach to graduate education in the humanities and social sciences. The acid test of FFGP, therefore, is whether any significant change in departmental performance (as measured by time to degree) occurred in response to the program. The data reviewed in this chapter are clear and unambiguous; the program failed in its central purpose. Reasons for the failure will be discussed in subsequent chapters.

Relationships between Elapsed and Enrolled Time

One way to think about the Ford Foundation program is that it attempted to reduce elapsed time to degree by modestly increasing enrolled time. With four years of support, students would be able to complete the dissertation in residence, rather than be forced to seek employment after comprehensive exams, and finish the dissertation on weekends and summers over several years. Since financial support for graduate students generally increased during the 1960's, topped-off by the Ford Foundation grants at the end of the decade, one might hypothesize that the following relationship would hold:



Consider two groups of students, those who received PhD's in 1965 and in 1970. The hypothesis is that the first group had a shorter enrolled time ($a < a'$), and consequently a longer elapsed time ($b > b'$). The implied functional relationship is:

Median Elapsed Time = f (Median Enrolled time)

where an increase in enrolled time causes a decrease in elapsed time. The Ford Foundation program was based implicitly on this relationship, and in particular, on the limiting case in which enrolled time equals elapsed time.

Data from the DRF were used to test this relationship in each of the 10 disciplines covered by this study. Fifteen observations were available for each discipline, and ordinary least square regressions were applied to the conventional linear model.[1] Results for the 10 disciplines are reported in Table 9.

[1] The regression model was MLT = a + b MET + u, where MLT = Median Elapsed Time, MET = Median Enrolled Time.

Coefficients for the independent variable (median enrolled time) were statistically significant in seven disciplines (the first seven listed in Table 9), but only in the case of economics was the relationship as hypothesized, i.e., coefficient negative. In the other six cases, the relation was reversed, and longer enrolled times were associated with longer elapsed times. All five of the humanities disciplines followed this latter pattern.

Table 9. Estimates of the Relationship Between Elapsed Time and Enrolled Time, 10 Disciplines

Dependent Variable (Median Elapsed Time)	Constant	Independent Variable (Median Enrolled Time)
Economics	20.7 (7.80)*	-2.88 (5.19)*
English	-3.70 (0.84)	+2.09 (2.54)
Romance Languages	0.20 (0.39)	+1.40 (13.98)
Philosophy	0.40 (0.22)	+1.28 (3.68)
German	0.26 (0.47)	+1.35 (12.04)
Classics	0.67 (0.45)	+1.21 (4.30)
Sociology	0.75 (0.26)	+1.21 (2.49)
History	7.61 (5.43)	0.02 (0.09)
Anthropology	9.61 (3.09)	0.28 (0.52)
Political Science	7.11 (4.52)	0.08 (0.27)

* Numbers in parentheses are t statistics.

Although necessarily speculative, an interesting explanation for these results can be offered. Of the 10 fields, only economics has come to resemble the physical sciences in the organization and method of graduate education. Dissertations are increasingly done as part of a funded research project, involving faculty and several graduate students. An additional year spent on campus can be productively devoted to completing the dissertation, in a social setting that is supportive of that effort. The research environment that has long been the key to successful dissertations in fields such as chemistry and physics has been emulated in economics to a greater degree than in any of the other 9 disciplines.

By contrast, doctoral work in the humanities is not organized around group research projects, remaining instead the lonely exercise of solitary scholars. In such fields, an extra year on campus may fail to be productive, for much of the student's time may be spent serving as a teaching assistant or in other activities that do not contribute to completing the dissertation. The data in Table 9 suggest that, on average, every additional year of enrolled time in the humanities adds between one and two years to total elapsed time. For example, in philosophy, median elapsed time (MLT) = 1.28 X median enrolled time (MET),[/] yielding

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/ The constant is not significantly different from zero.

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the following results:

MET	MLT
4 years	5 years
5 years	$6\frac{1}{4}$ years
6 years	$7\frac{1}{2}$ years
7 years	$8\frac{3}{4}$ years

Note also that the three fields that showed no systematic relationship between elapsed and enrolled time were social sciences, where the research style of the sciences has made inroads, but not to the same degree as in economics. Only sociology broke this pattern, displaying the same relationship between elapsed and enrolled time as the five humanities disciplines.

I do not think that too much can (or should) be made of this analysis; however, it is intriguing to note that the systematic relationships present in the data do lend themselves to a plausible explanation. As the site visits made clear, the nature and organization of graduate education in the various disciplines have much more to do with time to degree and attrition than does the amount of money available to support students. The present analysis, although only suggestive, is consistent with that observation.

A Note on Attrition

The cohort data in Tables 4-8 demonstrate clearly that attrition from doctoral programs remained high, even among the select group that received guaranteed four year support. Attrition rates of 50 percent or more would be a scandal in any professional school, but seem to be accepted in doctoral education as part of the natural order. Berelson's discussion of the topic was brief, and his attitude complacent (Berelson, pp. 167-171); he did not view attrition as a particularly serious problem.

This attitude obviously prevailed in FFGP, for attrition was not an explicit focus of the program. (Of course, it was reasonable to assume that reforms to reduce the time to degree would also cut down on attrition.)

I have written extensively on the subject of attrition elsewhere,[1] and

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[1] David W. Breneman, The PhD Production Process: A Study of Departmental Behavior, unpublished PhD dissertation, University of California, Berkeley, 1970.

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in my view , the emphasis of FFGP was misplaced. Attrition, I believe, is a more severe problem than time to degree, and an opportunity was lost under FFGP to explore ways in which attrition could be reduced.

At the very least, it is sobering to consider that a substantial part of the $152.5 million of student support under FFGP was spent on students who did not receive degrees. Since attrition rates remained high even when four years of support was guaranteed, more cost effective ways to allocate fellowship money surely exist. Money spent on entering students carries the greatest risk of loss, and can only be justified if the principal purpose is recruitment. Measured in terms of dollar outlay per PhD produced, I believe that final figures, if collected, would show that Michigan and Wisconsin ran the most cost-effective programs, since FFGP awards were not made to first or second year students.

Chapter III THE OUTCOMES: SITE VISITS

This chapter presents findings from site visits conducted at each of the 10 supported universities. Our purpose ir making the visits was to "get behind the numbers" in order to understand how the program was implemented on the several campuses, and why it had so little effect. Several common themes emerged fro: the 80+ interviews, and these are presented first, followed by brief accounts for each university.

Common Themes

(1) Although there were exceptions, the vast majority of faculty and administrators agreed that the timing of FFGP could hardly have been worse. Within two years of its start, many of the key assumptions on which the program was based no longer held; the labor market for college teachers was clearly shifting toward excess supply, and federal fellowship programs were being dismantled, not expanded. One of the major justifications for the program -- the shortage of college teachers -- was undermined, and the motivation of faculty and students fell victim to that change. By 1970, the program no longer had a valid purpose in the eyes of most faculty, and they lost whatever interest they may have had in the program's success.

The severe disruption of university life caused by the war in Vietnam, and the related radical attack by students on all aspects of established society that so dominated the late 1960's - early 1970's, also helped to doom the program. In those heady and riot-torn years, who could have cared about an orderly attempt to produce Ph.D.'s quickly and efficiently? The emotional energy of faculty and students was concentrated elsewhere,

and this was particularly true at leading universities and among faculty and graduate students in the humanities and social sciences. One need only remember the late 1960's headlines from Berkeley, Cambridge, Madison, Ithaca, and New Haven, to realize that FFGP did not have a chance in that environment. (Of course, the outlines of campus strikes and pitched battles with police were only dimly visible in 1966, when the program was being planned.)

The timing also suffered in that financial support for graduate education was still abundant in 1967, and many faculty viewed FFGP as just another program in a seemingly endless string of grants to universities. The attitude on some campuses was arrogant, as if the grants were little more than the proper tribute of a grateful society. Seven years later, the last payments of Foundation money coincided with the end of most federal support programs, giving rise to further complaints about the bad timing of FFGP. The Foundation would have had greater leverage with the grants had the awards been made either in 1960 or in 1975, when they would have loomed larger and been more appreciated.

(2) The influence of the changing labor market was mentioned in virtually every interview as a major cause for the program's failure. Most faculty think that students slowed down in their work as the labor market weakened, in order to postpone the inevitable - but painful - plunge into the pool of unappreciated and unwanted job-seekers. In recent years, furthermore, one had little hope for a job without the degree in hand, and a publication or two (or a book stemming from the dissertation) was also helpful. It is widely believed that these changing market forces produced

an incentive for students to spend more time writing better and more polished dissertations, hence slowing down time to degree.

There is a certain irony to these arguments, since the booming market of the mid 1960's was alleged at that time to be a major cause of Ph.D. "stretch-out," as students were lured away from graduate school before they could finish their dissertations. One of the ways FFGP was supposed to work was by reducing the financial incentive to leave campus early, i.e., by increasing enrolled time, the program would reduce elapsed time. Similarly, during our interviews, a few faculty members argued that the declining market (and prospects for further decline) should have increased the incentive to finish up quickly before the market turned even more sour. One can argue plausibly on both sides of this issue, although the data presented in Chapter II (Figures 1-20) generally support the view that time to degree is shortened when labor markets are strong, and stretches out when markets are weak. Without having seen these data, most faculty share this view.

(3) One of the ostensible goals of FFGP was to improve the preparation of graduate students for teaching careers by incorporating teaching experience into the graduate program in a planned and supervised fashion. It was clear, however, from our interviews that this objective was either misunderstood or simply ignored by the vast majority of departments. We found no evidence of any carefully designed or well conceived attempts to make the apprentice teaching experience more valuable or productive. (Where serious interest in teacher preparation was present, FFGP was not the cause.) The major effect of the additional money was to reduce the

amount of student teaching done, and for some students, to eliminate such experience entirely.

(4) Economics is the only discipline of the 10 we included in this study where wide agreement exists within the profession that a four year Ph.D. is both desirable and feasible. In virtually all departments, the program is organized around two years of course work and two years for the dissertation. In the other 9 disciplines, FFGP seems to have strengthened most faculty members in their belief that a four year degree is educationally unsound. (Faculty at Princeton University represent the major exception to this statement, and we encountered individual faculty members elsewhere who continue to support the concept of a four year degree. The overwhelming weight of opinion, however, was negative.)

Among the common reasons given to justify five (or more) years as a minimum for the Ph.D. were:

(a) In the social sciences, particularly anthropology and some branches of sociology and political science, a year or more of field work is often required, and course work, field work, and dissertation cannot be completed in four years.

(b) In history, access to archival material is essential, and for other than American historians, this often requires travel abroad. Good command of one or more foreign languages is also a common requirement, and many students lack such skills when they begin graduate study. History, as one scholar put it, is a "ruminative discipline," and cannot be rushed.

(c) In the languages, there is a large and reasonably fixed body of literature that must be mastered by anyone who would strive

for the Ph.D., and the compromise necessary to turn people out in four years comes at too great a cost in quality.

None of these observations is new; each of these considerations would clearly have been at issue in 1967 when the program was started. One concludes that some departments accepted the Foundation's money knowing full well that no major change in curriculum or in time to degree would occur. This possibility could have been reduced if the Foundation had included departmental representatives in the negotiations, or if effective check points had been built into the program, or if clear lines of accountability had been established; none of these measures was taken.

One effect of the program is clear. There are now a great many faculty members in leading humanities and social science departments who are firmly convinced that a four year degree in their disciplines is unsound. Whereas before FFGP, they may have held this belief, they now cite their experiences under the program as proof positive. For that reason, future reform in these disciplines will probably be harder.

(5) There was a general sense in many of the departments that guaranteeing students four years of support upon entrance produced a number of bad effects, and was not a good strategy. Where all entering students could not be supported, problems of equity and "second class citizenship" arose, particularly when students without support outperformed those with support. For some students, guaranteed support eliminated the necessary spur of competition, and they tended to scrape by, knowing their

support was assured, and not contingent upon high standards of performance. In other instances, faculty we interviewed thought that the four year guarantee actually slowed students down; "With four years underwritten in advance, why rush?" While all departments now are concerned by the lack of fellowship money, few would argue for a return to the four year guarantee upon admission.

(6) The dissertation is clearly the part of doctoral programs that renders student performance unpredictable. Spurred by FFGP, many departments did establish more regular patterns for course work and examinations; requirements were set forth in writing that most students could be expected to complete in 2-3 years. The major achievement of FFGP occurred in this part of the program. Nothing much was done, however, to improve performance on the dissertation, nor was much attempted. We found no evidence that dissertation requirements had been changed, nor that imaginative ways to involve students and faculty jointly in research had been explored. With this critical part of the doctoral program left untouched, time to degree and attrition were not likely to change by much.

(7) The program suffered in numerous instances from poor communication between Foundation personnel and the deans, between deans and department chairmen, and between chairmen and other faculty and students. The four meetings at Foundation headquarters in New York City, for example, gave rise to several misunderstandings, or apprehensions, about the Foundation's expectations. At one meeting, a dean asked what could be done if the university

were not able to match the For money as outlined in the proposal. One of the Foundation officers answered abruptly that if that happened, the Foundation money would have to be returned. This offhand comment unnerved several of the deans (ersions of this story were told to me at several campuses, so the incident obviously had an impact), and several deans concluded that Foundation officials weren't aware of the financial problems on the campus, caused by cutbacks in federal support. Afraid that further discussion of possible program changes might jeopardize the grants, the deans were reluctant to propose alternatives to the Foundation. By 1970, all parties knew that the program was poorly timed and that changes were called for, but instead of open discussion, everyone kept quiet and rode the grants through to completion. An opportunity to think creatively about changing the program was lost, in part because of the deans' wariness toward the Foundation.

On the campuses, the program was subject to numerous misunderstandings and misinterpretations. Many faculty members thought that local regulations imposed by the dean were required by the Foundation; in several cases, the dean encouraged that belief. One of the Foundation's few stipulations - that the recipients not be singled out as a select group - was violated at several universities, in large measure, I believe, because the faculty did not understand the reason for the Foundation's policy. Whereas the Foundation was trying to encourage a new approach to doctoral education symbolized by the four year Ph.D., many faculty members interpreted the program as an experiment to test the effect of financial support on time to degree, while others simply viewed it as another fellowship program. Other examples of this

problem will be noted when we discuss individual universities; the main point, however, is that the program was plagued by various misunderstandings regarding its purpose and procedures, and these misunderstandings contributed in various ways to the program's failure.

(8) Finally, many faculty members said that the program helped their department to recruit better graduate students than before (although this is hard to understand, since their major competitors also had Ford grants). A commonly expressed worry now is that graduate education, particularly in the humanities, may be limited primarily to the sons and daughters of the wealthy, and that such a trend would be harmful to the vitality and diversity of the disciplines.

We turn now to brief comments on the experience with the program at each of the 10 universities.

Berkeley. Eight disciplines were included under the Ford grant at Berkeley (English, Comparative Literature, Philosophy, History, Economics, Sociology, Anthropology, and Political Science), and these were chosen by the Dean and Chancellor as strong departments that were willing to develop programs that could be completed in "five years or less." (Berkeley apparently negotiated a separate five year target with the Foundation). The money was used by departments to recruit Special Career Fellows, the Berkeley name for the program.

At Berkeley, if a Special Career Fellow dropped out, the remaining stipend money reverted to the Dean's office for assignment elsewhere. Several faculty members commented that this policy was flawed in that there was no incentive to counsel marginal students with Ford support out of the program, since the money and enrollment count would be lost to the department.

The guaranteed support also operated as an incentive to the students to stay in the program, even when their chances for finishing looked dim. The result was that many students stayed on too long, and never received degrees. Removing stipend money from a department when a student dropped out, however, was the most potent sanction that the dean had at his disposal.

Of the six departments that we visited, only two (Political Science and Sociology) made any curriculum changes in response to FFGP. The Political Science department experimented with a five year program based on individualized instruction, and dropped it quickly as "educationally unsound." The department is now of the opinion that six - and preferably seven - years should be the norm for the Ph.D. Sociology worked out a more structured program and formed a committee to track student progress, but the program foundered because of the disruptive effects of the Vietnam era. "The program was an attempt to impose discipline at a time when all discipline was being challenged."

The concept of a four (or five) year norm did not catch on at Berkeley except in economics, where that trend was nation-wide. Other participating departments now consider five to seven years as both reasonable and proper, and some departments never seriously tried for a more rapid degree. As one observer at Berkeley noted, "History didn't think it could be done, made no effort to do it, and didn't do it. Philosophy thought it could be done, made no effort to do it, and didn't do it."

Several administrators argued that the program was based on a false premise; in their view, attrition, not time to degree, was (and is) the

real problem. There was also some bitterness that the Foundation would not allow a no-cost extension to the grant. That this issue was not checked out with the Foundation until too late, I attribute in part to the unfortunate tendency, noted earlier, not to talk openly with Foundation staff about this troubled program.

In the eyes of many faculty, the program never had a chance for success at Berkeley because of the state of siege that prevailed on that campus during much of those seven years. As a graduate student there myself from 1966-1970, I can attest to the truth of that comment.

Chicago. The University of Chicago, like Berkeley, also limited the participating departments to eight - Classics, English, Romance Languages, German, Philosophy, Economics, Political Science, and History. These eight departments were selected by the administration (Edward Levi, Robert Streeter, and Gale Johnson) on the basis of quality and willingness to try to achieve the four year Ph.D. (Several Chicago departments refused to enter the program, not agreeing with its purpose.) Since the Ford dollars in these two universities were concentrated in a much smaller number of departments, one might have expected better results at Berkeley and Chicago than elsewhere; the data in Chapter II, however, do not support this hypothesis.

At Chicago, the program ran for an eighth year, since the speed with which the grant was made in 1967 prevented the University from implementing the program effectively until 1968. Originally, the University had planned to use the money for third and fourth year fellowships, but this policy was changed early in the program to allow support for first and second year students as well. The change was made largely for competitive reasons to

enhance Chicago's recruiting, but a secondary factor was the greater ease of finding other sources of support for third and fourth year students. After the fact, several of the faculty we interviewed were critical of the support given to entering students, since it was very difficult to identify the best students on the basis of undergraduate credentials.

The principal reform enacted at Chicago was the specification of definite deadlines for the several stages of the program - course work, examinations, dissertation. Before FFGP, most departments did not enforce any time requirements; after it, they did (although with numerous exceptions made for individual students). The University requires each doctoral student to register for 27 courses, including the dissertation in that number; before FFGP, many departments had interpreted the rule to mean 27 formal courses, not counting any dissertation work. FFGP provided a stimulus for some rationalization and clarification of these requirements, although we did not encounter any striking instances of curriculum reform. In the Political Science department, for example, deadlines were imposed on the existing doctoral program, and students were pressured to complete an unchanged set of requirements in a more rapid time. Not surprisingly, this policy caused great unhappiness in the department among both students and faculty, and FFGP is viewed with considerable bitterness in that department.(We had been told earlier that Political Science had given the deans the most trouble under the program, by not taking the commitments seriously.) In this instance, the department had no intention of altering the requirements for the degree, and simply tried (unsuccessfully) to pressure students into a faster pace. It was unclear to us whether the department simply failed to understand that curriculum

change was the key to the program, or whether it was assumed that better support plus specified deadlines would do the trick. This example typifies the misunderstandings and failures of the program as it was implemented on many of the campuses. Although the objectives were clear and understood (and even that level of agreement was by no means universal), there was a failure to agree in advance on the changes that would be required to meet those objectives. Thus the dean blamed the department for failing to meet its "commitments," while the department blamed the program for being misguided and educationally unsound.

Another area of conflict between program and university objectives at Chicago was the expectation that students be given systematic and supervised teaching experience. It has been a long-standing policy at Chicago not to use graduate students as teaching assistants, and the President, Edward Levi, was not about to change that policy in response to the Foundation's program. Consequently, there simply was no teaching experience built into the program; the relatively small sums reported to the Foundation under the teaching assistant heading represented estimated earnings of graduate students who taught part-time at other colleges in Chicago.

As was true at Berkeley, unexpended stipends of students who dropped out reverted back to the dean for reallocation. This policy gave rise to the same disincentive to counsel marginal students out of the program, hence prolonging a certain amount of inevitable attrition. Prof. Peter Dembrowski of the Department of Romance Languages added a further twist to the "problems" caused by four year support; students who did drop out (or who wanted to drop out) were deprived of a major face-saving explanation, i.e., financial difficulty. He claimed that there was a noticeable increase in anxiety among the

fully supported students, as well as several nervous breakdowns within their ranks. Affluence apparently creates its own perverse problems; Dembrowski was not alone in his sense that the money lavished on graduate education in the 1960's had its darker side.

Cornell. Graduate Dean W. D. Cooke viewed the Ford grant as an opportunity to learn more about the selection and financing of graduate students, and was critical of the other universities for taking the attitude that FFGP was just another fellowship program. Consequently, while Cooke was dean, detailed records on the entering students were kept, and analyses were made of the factors that influence success in the program. In this connection, Cooke understood one of the Foundation objectives to have been reduced attrition, although he seems to have been alone in that perception.

All humanities and social science departments were eligible for the program, and each turned in a revised curriculum outlining the steps to a four year degree. The dissertation proved to be the major obstacle to meeting this objective. Cooke met annually with the field representative of each department to review progress under the program, and in our six departmental interviews, we found a better understanding of the program among faculty than at many of the other universities. With the exception of the History department, there seemed to be general acceptance of the value (at least in theory) of the four year Ph.D. On the other hand, Cooke and William Lambert, the current dean, did say that Cornell would probably be unwilling to accept further money if it were tied to a four year degree requirement. Presumably this comment reflects their awareness of the dean's limited ability to influence the time to degree.

Many of the Cornell departments used the money to expand total enrollments and to improve the quality of entering students. The inability to forecast performance of students once enrolled was keenly felt, however, and several departments wished that they had had the flexibility to reallocate support among students in the second and subsequent years of the program.

Our interview with two professors from the History department was particularly interesting since these gentlemen were very candid about the power relationships within the University and their effect on the Ford program. The majority of the History faculty thought that a four year degree program made no sense and could not be accomplished; only one student completed the program in four years, and he entered with an M.A. The department was not about to be deprived of its share of the Ford grant, however, and used the money to attract better students and expand enrollments. Had the graduate dean tried to cut them out of the program for non-compliance, they would simply "have taken him to the mat." The Graduate Dean's position carried no effective sanctions nor rewards that could be used to threaten or bribe recalcitrant departments. Although one of the unspoken purposes of the Ford grant was to strengthen the dean's hand, the resources provided were insufficient to alter the existing distribution of power.

Harvard. "Alas, we near the end of this great experiment!" So began the discussion on Graduate Prize Fellowships in the 1971-72 Dean's Report for the Graduate School of Arts and Sciences at Harvard. The Ford program at Harvard was preceded by the Harvard Graduate Prize Fellowships, begun in 1964-65 with 50 awards. The Ford grant made possible the expansion of that program to 150 awards per year, covering roughly 25 percent of the

entering classes in humanities and social science departments. To understand the Ford program, therefore, one must start with the earlier Harvard program.

Credit for the Graduate Prize Fellowship concept belongs to former Dean Reginald Phelps, whom we interviewed on our visit at Harvard. During his tenure as dean, Phelps was concerned by the annual competitive scramble for graduate student support and by the lack of any set schedule for the degree. Phelps wanted to see more structure in the programs, so that doctoral study could become more like other professional programs. He also hoped to reduce the amount of graduate student teaching to two years, conducted in the student's third and fourth years, leaving the first two years for uninterrupted study and the fifth for concentrated work on the dissertation. When the Harvard History department agreed to revise their course of study to fit this pattern, the Prize Fellowship program was born, with 25 awards offered in History in 1964-65. Fellowship support was provided in the first, second, and fifth year, and support as a Teaching Fellow in the third and fourth years. The Government and Economics departments soon came forward with four year plans, and English with a five year program. The Graduate Prize Fellowships served, no doubt, as one model for the Ford grants, and the Foundation money made it possible for Harvard to expand the program to all humanities and social science departments.

In Phelps' view, the program did not succeed at Harvard because most of the departments did not make the necessary changes in curricula. The dissertation, in particular, had not been scaled back to a manageable size, being still looked upon by most faculty as a magnum opus. Given the strong

tradition of departmental autonomy on matters academic, there was little that the graduate dean could do but attempt to be persuasive in arguing for reform.

The case for a four (or even five) year norm for the Ph.D. was not persuasive to the Committee on the Future of the Graduate School. Writing in 1969, the Committee observed that

> We believe that the length of time required to obtain the Ph.D. degree is entirely a departmental problem, the most exclusively departmental problem we know of. Whatever we think of one another's practices is irrelevant. Any attempt from the outside, no matter how well meant, to speed up the process by setting an arbitrary number of years as a limit, we think inappropriate. Even the generous Harvard Prize Fellowships err here./

/ "Report of the Committee on the Future of the Graduate School," Faculty of Arts and Sciences, Harvard University, March 1969, p. 5.

Furthermore, there was strenuous resistance to the requirement that each Prize Fellow must teach for a minimum of two years, since that effectively excluded other students from teaching, particularly in smaller departments such as Classics. The students who were awarded fellowships on the basis of their credentials occasionally turned out to be poor teachers, and the departments resented having no option but to honor the commitment (although one wonders how departments could rationalize the continued preparation of such students for teaching careers without giving them extra help in teaching). These requirements were sufficiently irksome to the Classics department that it withdrew from the program after two years, a move made much easier when the department began receiving income from the ownership of the Loeb Classical

Library. There was also a strong feeling in most of the departments that the best students could not be identified at the time of admission; therefore, guaranteeing four or five years of support before the students set foot on campus was bad policy.

Peter McKinney, Administrative Dean of the Graduate School, stated that the major effect of the program was to cause the Graduate School to assume greater responsibility for the financial support of students once enrolled. Each graduate student is now seen as embodying a substantial investment of Harvard's resources, and departments are no longer allowed to cut students off from support while they remain in residence. The official view of the Graduate School is that if a department does not want to support a student with its allocation of support funds, then that student should not be enrolled. (Harvard does follow a modified type of financial need analysis in determining whether a student needs support.) In a sense, departments are faced with a budget constraint in the form of financial aid available, and are free to maximize departmental objectives subject to the budget constraint and the requirement that enrolled students must be supported.

Students who remain enrolled for a sixth year absorb money that could be used for first year students; in this way, the Graduate School hopes to provide faculty with an incentive to move students through expeditiously, and to weed out marginal students quickly. (Unexpended support funds for a terminated student remain with the department.) Thus, the Ford program did have an impact on the way graduate support is administered at Harvard, but it was less successful in establishing a four or five year norm for the Ph.D. Perhaps the incentives built into the current support policy will succeed where simple persuasion failed.

Michigan. Foundation money was used to support third and fourth year fellowships at Michigan, with the grants awarded competitively to students who were progressing "on schedule." The schedule was defined as a 10 term track, where a full calendar year was equal to 2-1/2 terms. By using the money in this fashion, the dean's office hoped to produce an incentive for students to progress rapidly and for departments to organize programs so that a 10 term degree was possible. We received mixed comments on the success of this approach (several faculty members stated that the incentive existed only in the Associate Dean's mind); however, the university must be given credit for trying to incorporate positive incentives into the program. As we have seen elsewhere, when the incentives produced by the program were not thought through clearly in advance, the result was often unfortunate.

The Michigan program suffered in its first years from procedural uncertainties. George Hay, who administered the program, remembered feeling very much at sea during those years, since many of the arrangements and understandings had been worked out between Stephen Spurr, then Graduate Dean, and Malcolm Moos, representing the Foundation. When Spurr left for the University of Texas, many of the details went with him, for the proposal was brief and not very specific. The original stipend announced under the Rackham Prize Fellowships, for example, was $3,000, an amount exceeding the NDEA IV level set by the Foundation as the maximum payment. The University also made awards to transfer students, some of whom had begun graduate study years before. The Foundation had ruled such students out at Wisconsin, and wanted the same procedure followed at Michigan. To clarify such matters, Mariam Chamberlain visited the campus in February 1970, and negotiated agreements on each of these points. This incident is fairly typical of the type of problems caused

by the speed with which proposals were put together and the inevitable turnover of key personnel.

Hay judged the program to have been successful for the top half of the Prize Fellows (where the "top half" is defined after the fact as those who completed degrees on schedule.) As another index of the program's effect, he noted that in the early years of the program it was difficult to find many students who were "on track" after two years, but that the number of eligible applicants increased steadily each year. In our departmental interviews, we did not find much evidence of major curriculum overhaul (with the exception of the English department, to be discussed subsequently); consequently the increased number of eligible applicants must be attributed more to the financial incentive operating on students than to the reform efforts within departments. This interpretation is consistent with the general skepticism we encountered among faculty regarding any incentive effects on their own behavior.

Robben Fleming, President of the University, had observed the program in operation both at Michigan and earlier at Wisconsin, and was under the impression that it had been successful at both campuses. (When one reads the seven annual reports submitted to the Foundation by all 10 universities, there is a general pattern of early optimism followed by a growing sense of failure, particularly as the data mount up. Fleming's comments may have reflected his reading of those earlier reports.) He also remembered that Fred Harrington, President of Wisconsin when the program began, had been an outspoken supporter of the view that humanities students would progress as rapidly as science students if supported equally well. The experience with FFGP clearly shows that this view was, at best, an oversimplification.

The reactions of two Michigan departments - Anthropology and English - demonstrate the importance of departmental attitudes toward the program's purpose in determining whether it had any effect. The professors we interviewed in the Anthropology department stated that a four year Ph.D. in their discipline is a nonsensical idea, and the department made no attempt to design such a program. Furthermore, the department opposed the Graduate School's policy of using Foundation money for third and fourth year students, and simply offset any Prize Fellowships earned by third year students by shifting other departmental support to entering students. Foundation money was viewed simply as another source of student support, and the department was able to circumvent the Graduate School's attempts to use the money as leverage for changing doctoral education. The behavior of the Michigan Anthropology department typified the attitude and approach of the vast majority of departments toward the program, regardless of field or university, and explains in large measure why the program failed. The best efforts of the graduate dean could not (or did not) prevail against the inertia and resistance of the departments.

By contrast, FFGP contributed importantly to change in the English department because it provided leverage to a group of younger faculty members who were eager to reform the doctoral program. The appointment of a new chairman in 1968 - the previous chairman had served for 20 years - coincided with the publication of the Don Cameron Allen book, The PhD in English and American Literature, and provided the opportunity to review the graduate program thoroughly. Dissatisfaction with the teacher training provided by the PhD program gave rise to a new Doctor of Arts degree in the department, targeted at community college faculty.[/] The department also revised the curriculum

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/ A good description of this Doctor of Arts program at Michigan, and how it was developed, can be found in Daniel Fader, "The University of Michigan: A New Degree Program to Prepare Teachers of English," in S. V. Martorana, William Toombs, and David W. Breneman (eds.), Graduate Education and Community Colleges, a Technical Report to the National Board on Graduate Education (Washington, DC: National Academy of Sciences, 1975), pp. 41-47.

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to shorten the time to degree; required course work was reduced, a shift was made from course-certification to exam-certification, and the student's dissertation topic was made a part of the comprehensive examination. The Ford program was not the initial stimulus for change, but it coincided fortuitously with a desire for reform within the department and gave that process a major boost. In our 60 departmental interviews, we encountered only one other instance where the Foundation's purposes coincided so closely with those of the department - the University of Pennsylvania English Department.

The present Graduate Dean, Alfred Sussman, capped off our visit with the observation that the objectives of FFGP - shorter time to degree, emphasis on full-time residential study, program rationalization - were no longer relevant to the emerging era of "non-traditional" graduate education. Perhaps the fate of any educational reform that spans a decade or more is inevitably to fall out of synchronization with changing needs and interests.

Pennsylvania. The program at Pennsylvania was heavily influenced by the efforts of Robert Lumiansky to implement a four-year Ph.D. in English, beginning in 1966. Lumiansky arrived at Pennsylvania in 1965, newly appointed as English department chairman. In many of the Arts and Sciences graduate

programs at that time, a majority of the students were enrolled part-time, doctoral programs were loosely organized, mid-year admissions were common, and time to degree was excessive (see Figure 17, Chapter 2). Lumiansky developed a four year curriculum in English that could be completed by well-prepared, full-time students, and a select group of 23 candidates were admitted in 1966, to be financed by a combination of fellowships and assistantships. These 23 were treated as a separate and select group, complete with their own pro-seminar in which no other graduate students could enroll. One year later, FFGP underwrote similar programs in 18 departments at Penn. One consequence of Lumiansky's lead, however, was the tendency at Penn. to focus on just the sub-set of students receiving Ford grants. Whereas Lumiansky viewed full-time support and curriculum change as joint requirements for a successful program, faculty in other departments had not thought the program through as thoroughly, and thus tended to focus just on financial support and full-time attendance. As a consequence, the program had little lasting effect on the majority of Penn. departments; when the grant ran out, its impact ended.

A high turnover rate in the graduate dean's office also undermined the administrative continuity of the program. The current dean is the fourth person in that position since FFGP began; among other problems, this rapid turnover may help to explain why the University failed to spend $1 million of the grant, and had to return that sum to the Foundation at the program's end. A further word on that experience is warranted.

An executive assistant to the dean explained the unspent million dollars as the result of attrition. The original proposal - and the accompanying budget - made no allowance for attrition; it

was apparently assumed that 100 percent of each entering cohort would remain for the full four years. When a student dropped out, it was thought that the remaining stipend could not be reallocated to any other student. University officials were shocked when informed by the Foundation that the unspent money would have to be returned, another example of the misunderstandings and failure to communicate that marked so many aspects of this program.

Princeton. In light of the program's ostensible purpose, including Princeton University made little sense. For years, Princeton had emphasized the rapid Ph.D.; in fact, under Sir Hugh Taylor's administration, students were only allowed to register for three years of full-time study. The standard pattern was two years of course work and a good start on the thesis during the third year. The dissertation was not viewed as a major, original work of great length, but rather as an exercise to demonstrate research proficiency. The goal at Princeton was not to turn out scholars whose educations were (theoretically) complete; instead, the Ph.D. was simply one stage in a lifetime of learning. The implementation of FFGP at Princeton would surely be different than elsewhere.

The Foundation money made it possible for Princeton to support all students for a full four years in residence, and hence the major effect of FFGP was to further those forces (increased specialization and professionalism) that had already undermined the three-year concept. It was assumed that total elapsed time to the degree would be reduced by increasing registered time, since few students had ever managed to complete the dissertation during the single year allowed under Taylor's policy. As we have seen, however (Figure 12, Chapter 2), elapsed time actually increased at Princeton under the Ford program.[/] Faculty members advanced

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_/ Using data from the Doctorate Record File for the period 1960-1974, the relationship between elapsed and enrolled time at Princeton was examined, using the same regression model described in Chapter 2 (p. 49). The result was:

$$MLT_{Princeton} = \underset{(2.67)*}{3.52} + \underset{(2.09)*}{.66}\ MET_{Princeton}$$

* t statistics

indicating that an additional enrolled year added 2/3 of a year to the elapsed time.

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several reasons for this unexpected effect: Four years of support undermined motivation and took the pressure off; the weak labor market caused students to slow down; the turmoil of the late 1960's - early 1970's deflected students; more polished dissertations were required. Each of these "explanations" is plausible, and we have encountered them elsewhere; the fact remains that the major visible effect of the Ford grant at Princeton was an increase in the median elapsed time to degree.

Stanford. The Ford program at Stanford (known as FYGA - Four Years Guaranteed Assistance) did not succeed when judged by the statistical criteria of Chapter II; however, the program did coincide and contribute in important ways to a university-wide reassessment of graduate education at Stanford._/

_/ See the published committee report entitled The Study of Graduate Education at Stanford (Stanford University, June 1972).

Among the numerous recommendations in the committee's 323 page report was one to establish four years as the norm for doctoral education, and this recommendation was subsequently enacted by the Faculty Senate. It is significant that both the study committee and the Faculty Senate would endorse the four year degree several years after the Ford grant was made; apparently the experience with the program at Stanford was sufficiently satisfactory that the faculty were willing to retain its central feature. As the site visit reports in this chapter make clear, it is unlikely that such a recommendation would receive faculty support at many of the participating universities.

Several factors explain the more positive attitude toward the program at Stanford than elsewhere. Virgil Whitaker, Dean Emeritus of the Graduate School, described Stanford as a university that truly arrived in the first rank of institutions during the 1960's (helped in large measure by the Ford Foundation PACE grant in 1960), and the Ford graduate program, in his view, coincided with a period of great interest and pride in the graduate school. That the Ford grant made possible the full support of all entering graduate students added to the significance of the program; here, the Foundation's money managed to achieve the leverage effect that was less successful elsewhere. The program also helped to increase the power of the graduate school vis a vis the departments, particularly in setting enrollment ceilings and financial aid policies. Richard Lyman, President of the University, commented that the grant had given the humanities faculty and students a real boost in morale, for here was a major private foundation announcing publicly that graduate education in the humanities was important and worthy of the Foundation's interest and support.

And yet, with all these positive factors, the study committee on graduate education at Stanford wrote in 1972 that,

> We report with dismay that the Ford Grant apparently has not significantly reduced the time to degree in most departments. There is little evidence of a shift in either the practices or the expectations of the department to parallel the dramatic increase in the time a student has available for graduate study. —/

—/ Ibid., p. 28.

In our faculty interviews, we heard most of the standard reasons given for the failure of the program elsewhere - the disruptive effects of Vietnam, the worsening market, difficulties with the dissertation. In addition, we learned that the History department was generally unhappy with the four year concept, and the Anthropology department was applying for an exemption from the regulation voted by the Faculty Senate. The departments that were in general sympathy with the four year degree, such as English, acknowledged that only a very few students actually succeeded in that time. In short, we encountered less than wholehearted enthusiasm for the four year program in our sampling of six departments.

One sticking point was the Graduate Division policy of not providing financial support for students beyond the fourth year. This policy was clearly in the spirit of the Ford program and was implemented in part to provide an incentive for four year degree completion; however, it was resented in many departments, and ways around the policy were negotiated on a case by case basis. In Anthropology, for example, the understanding was that all graduate school aid ended after the fourth year, with fifth year support the department's

responsibility. In History, we were simply told that the situation never reached an impasse.

One of the unstated goals of FFGP was to enhance the graduate dean's position and ability to administer graduate programs effectively by expanding the financial resources that the dean controlled. Whereas this attempt was generally unsuccessful, it did seem to work at Stanford. The policy of guaranteeing support for four years to every enrolled graduate student meant that the dean's office had a large fiscal responsibility that was incompatible with the autonomy departments were used to exercising over enrollment levels. Consequently, the dean had to assume control over the number of admissions granted, and in the program's third year, was forced to cut back sharply on the number of new entrants because of larger than expected enrollments in the first two cohorts. Virtually every department we visited mentioned the increased power in the dean's office, blaming this on the Ford program. (There is some evidence that in the program's early years, various procedures being implemented were explained to the faculty as a condition of the grant. Several of the professors we interviewed chided the Foundation for being so inflexible in setting up rules for the program - a great irony for so flexible a program.)

Stanford is also relatively unique in that a commitment to the goals of the program remains even though the Foundation money is gone. The university still tries to guarantee four year support to students, and has reduced graduate enrollments to make that possible; financial need analysis now plays some part in the fellowship program. The Faculty Senate's resolution endorsing the four year degree as the official norm is a further indication that the

program survives as more than a memory. The program operated at Stanford very much as its architects hoped it would; the concepts (or hypotheses) underlying the "experiment" received a fair test there. That time to degree was not reduced noticably at Stanford is evidence that the program suffered from more than just poor timing.

Wisconsin. Foundation funds were used in a great variety of ways at Wisconsin, rendering the program there difficult to describe and to evaluate rigorously. A simple-- and reasonably accurate -- description of the program would be that the money was used by departments in any way that seemed likely to speed a student through the program. In some instances, this meant summer support; in others, partial fellowships, i.e., one semester of fellowship alternating with one semester of teaching assistantship; in still others, dissertation fellowships in the fourth year; and, in a few cases support for research and travel expenses. In 1967 and 1968, Foundation money was used to help "salvage" some candidates who had been students for long periods of time and who needed a semester or two of support to finish the dissertation. (This practice was subsequently ruled out by the Foundation.) Ultimately, any student who was "on track" and beyond the first year of graduate study was eligible to apply for support.

Because Wisconsin chose to use the money in a fashion that was not tidy administratively, numerous problems and misunderstandings arose within the university and between the university and the Foundation. Mariam Chamberlain's visit to Madison in February 1969 and subsequent correspondence cleared up some of the problems and forced some decisions, but an uneasy relationship between Foundation and university seems to have marked the program throughout its life.

Indications of this unease were apparent in our interviews, and also in such relatively small matters as the annual reports, where the Foundation's work forms and data sheets never meshed with the university's management of the program, to the consternation of both parties.

The withdrawal of the English department (along with several smaller departments) from the program in 1969 illustrates these procedural difficulties. A majority of the graduate students in English at Wisconsin have typically had prior graduate experience, and many have taught for several years before enrolling there. Following Mariam Chamberlain's visit, the Foundation ruled that, for purposes of the program, the time-to-degree clock started running when a student first entered graduate school anywhere; consequently, a student with an M.A. and three years of teaching would be ineligible. This ruling by itself would not have precluded the English department from remaining in the program, but the University had imposed a requirement that 80 percent of the student support funds available to a participating department had to be devoted to students who were "on-track." The English department was unwilling to accept this restriction, since it would have prevented giving teaching assistantships to many of the older students; reluctantly, the department withdrew from the program. A considerable amount of correspondence and discussion during the program's second year was required to sort all this out, and it seems obvious that these basic ground rules and understandings should have been established before the grant was made, or immediately thereafter.

As for the program's effects several of the faculty interviewed thought that the quality of graduate work done by supported students was enhanced by

the greater amount of free time for study and reflection. (The main effect of the funds at Wisconsin was to reduce the amount of time a student spent as a teaching assistant.) In addition, a major accomplishment of the program was the preparation by departments of a "normal progress statement." This statement was a precise description of Ph.D. requirements together with a schedule showing when each step should be completed. With these schedules, one could tell whether a student were making normal progress toward the degree. For many departments, this statement represented the first time requirements had ever been laid out precisely with a time table, and these statements remain in effect at Wisconsin as the departments' declared programs.

An unexpected benefit of having these progress statements on file developed after the 1969-70 teaching assistant strike and the subsequent formation of a T.A. Union. The union contract mandates continued support of a T.A. as long as he or she is making normal progress toward the degree; had a description of normal progress for each department not been on file, interpretation of that contract clause would have been a source of continued conflict.

Our faculty interviews revealed that support for a four year degree was luke-warm at best, and strongly opposed in some departments, such as History. Even in the Economics department, where support for a four year degree is strong, very few students complete in that time. In a detailed study of

successive entering cohorts of Economics graduate students, Lee Hansen and Judy Craig isolated the dissertation as the difficulty; whereas the time required to complete preliminary exams had generally declined over the period 1956-1974, the time spent on dissertations had increased by more than enough to offset the other gains.[1] The authors also found that the sub-set

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[1] W. Lee Hansen and Judith S. Craig, "Trends and Patterns in Ph.D. Completion: The University of Wisconsin - Economics Program," unpublished paper, Madison, Wisconsin, 1975, p. 16.

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of students supported under the Ford grant did not proceed through the program more rapidly than others, and concluded that the program had little apparent effect on time to degree.[1]

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[1] Ibid., pp. 22-24.

Although Wisconsin's procedures were a source of concern to the Foundation, in an important sense, Wisconsin's approach was more in line with Berelson's ideas than was true at several other universities. The stress at Wisconsin was on program rationalization and changing expectations, in the hope that all students would have their graduate work accelerated. Consequently, the administration at Wisconsin wanted the program evaluated in terms of its impact on all students, not just on the sub-set receiving Foundation support. Their focus was on the normal progress statements and having them implemented, with financial support used in any way that would help students at a critical stage in their degree work. In my opinion, this was a

thoroughly sensible way to implement the program in those cases where full, four year support for every student could not be provided. Unfortunately, the data and interviews indicate that Wisconsin was no more successful with its approach than were those universities that targeted money on a sub-set of entering students.

Yale. Writing in the fall of 1967, John Perry Miller, the Graduate Dean at Yale, concluded an article on reforming the Ph.D. by observing that,

> It should be clear by this time that the phenomena of the drop-out and the stretch-out are not to be explained simply. Money is only part of the answer. There is need for extensive reform of graduate education, reform in the substance of training programs and in their administration. The Ford Foundation has given us a real challenge. The problem is now in the hands of the deans and their faculties./

/ John Perry Miller, "Drop-out Stretch-out: Reforming the Ph.D.," Ventures (Vol. VII, No. 2, Fall 1967), p. 10.

And yet, when one reads Miller's discussion in the same article of Yale's program under the Ford grant, one is struck by the lack of specific changes that he recommended or hoped to implement. In fact, much of the article is devoted to insightful observations on the reasons why four year degree programs may be generally unattainable. On the one hand, Miller notes that in a recent review of doctoral programs at Yale, he discovered that in most departments "the Director of Graduate Studies believes that the normal expectation for the completion of the Ph.D. should be about four years."/ On the other

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/ Ibid., p. 8.

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hand, in the following two pages, Miller ticks off virtually every reason that we were given eight years later at the several campuses to explain why the program did not work, with the exception of the disruptive effects of Vietnam and the weakened labor market. Most of the difficulties were foreseen at Yale, but were not solved there any better than elsewhere.

One problem at Yale was that the Ford grant did not represent a large increase in financial aid available; the grant roughly offset the funds that had been brought in earlier years by Woodrow Wilson Fellows. Consequently, it may have been difficult to excite the faculty very much about this new, reform-oriented program. It seems likely that Miller's article in the Fall 1967 issue of Ventures, the magazine of the Yale Graduate School, was intended to impress the faculty with their responsibilities under the grant.

Furthermore, as Figure 20 in Chapter II shows, median time to degree for Yale graduates was among the lowest in the group of 10 supported universities before the program began. Consequently, there was less room for dramatic improvement at Yale than at many of the other institutions.

Yale differs from most universities in that the Graduate Dean's position is a powerful one. The Dean of the Graduate School shares with the Dean of the College the responsibility normally lodged with a Dean of Arts and Sciences, including responsibility for faculty appointments and promotion. All of the university-controlled graduate fellowship funds are allocated by the Graduate Dean, and that office also controls the level of graduate enrollments. Miller and his successor, Donald Taylor, enforced a policy of limiting fellowship support for each student to four years, but departments were able to circumvent this restriction by supporting students in the fifth year with Teaching Fellowships. As John Hall, Chairman of the History department

noted, once a student was off the fellowship and in the hands of the dissertation committee, the Dean's leverage was gone. More importantly, however, in John Perry Miller's view, is the fact that the tumultuous events of the late 1960's - early 1970's simply drew the Dean's energies away from the Ford program.

The current Graduate Dean, Jaroslav Pelikan, argued that time comparisons between humanities and natural science fields are misleading because the sciences rely on postdoctoral appointments to provide the necessary breadth of training, while the humanities lack that option. More material must be included, therefore, in the predoctoral years in the humanities than in the sciences, so that a five year humanities Ph.D. program, in his view, is no disgrace.

At Yale, the Ford grant was used well to support students for four years of graduate study, but it had very little additional impact. The "challenge" posed by the Ford Foundation, alluded to in John Perry Miller's article, was not met.

Chapter IV CONCLUSIONS

In this chapter, the major conclusions from this study of the Ford Foundation Graduate Program are assembled, together with my evaluation of where - and why - the program went wrong. Since the program is defunct, and there are no plans to revive it, recommendations about its future are unnecessary; however, several lessons can be drawn from this experience that may be applicable to future attempts to reform or influence university programs.

Conclusions from this Study

Although the program operated under far from ideal circumstances and violated virtually every requirement of good experimental design, the hypothesis that differences in Ph.D. production efficiency among disciplines can be explained fully by differences in student financial support can be firmly rejected on the basis of the FFGP experience. The most compelling evidence is provided by the three participating universities (Stanford, Yale, and Princeton) that fully supported all entering graduate students for four years under the program; median time to degree and attrition rates were not appreciably lowered for these cohorts. In universities where only a subset of students was supported, selection bias was present since awards were made to the "best" applicants; even in these cases, however, little progress was made in reducing time to degree and attrition. In fact, given the variety of approaches used by the 10 universities, it is remarkable that one cannot point to a single university where the program was a clear success. Whereas faculty members and deans advanced numerous reasons for

the program's failure, I believe the fundamental explanation is that the hypothesis was simply wrong.

When comparisons of degree productivity among disciplines were made in the 1960's, the high correlation between graduate student support and departmental productivity stood out, and gave rise to the plausible view that the connection was causal. The fact that much financial support in science and engineering fields is commonly provided as research assistantships on professors' research projects was conveniently overlooked in these comparisons, and yet the research assistantship - and membership in a research group - are the keys to Ph.D. productivity in the sciences. Unless one were able to transfer this method of Ph.D. production into the humanities, simply providing four years of fellowship or teaching assistantship support would not render History departments as productive as Chemistry departments. The ability to pursue the degree full-time is a necessary, but not a sufficient, condition for realizing the four year Ph.D.

The Ford program recognized the fact that money alone was not sufficient; hence, the stress on curriculum reform and rationalization. In several universities, the program succeeded in bringing greater clarity and organization to the course-work and examination phase of doctoral programs, but it failed to produce any fundamental change in the nature of the dissertation, or in the method of its production. The Ford grants were successful in accelerating the production of ABD's (all but dissertation), but not of Ph.D.'s.

The weakened academic labor market sealed the program's fate by undermining its rationale in the eyes of most faculty and students. Although

we will never know what would have happened had the academic labor market remained strong, it is plausible to think that faculty would have been motivated to find ways to speed students through (and that students would have shared this motivation). For the vast majority of humanities and social science disciplines, there is no reason to assume that doctoral work inherently requires more than four years; however, with a weak labor market, it is easy to find reasons for stretching-out the period of study. There is an irreducible element of arbitrariness in Ph.D. programs; one can always read more, cover more periods or genre, study more languages, write a longer or better dissertation. With a weak labor market, one can readily understand a departmental tendency to turn out fewer and more-finished products.—/

—/ For a detailed study of this phenomenon, see David W. Breneman, "The Ph.D. Production Process: A Study of Departmental Behavior," op. cit.

That the rationale for the program should be in question three years after it began raises the issue of the Foundation's planning capability. Two of the critical assumptions underlying the program were that academic demand for new faculty would remain strong and that the federal government would expand its fellowship programs. By 1970, it was clear that both assumptions had been wrong, to the program's detriment. Should we have expected the Foundation to have foreseen these events in 1966-67?

Judging past decisions with the benefit of hindsight is always treacherous, and yet it is hard to understand in this case why the Foundation

so thoroughly misjudged the future. The first of Allan Cartter's numerous projections of excess Ph.D. supply had been published in 1965,—/ and

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—/ Allan M. Cartter, "A New Look at the Supply of College Teachers," Educational Record, Summer 1965, pp. 267-277; and "The Supply and Demand of College Teachers," Proceedings, American Statistical Association, September 1965, pp. 70-80.

Cartter was speaking widely on the subject at that time. Furthermore, Cartter was not an obscure academic writing for a handful of peers, but was Vice President of the American Council on Education, a visible position for an analyst of educational policy. The opening pages of Cartter's widely read volume on graduate program ratings,—/ published in 1966, contained a

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—/ Allan M. Cartter, An Assessment of Quality in Graduate Education (Washington, DC: American Council on Education, 1966), pp. 1-3.

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review of the supply - demand situation. At the very least, Cartter's work should have served as a warning that the conditions under which the program was launched might change radically in the course of seven years. The federal government's reaction in cutting back fellowships, while not totally predictable, was an understandable response to the end of teacher shortages, and should have been foreseen as a possibility in light of Cartter's projections. While labor market forecasts are notoriously unreliable, the Foundation, at a minimum, should have had contingency plans in case Cartter's projections proved accurate. Instead, all parties were apparently caught by surprise when the

economic environment of graduate education changed so dramatically in the early 1970's, and an opportunity was lost to salvage (or modify) what had become a very dubious, but expensive, program.

This non-response to changed circumstances is worth pursuing, since it typified a broader problem, the absence of free and open communication between the universities and the Foundation. In part, this problem was caused by the departure or changed assignments of the majority of Foundation staff who helped to plan the program; in part, by the deans' perception that the Foundation had lost interest in the program; and in part, by the Foundation's failure to assign a staff member to the program full-time. As it was, the contacts were limited to four half-day meetings held annually at Foundation headquarters from 1968 through 1971, the annual written reports to the Foundation, and limited contact with Mariam Chamberlain when administrative questions arose. Therefore, although it had become clear to practically everyone by 1970 that the program was succumbing to external events, the basis had not been laid for open and frank discussion of the problems, with an eye toward reallocating remaining funds in a more sensible way./ From our campus visits, it was apparent

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/ Gale Johnson of the University of Chicago points out, however, that by 1970, most of the money had been committed in those universities that guaranteed four years of support. In those instances, reallocation of funds would have been limited, although the purpose of the program might have been reconsidered, and a different focus might have been found.

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that the deans were unwilling to raise any serious questions about the program with the Foundation for fear that the grants would simply be terminated. Instead, the fiction was maintained that the program was proceeding largely as planned, and the opportunity to consider redirecting the program was not exercised. (This reluctance to raise questions about the program may explain why Berkeley and Pennsylvania failed to spend all of their grants. At both universities, it was assumed that the grants could be extended without confirming that policy with the Foundation well in advance of the grants' termination.) Had Berelson's original suggestion for continuous monitoring of the program been adopted, including a type of "circuit rider" for campus visits, it seems very likely that the program might have been altered and better use made of the grants in the later years.

In the course of conducting this study, I have reached certain conclusions about graduate student finance, and will present them briefly. These conclusions are my own, and I do not attempt to support them with detailed statistical tables; however, I think they can be drawn fairly from the experience of the Ford Foundation Graduate Program.

First, the selection and recruitment of graduate students in the leading universities is, by all accounts, a haphazard business, subject to much uncertainty regarding student abilities and motivation. In our interviews, we were told countless times that the "best" applicants are often disappointments, while the more marginal candidates for admission often turn out to be the best performers. At Cornell, for example, Don Cooke, while Graduate Dean, kept careful records of the departments' rank ordering of applicants and their subsequent performance in graduate school, and found no positive correlation. In spite of this common experience, many departments

continue to bid agressively for those students that are ranked as top applicants, although an appreciable number will fail to complete the degree. Using fellowship money to recruit particular applicants was a luxury that many universities could afford in the 1960's, but this inefficient use of support funds hardly seems justified in an era of financial scarcity. (One of the unfortunate legacies of FFGP is that it encouraged this type of competitive bidding for students.) The limited amount of financial support that humanities and social science departments currently control could be more effectively spent supporting students who have proven themselves after one or more years of graduate study./

/ This procedure was followed under FFGP at Wisconsin and Michigan.

During the late 1950's - early 1960's, the Woodrow Wilson Program of first-year fellowships made sense as a recruiting device for future college teachers, and even today, one can argue for a small number of nationally competitive, merit fellowships to recruit highly talented young people into humanities and social science fields. What does not make sense, in light of increasingly scarce resources and departmental inability to pick "winners" in advance, is the competitive bidding among top departments to lure applicants away from each other. To the extent that departments are allocating substantial sums for this purpose, their claim on foundation or government money is undermined. There is no public interest in helping Yale bid a student away from Harvard or Michigan, and such practices are clear evidence that existing fellowship money is not being used to maximum advantage.

It is all too easy to criticize a current practice without offering

any practical way to change that practice; in the present case, however, the solution clearly requires a cartel-like agreement among the handful of top graduate schools. If these institutions could agree that fellowship support should be shifted away from first year students and the recruiting function, and toward support for students of proven ability, not only would scarce fellowship dollars be better spent, but the self-defeating need to bid against each other would be ended. In essence, the risk of the first year of graduate study would be shifted from the institution to the student. By way of compensation, students could be assured that support in subsequent years would be available for those who prove to be serious scholars. This policy would serve as a deterrent to those less-than-serious students who are willing to spend a year or so in graduate school on someone else's money, but who would be reluctant to borrow for that first year. The loss of such students should be no cause for concern.

First year fellowship support in the current milieu of graduate education can only be justified, therefore, when a particular national interest is served by recruiting specific individuals into graduate study. A small, nationally competitive merit fellowship program to attract the very best undergraduates into full-time graduate study—/ meets this

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—/ The National Science Foundation awards approximately 500 such fellowships annually in the sciences, but no parallel program exists for the humanities. Such a program should be started by the National Endowment for the Humanities, with a comparable number of awards in humanities and social science disciplines excluded by NSF. The NSF program costs $11.5

million annually.

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recruiting requirement, as would a program to attract talented minority students into doctoral study.—/ In addition, fellowships and traineeships

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_/ For a complete discussion of this topic, see National Board on Graduate Education, Minority Group Participation in Graduate Education (Washington, D.C.: National Academy of Sciences, 1975). A program similar to that recommended by the National Board was requested by HEW for FY 1978, and Congress appropriated $3.25 million for that purpose.

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will continue to be used by federal agencies to attract people into specialized areas of study where shortages of trained talent exist; an example would be the new program of NSF energy-related science traineeships. Apart from these instances, however, I see little justification for continued use of first year fellowships for recruitment purposes, and hope that the graduate schools will eventually adopt this policy.

A second, and related, conclusion about graduate student finance is that four years of guaranteed support is generally bad policy, even when financially possible. Not only are mistakes in selection likely, but four years of guaranteed support can produce perverse incentive effects, as noted in the last chapter. Rather than accelerating a student's progress, four years of support guaranteed in advance can cause students to slacken their pace. Similarly, unless managed carefully, guaranteed sup-

port can produce the wrong incentives for faculty; we noted at several universities that faculty were reluctant to counsel supported students out of the program because the fellowships made them a "free good" to the department, and if they left, the unused money would revert to the graduate school for use elsewhere. To work well, a four year guarantee of support would require a far better selection and admission process than currently exists, and in its absence, preserving an annual decision on the allocation of support is wise policy.

Finally, the remarkable differences that exist among these 10 leading universities in the economics of graduate education are worth noting. At Yale, Stanford, and Princeton, the institution invests heavily of its own resources in graduate students. There is an active competition to recruit the "best" applicants, the majority of students continue to receive financial support and tuition waivers for three or four years, and there is only limited use made of graduate students as teaching assistants. At another extreme, the University of Chicago views the graduate school as a major source of tuition revenue, and therefore awards few fellowships and does not compete financially for as many of the applicants that Yale or Stanford attract with offers of support. Chicago admits many applicants who would be denied elsewhere, but by maintaining high exit standards, their graduates are well received on the academic market. Chicago also makes little use of graduate teaching assistants.

Berkeley, Michigan and Wisconsin, all large public universities rely heavily on graduate students to carry much of the undergraduate teaching load, but so do Harvard, Cornell, and Pennsylvania, undermining any simple public/private explanation. Whereas the undergraduates at Yale, Stanford, and Princeton help to subsidize graduate education and research through tuition payments, at the three public universities the subsidy comes through the undergraduate teaching function and the induced demand for teaching assistants, while Harvard, Cornell, and Pennsylvania share elements of both types of subsidies. Of the 10 universities, the least subsidy of graduate by undergraduate education occurs at Chicago, where the two activities are less closely linked, both financially and educationally.[1] The diversity in the economic and educational role of graduate students in these 10 universities is so striking, however, that it casts doubt on the existence or feasibility of any unifying theory of university behavior.

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[1] In fact, Gale Johnson of the University of Chicago writes that "...o[illegible]ation costs and income by academic areas indicate that there is no subsidy of graduate education by undergraduate education." (private correspondence).

Lessons for the Future

Although a program similar to FFGP may never be proposed again, private foundations, federal and state agencies, and private industry will no doubt continue to support activities designed to change or influence university behavior and performance. Consequently, the lessons that can be drawn from this program should have relevance for subsequent attempts to intervene in the life of universities.

A crucial question to ask when any external intervention is proposed is whether the pertinent members of the university genuinely support the intended change. In the case of FFGP, the pertinent decision makers were the graduate faculty in each supported department, and the majority were either not in sympathy with the goal of the four year PhD, or were, at best, luke-warm in their support. Only in a handful of departments did we find faculty who strongly supported the goal, or would admit to having been enthusiastic about it in 1967. In these circumstances, a program would require close and continuous monitoring, unambiguous performance measures, and clear lines of accountability in order to succeed, all features that FFGP lacked. The Foundation employed an open-ended grant, with few check points or controls, in an attempt to change graduate education in a way not supported by the majority of faculty; it is hardly surprising that the program failed.

The rather obvious lesson from this experience is that institutional grants with few, if any, strings attached will only be successful if the objectives are fully supported by the people who determine the outcome. If

the objectives are not shared, but the grant is still deemed worth making, then the Foundation should insist upon monitoring and accountability procedures sufficient to ensure that objectives are met (or the grant cancelled). In the case of FFGP, Berelson proposed such procedures, but his advice was disregarded, to the program's detriment. One can understand the Foundation's desire not to interfere with university autonomy, but if that principle is of overriding importance to university - foundation relationships, then grants should not be made to try to achieve objectives not supported by the relevant members of the university community.

There is a clear lesson in the experience with FFGP for the current interest in finding ways to increase minority student enrollments in doctoral programs. Here is a goal that, like the four year PhD, is largely being imposed on the graduate schools from the outside, with the majority of faculty either indifferent or opposed to the necessary changes. Furthermore, the major financing proposal calls for federal grants to institutions to support recruiting and counseling efforts, as well as the necessary financial support for students.[1] Although an alternative program

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[1] See National Board on Graduate Education, Minority Group Participation in Graduate Education, op. cit., for the arguments in support of institutional grants. This approach will be followed by the new HEW program.

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of portable fellowships targeted on minority students faces severe legal roadblocks, some knowledgeable people support direct aid to students rather than grants to institutions because they do not trust the institutions, and

fear that the purposes of the program will be subverted. The experience of FFGP has been cited in this context by some critics of institutional grants. The potential for abuse certainly exists, and although I believe the case for institutional grants as opposed to portable fellowships is compelling, that is only true if the lessons from FFGP are absorbed. In particular, grants to increase minority graduate enrollments should be

(1) awarded competitively on the basis of sound proposals and evidence of prior activity,

(2) monitored closely and continuously, with clear check points for terminating unsuccessful grants, and

(3) negotiated directly with members of both the administration and the academic departments.

The need to involve faculty members directly in any negotiation over graduate program changes also derives from the experience with FFGP. In that case, the Foundation did receive assurances from university presidents and graduate deans that the four year degree was a desirable objective, even the most pressing current issue facing graduate education. The problem, however, was that the administrators were not speaking for the faculty, who would have added numerous qualifications and caveats had they been asked. Since the effective power to implement the program resided with the faculty, the Foundation should have negotiated directly with the academic departments as well as with the central administration. To have done that would have changed the program significantly, into a series of small-scale demonstration projects. The amount of money spent would have been much less (I assume far fewer departments would have qualified for support under this procedure),

and the program would have been more of a true experiment, rather than a wholesale attempt to reform graduate education. With the benefit of hindsight, a strong case can be made that the more limited approach of departmental grants would have been more effective.[1] Educational reform,

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[1] In 1968 and 1969, the Foundation did make several departmental grants in various humanities and social science disciplines at Rice, Emory, The Johns Hopkins, and Washington Universities, the Universities of Denver and Minnesota, and Massachusetts Institute of Technology. Grants to the Political Science departments at Minenesota and M. I. T. were primarily for the purpose of revising curricula to enable four year PhD completion. Although these two departmental grants were not included in this evaluation, their final reports to the Foundation indicate that the grants were largely successful. What is clear from the reports is the presence of faculty commitment to the program goals, and pride in accomplishment. These powerful motivating forces were absent from most departments participating in the larger program, suggesting that an expanded program of departmental grants, although administratively more complex, would have been much more successful.

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particularly at the graduate level, is not likely to be successful when approached in a blanket fashion with bold and sweeping multi-million dollar projects, however satsifying such grants may be to foundations or federal agencies. Smaller, more carefully targeted grants awarded to institutions or departments that genuinely want to change promise to be far more cost-effective.

Smaller, more experimental grants are also called for whenever the underlying theory, or understanding of how things work, is weak. In the case of FFGP, $41 million were spent on an oversimplified and largely inaccurate hypothesis regarding the factors that determine time to degree. Perhaps no doubts existed in the minds of those who dreamed up the program, but that seems unlikely. Where considerable uncertainty is present, prudence would dictate small scale experimentation before millions of dollars are invested.

Concluding Comment

I have been harsh in my evaluation of FFGP because it was such a poorly designed vehicle to accomplish what was intended; however, a few compensating remarks are in order. As a straight fellowship program, it was no worse than any other, and it undeniably helped many able and intelligent students through graduate school and into scholarly careers. Furthermore, the money was allocated to universities of the highest quality, and the assistance to humanities and social science disciplines was a valuable offset to the heavy support that the federal government was bestowing on the sciences. In fact, if these were the real purposes of the grant (as some participants suspect), it was then a pity to encumber the awards with the specific objective of the four year PhD. Had the awards been made in a non-restrictive fashion, subject only to the request that the money be used for student support in any way that would strengthen graduate education (including, but not limited, to speeding up degree completion), the results might have been far more interesting and creative. As it was, the program gave rise to an unnecessary degree of cynicism and

occasional bitterness on the campuses and within the Foundation, as it became apparent that the program was not succeeding. On the campuses, these feelings were motivated by a sense of guilt and defensiveness over the poor results, while within the Foundation, the program is not viewed with pride. Just a simple change of focus, of stated purpose, could have eliminated any possibility of ill will or sense of failure; herein may lie the program's most important lesson.

Appendix A

Comparisons of Proposed Budgets and Actual Expenditures

Under the Ford Foundation Graduate Program, by University

University: BERKELEY

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$900,600	7%	$144,000	2%
Outside Fellowships	915,000	7%	2,061,300	29%
Teaching Assistantships	3,353,000	27%	921,300	13%
Ford Foundation	4,852,000 a/	38%	3,805,000	54%
Other	2,626,000	21%	127,000	2%
Total	$12,646,000	100%	$7,058,000	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	-756,600	-84%
Outside Fellowships	+1,146,300	+125%
Teaching Assistantships	-2,431,700	-73%
Ford Foundation	-1,047,000 b/	-22%
Other	-2,499,000	-95%
Total	-5,588,000	-44%

* Figures express total seven year expenditures for each category, unless otherwise specified.

a. Although Berkeley requested $4.85 million from the Foundation, a/grant of $4.3 million was awarded.

b. Based on original request for $4.85 million.

University: BERKELEY

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	290	70	-76%
Outside Fellowships	294	1,003	+240%
Teaching Assistantships	1,078	448	-59%
Ford Foundation	1,560	1,851	+18%
Other	844	62	-93%
Total	4,066	3,433	-16%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected[a/]	Actual
1967-68	146	140
1968-69	297	309
1969-70	456	388
1970-71	622	327
1971-72	622	262
1972-73	476	254
1973-74	325	251
1974-75	166	125
Total Student Years	3,110	2,056

a. Numbers accompanying original proposal.

University: CHICAGO

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$2,990,600	33%	$3,178,600	34%
Outside Fellowships	1,699,300	19%	1,947,025	21%
Teaching Assistantships	150,000	2%	135,000	1%
Ford Foundation	4,000,000	44%	3,995,000	42%
Other	280,000	3%	170,000	2%
Total	$9,096,400	100%	9,425,625	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	+$188,000	+6%
Outside Fellowships	+ 247,725	+15%
Teaching Assistantships	- 15,000	-10%
Ford Foundation	- 5,000	-
Other	- 110,000	-39%
Total	+ 356,225	+ 4%

* Figures express total seven year expenditures for each category, unless otherwise specified.

University: CHICAGO

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	1,604	1,708	+7%
Outside Fellowships	912	1,046	+15%
Teaching Assistantships	80	73	- 9%
Ford Foundation	2,146	2,147	+ 1%
Other	150	91	-39%
Total	4,880	5,065	+ 4%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected[a]	Actual
1967-68	60	60
1968-69	196	196
1969-70	288	274
1970-71	450	479
1971-72	420	368
1972-73	300	287
1973-74	150	122
1974-75	-	75
Total Student Years	1,864	1,861

a. Number accompanying original proposal.

University: CORNELL

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$2,074,500	12%	$1,286,700	10%
Outside Fellowships	7,992,600	48%	4,897,700	38%
Teaching Assistantships	2,366,900	14%	2,318,400	18%
Ford Foundation	4,000,000	24%	3,997,300	31%
Other	356,900	2%	241,100	2%
Total	$16,790,900	100%	$12,741,200	99%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	-787,800	-38%
Outside Fellowships	-3,094,900	-39%
Teaching Assistantships	-48,500	-2%
Ford Foundation	-2,700	0
Other	-115,800	-32%
Total	-4,049,700	-24%

* Figures express total seven year expenditures for each category, unless otherwise specified.

University: CORNELL

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	778	586	-25%
Outside Fellowships	2,996	2,231	-25%
Teaching Assistantships	887	1,056	+19%
Ford Foundation	1,499	1,821	+21%
Other	134	110	-18%
Total	6,293	5,805	-8%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected [a]	Actual
1967-68	216	222
1968-69	388	352
1969-70	535	493
1970-71	670	529
1971-72	451	337
1972-73	276	201
1973-74	132	61
Total Student Years	2,668	2,195

a. Numbers accompanying original proposal.

University: HARVARD

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$3,666,500	26%	$1,054,400	12%
Outside Fellowships	2,095,200	15%	1,038,900	12%
Teaching Assistantships	3,809,100	27%	2,392,400	27%
Ford Foundation	4,400,000	31%	4,333,900	49%
Other	-	-	-	-
Total	$13,970,800	100%	$ 8,810,000	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	-2,612,100	-71%
Outside Fellowships	-1,056,300	-50%
Teaching Assistantships	-1,416,700	-37%
Ford Foundation	- 66,100	-2%
Other	-	-
Total	-5,160,800	-37%

* Figures express total seven year expenditures for each category, unless otherwise specified.

University: HARVARD

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	1,177	470	-60%
Outside Fellowships	673	463	-31%
Teaching Assistantships	1,223	1,066	-13%
Ford Foundation	1,413	1,930	+37%
Other	-	-	-
Total	4,486	3,924	-13%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected [a]	Actual
1967-68	285	275*
1968-69	431	441
1969-70	538	485
1970-71	540	402
1971-72	540	321
1972-73	440	197
1973-74	340	124
Total Student Years	3,114	2,245

a. numbers accompanying original proposal.

* includes the earlier cohorts of Prize Fellows, who were on TF's in 3rd-4th year.

University: MICHIGAN

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$1,371,500	16%	$2,383,000 a/	28%
Outside Fellowships	666,500	8%		
Teaching Assistantships	1,904,000	22%	2,094,600	25%
Ford Foundation	4,000,000	48%	3,963,300	47%
Other	618,000	7%	-	-
Total	$8,560,000	100%	$8,440,900	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	+345,000	+17%
Outside Fellowships		
Teaching Assistantships	+190,600	+10%
Ford Foundation	-36,700	- 1%
Other	-618,000	-
Total	-119,100	- 1%

* Figures express total seven year expenditures for each category, unless otherwise specified.

a. University and Outside Fellowships were reported as a single, combined figure in the final report.

University: MICHIGAN

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	$762	$1,051 -	-7%
Outside Fellowships	370		
Teaching Assistantships	1,058	924	-13%
Ford Foundation	2,222	1,747	-21%
Other	343	-	-
Total	$4,755	$3,722	-22%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected	Actual
1967-68	--	--
1968-69	--	--
1969-70	--	--
1970-71	--	--
1971-72	--	--
1972-73	--	--
1973-74	--	--
Total Student Years	1,800[a/]	2,268[b/]

a. We were unable to reconstruct a consistent figure for the projected number of students to be supported each year.

b. Estimated on the basis of 567 students supported for four years each.

University: PENNSYLVANIA

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$2,792,000	22%	$1,145,300	15%
Outside Fellowships	3,240,000	25%	2,136,000	29%
Teaching Assistantships	2,777,800	22%	1,129,000	15%
Ford Foundation	4,000,000	31%	2,990,260	40%
Other	--	-	--	-
Total	$12,809,900	100%	$7,400,600	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	-1,646,700	-59%
Outside Fellowships	-1,104,000	-34%
Teaching Assistantships	-1,648,800	-59%
Ford Foundation	-1,009,740	-25%
Other	--	-
Total	-5,490,300	-42%

* Figures express total seven year expenditures for each category, unless otherwise specified.

University: PENNSYLVANIA

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	938	704	-25%
Outside Fellowships	1,089	1,314	+21%
Teaching Assistantships	933	694	-27%
Ford Foundation	1,344	1,839	+37%
Other	--	--	--
Total	4,304	4,551	+6%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected	Actual
1967-68	186	194
1968-69	372	272
1969-70	558	277
1970-71	744	254
1971-72	558	230
1972-73	372	217
1973-74	186	182
Total Student Years	2,976	1,626

University: PRINCETON

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$3,080,000	11.4%	$5,144,000	26%
Outside Fellowships	15,260,000	57%	8,901,700	45%
Teaching Assistantships	1,405,000	5%	1,592,100	8%
Ford Foundation	7,070,000[a]	26%	3,999,700	20%
Other	156,000	.6%	35,000	.2%
Total	$26,971,000	100%	$19,672,000	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	+2,064,000	+67%
Outside Fellowships	-6,358,300	-42%
Teaching Assistantships	+187,100	+13%
Ford Foundation	-3,070,300[b]	-43%
Other	121,000	-78%
Total	-7,299,000	-27%

* Figures express total seven year expenditures for each category, unless otherwise specified.

a. Princeton requested $7.07 million from the Foundation but received only $4.0 million. A modified proposal reflecting that change was not prepared.

b. Comparison based on the original proposal that requested $7.07 million.

University: PRINCETON

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	624	1,201	+92%
Outside Fellowships	3,091	2,078	-33%
Teaching Assistantships	285	372	+30%
Ford Foundation	1,432	934	-35%
Other	32	8	-75%
Total	5,463	4,59?	-16%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected	Actual
1967-68	631	596
1968-69	659	615
1969-70	688	620
1970-71	715	606
1971-72	743	581
1972-73	748	628
1973-74	753	637
Total Student Years	4,937	4,283

University: STANFORD

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$2,852,000	21%	3,023,500	19%
Outside Fellowships	4,831,000	36%	6,022,000	38%
Teaching Assistantships	1,811,500	13%	2,887,000	18%
Ford Foundation	4,001,000	30%	4,000,000	25%
Other	--	-	--	-
Total	$13,495,000	100%	$16,000,000	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	+171,500	+6%
Outside Fellowships	+1,191,100	+25%
Teaching Assistantships	+1,075,300	+63%
Ford Foundation	+ 1,000	-
Other	--	-
Total	+2,505,000	+19%

* Figures express total seven year expenditures for each category, unless otherwise specified.

University: STANFORD

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	$849	$767	-10%
Outside Fellowships	1,438	1,528	+ 6%
Teaching Assistantships	539	733	+36%
Ford Foundation	1,191	1,015	-15%
Other	--	--	-
Total	$4,016	$4,060	+ 1%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected	Actual
1967-68	300	346
1968-69	525	611
1969-70	705	797
1970-71	840	848
1971-72	540	582
1972-73	315	456
1973-74	135	301
Total Student Years	3,360	3,941

University: WISCONSIN

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$9,550,000	15.5%	$3,287,800	7.1%
Outside Fellowships	16,265,000	26.4%	6,343,700	13.7%
Teaching Assistantships	20,500,000	33.3%	11,521,800	24.9%
Ford Foundation	5,145,000[a]	8.4%	4,400,000	9.5%
Other	10,150,000	16.5%	20,772,600	44.8%
Total	$61,610,000	100.0%	$46,325,900	100.0%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	-6,262,200	-65.6%
Outside Fellowships	-9,921,300	-61.0%
Teaching Assistantships	-8,978,200	-43.8%
Ford Foundation	-745,000[b]	-14.5%
Other	+10,622,600	+104.7%
Total	15,284,100	- 24.8%

* Figures express total seven year expenditures for each category, unless otherwise specified.

a. Wisconsin requested $5.145 million from the Foundation, but received only $4.4 million. A modified proposal reflecting that change was not prepared.

b. Comparison based on the original proposal that requested $5.145 million.

University: WISCONSIN

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	$303	$189	-39%
Outside Fellowships	517	358	-31%
Teaching Assistantships	651	649	- .4%
Ford Foundation	164	248	+51%
Other	323	1,171	+263%
Total	$1,957	$2,611	+33%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected	Actual
1967-68	3,450	3,414
1968-69	3,955	3,513
1969-70	4,245	2,327*
1970-71	4,460	2,272
1971-72	4,810	2,180
1972-73	5,105	2,062
1973-74	5,450	1,976
Total Student Years	31,475	17,744

* Fewer departments participating.

University: YALE

Planned and Actual Financing of the Ford Foundation Graduate Program *

	Projected Budget		Actual Expenditures	
	Amount	Percent of total	Amount	Percent of total
University Fellowships	$8,197,000	33%	$4,691,263	28%
Outside Fellowships	11,314,000	45%	7,749,964	46%
Teaching Assistantships	805,000	3%	NA	NA
Ford Foundation	4,400,000	18%	4,399,999	26%
Other	260,933	1%	8,768	0%
Total	$26,977,089	100%	$16,849,944	100%

Difference between Projected and Actual Expenditures, by Category

	Difference	Percent Change
University Fellowships	-3,505,737	-43%
Outside Fellowships	-3,564,036	-32%
Teaching Assistantships	NA	NA
Ford Foundation	1	0
Other	-252,165	-97%
Total	-8,127,741	-33%

* Figures express total seven year expenditures for each category, unless otherwise specified.

University: YALE

Per Student Breakdown of Graduate Program Outlays
index = student years

	Projected cost per student year	Actual Expenditure per student year	Percent Change
University Fellowships	$1,445	$ 856	-41%
Outside Fellowships	1,995	1,414	-29%
Teaching Assistantships	142	NA	NA
Ford Foundation	776	803	+ 4%
Other	46	2	-96%
Total	$4,404	$3,074	-30%

Number of Student Years in Graduate Program, Projected and Actual

Year	Projected	Actual
1967-68	374	340
1968-69	716	720
1969-70	1,047	996
1970-71	1,371	1,145
1971-72	1,058	962
1972-73	721	758
1973-74	385	560
Total Student Years	5,672	5,481

Appendix B

Individuals Interviewed on Site Visits at the Ten Universities

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Individuals Interviewed on Site Visits at the Ten Universities

University of California at Berkeley:

Albert H. Bowker, Chancellor.

Sanford S. Elberg, Dean, and Eugene A. Hammel, Associate Dean, Graduate School.

Ralph W. Rader, Chairman, Graduate Studies, English Department.

Victor Jones, Chairman; Carl G. Rosberg, former Chairman; and Barbara Darnell, Administrative Assistant; Professors Jack Citrin, James Boyd, and Ken Dowitt, Political Science Department.

Benson Mates, Chairman, and Barry G. Stroud, Graduate Student Adviser, Philosophy Department.

Robert J. Brentano, Chairman, Graduate Advisory Committee (1967-69 and 1973-75), and Ge.. A. Brucker, Chairman (1969-72), History Department.

Neil Smelser, Chairman, Sociology Department.

Earl R. Rolph, Chairman, and Steven M. Goldman, Chairman of the Graduate Committee, Economics Department.

University of Chicago:

D. Gale Johnson, Provost and Eliakim Hastings Moore Distinguished Service Professor, Department of Economics.

Manley H. Thompson, Jr., Professor, Department of Philosophy and the College.

Stuart M. Tave, William Rainey Harper Professor in the College and Professor and Chairman, Department of English.

Peter F. Dembowski, Professor and Chairman, Department of Romance Languages and Literature.

Catherine Ham, Associate Professor and Lecturer, Department of English, and Dean of Students, Division of Humanities.

Emmet Larkin, Professor, Department of History.

Joseph Cropsey, Professor, Department of Political Science.

Kenneth J. Rehage, Professor Emeritus, Department of Education and Graduate School of Education, and Dean of Students, Division of Social Sciences.

Cornell University:

W. Donald Cooke, Vice President for Research, former Dean, Graduate School, and William W. Lambert, Dean, Graduate School.

Alice Colby and John W. Kronik, Professors, Romance Studies.

Donald Hayes, Chairman, Sociology Department.

Richard Polenberg and Joel Silbey, Professors of History.

Jean Blackall and Phillip Marcus, Professors, English Department.

R.C. Stalnaker and David Lyons, Professors, Department of Philosophy.

George Staller and Peter McClelland, Professors of Economics.

Harvard University:

Burton Dreben, Dean; Peter McKinney, Administrative Dean; Nina Hillgarth, Assistant to the Dean and Director of Special Students; and Donna Martyn, Assistant to the Dean, Graduate School of Arts and Sciences.

Reginald Phelps, former Associate Dean, Graduate School of Arts and Sciences.

Jack Stein, Professor of German.

Morton Bloomfield, Professor of English.

Bernard Bailyn, Professor of History.

James Duesenberry, Professor of Economics.

Wendell Clausen, Professor of Classics.

University of Michigan, Ann Arbor:

Alfred Sussman, Dean, and George E. Hay, Associate Dean, School of Graduate Studies.

Robben Fleming, President.

Gayl D. Ness, Associate Chairman, Sociology Department.

H.D. Cameron, Professor of Classics.

Jay L. Robinson, Chairman; Richard Bailey, Graduate Chairman; and Hugh English, former Graduate Chairman, English Language and Literature Department.

Jaegwon Kim, Acting Chairman, Department of Philosophy.

Harold T. Shapiro, Chairman, and Robert Holbrook, Chairman, Graduate Studies, Economics Department.

R. A. Rappaport, Chairman; Richard Ford, Director of the Museum of Anthropology; and William Shorter, Director of the Center for Near Eastern and North African Studies, former Chairman, Department of Anthropology.

University of Pennsylvania, Philadelphia:

Donald H. Langenberg, Dean, Graduate School (since 1974); Michael H. Jameson, Dean (1966-68); John H. Hobstetter, Dean (1968-70); Daniel J. O'Kane, Dean (1970-74); and Arthur A. Brennan, Jr., Assistant to the Dean (since 1968);

Jere R. Behrman, Chairman, Department of Economics, and Robert B. Summers, Chairman, Graduate Group in Economics.

Francis E. Johnston, Chairman, Department of Anthropology.

Martin Meyerson, President.

Joel O. Conarroe, Chairman, Department of English, and Robert F. Lucid, Chairman, Graduate Group in English.

Frank P. Bowan, Chairman, French Department, and Russell P. Sebold, Chairman, Spanish Department (Romance Languages).

Renee C. Fox, Chairperson, Department of Sociology, and E. Digby Baltzell, Chairman, Sociology Group.

Richard S. Dunn, Chairman, History Department; Robert M. Hartwell, Chairman, Graduate Group in History; and John Shover, former Graduate Group Chairman.

Princeton University:

Alvin B. Kernan, Dean, Graduate School, and David Redman, Assistant Dean, Graduate School.

Paul Benacereff, Professor of Philosophy, former Dean, Graduate School (1965-67).

John Fleming, Dudley Johnson, and Walter Litz, Professors of English, each at different times Director of Graduate Studies in English.

Karl Uitti, Chairman, and Edmund King, Director, Graduate Studies, Romance Language Department.

Henry S. Biener, Chairman, Department of Politics.

Michael Rothschild, Director of Graduate Studies, Economics Department.

Stanford University:

Bliss Carnochan, Dean; Lincoln Moses, former Dean; and Merrill Carlsmith, former Associate Dean, Graduate School.

Richard W. Lyman, President.

Virgil K. Whitaker, former Dean, Graduate School.

Alphonse Juilland, Chairman, and Raymond Giraud, former Chairman, Department of French and Italian.

Charles Fifer, Director, Graduate Studies, 1967-69; Tom Moser, Chairman, 1967-68; Ron Rebholz, Director, Graduate Studies, 1974-75; and John Loftis, Chairman, English Department.

George Knowles, Chairman (1967-72), and John Wirth, former member, Graduate Admissions Committee, History Department.

James Rosse, former Director of Graduate Studies, Economics Department.

Frank Cancian, Chairman, and Ben Paul, Director of Graduate Support, Anthropology Department.

University of Wisconsin, Madison:

Edwin Young, Chancellor.

Robert M. Bock, Dean, Graduate School; Ian C. Loram, Associate Dean, and Mareda Weiss, Assistant Dean, Graduate School; Gwen Wachal, Graduate School Fellowships Advisor.

Bryant Kearl, Professor, Agricultural Economics, former Graduate School Dean and Vice Chancellor.

Burton Weisbrod, Professor, former Chairman, Admissions and Financial Aid; Judy Craig, Graduate Advisor, Department of Economics.

Robert Nesbit, Assistant Chairman; Domenico Sella, Professor, Former Fellowships Chairman, History Department.

M. Crawford Young, Professor, former Graduate School Dean and Department Chairman; Dennis Dresang, Associate Chairman, Political Science Department.

John Moulton, Assistant to the Chairman; Gerald MacCallum, Professor, former Department Chairman, Philosophy Department.

Herbert Gochberg, Chairman; Merle Perkins, Fellowships Chairman; Christopher Kleinhenz, Associate Chairman, French and Italian Department.

Earl Aldrich, Chairman; E.R. Mulvihill, Associate Dean L&S, former Department Chairman, Spanish and Portuguese Department.

Standish Henning, Director, Graduate Division; Edgar Lacy, Associate Chairman, English Department.

Yale University:

Jaroslav J. Pelikan, Jr., Dean, and Paul Darlington, Assistant Dean, Graduate School.

John W. Hall, Chairman, History Department.

James Tobin, Chairman, Economics Department.

Karsten Harries, Chairman, Philosophy Department.

Kingman Brewster, President.

A. Dwight Culler, Chairman, English Department.

John Perry Miller, former Dean, Graduate School.

Joseph La Palombara, Chairman, David Mayhew, Bruce Russett, and William Foltz, professors, Political Science Department.