STATEMENT CONCERNING PUBLICATIONS OF RUSSELL SAGE FOUNDATION

Russell Sage Foundation was established in 1907 by Mrs. Russell Sage "for the improvement of social and living conditions in the United States of America." While the general responsibility for management of the Foundation is vested in the Board of Trustees, the responsibility for facts, conclusions, and interpretations in its publications rests with the authors and not upon the Foundation, its Trustees, or its staff. Publication under the imprint of the Foundation does not imply agreement by the organization with all opinions or interpretations expressed. It does imply that care has been taken that the work on which a manuscript is based has been thoroughly done.

M-9
Price, $3.50

The EDUCATION of SOCIOLOGISTS in the UNITED STATES

by ELBRIDGE SIBLEY

RUSSELL SAGE FOUNDATION
New York 1963

Printed in the United States
of America

Library of Congress
Catalog Card Number: 63–21919

WM. F. FELL CO., PRINTERS
PHILADELPHIA, PA.

Contents

Tables

Preface

READERS OF THIS REPORT should be forewarned that it does not purport to present a fair account of the historic progress of sociology, or a fair assessment of its present status and its promise of greater future achievements. Other writers have amply documented that history and this promise; my task has been to cast a critical eye upon the processes by which professional sociologists are currently being educated in the graduate schools of the United States. If in the effort to confine my report to matters in which improvement is needed and feasible, I have left unsaid many good and cheerful things, this is to be ascribed neither to malice nor to unawareness of what sociologists are accomplishing.

I am convinced that an autonomous sociological profession, based on sound training in a scientific discipline of its own, will be called upon to play an increasingly important role both in educating the American public and in the actual management of our society; and that if these challenges are to be met, there must be higher and in some respects more uniform minimum standards of basic scientific training for sociologists.

Among the hundreds of faculty members, other professional sociologists, and graduate students with whom I have talked in the course of my investigation, I have found little complacency about the present state of graduate education in sociology. I shall venture, in the following chapters, to point out two kinds of discrepancies: between what university catalogs say that their sociology departments offer and the actual training which typical students receive; and between prevailing patterns of training and those which I would consider desirable. In the latter regard, I claim no right to speak *ex cathedra;* if my sugges-

tions provoke constructive dissent they may serve a more useful purpose than if they elicit only bland acquiescence.

In discussions which led to undertaking the study here reported, the remark was occasionally heard that the field of sociology needs a "Flexner Report." I must hasten to disclaim either ability or intent to offer a comparably definitive set of findings. While some parallels could be drawn between medical education in the early twentieth century and the education of professional sociologists today, there are crucial differences between the two which debar a critic of the latter from emulating Abraham Flexner's courageous censure of individual schools. In the Johns Hopkins Medical School of his day, Flexner had a prototype against which the shortcomings of other schools could be measured. No one graduate department of sociology today could be taken as a standard for comparison. The most essential difference, however, is that whereas the medical schools had—and have—the clearly defined primary mission of preparing physicians to treat the sick, there is no similar consensus as to the objectives of education in such a subject as sociology, which is at once a liberal discipline and a field of training for nonacademic professional work. Each institution offering degrees in this field has set its own goals, and cannot fairly be condemned for failing to do what it does not set out to do.

If much that I have to say is not new, I still hope that a résumé of some familiar issues and problems may stimulate more determined efforts to resolve them. Collective action will be needed to remedy some of the observed deficiencies, but individual universities and departments of sociology can accomplish much by themselves if they will.

The American Sociological Association's Committee on Training and Professional Standards recommended in 1958 that a critical study of graduate training in sociology be undertaken. Approving the Committee's proposal, the Association persuaded Russell Sage Foundation to finance the study. The Social Science Research Council granted me partial leave from my regular duties beginning in June, 1960, provided office space, and acted as fiscal agent in administering the funds. All of these organiza-

tions have given me complete freedom in planning and carrying out the study, and have correspondingly left me with full responsibility for my findings. I thank them for the challenge and for the confidence it implies.

A list of the sociologists, academic administrators, and graduate students whose freely given information and judgments are anonymously incorporated in this report would number more than a thousand. To these, who cannot be named here, I am grateful. Especial thanks are due to M. H. Trytten and Lindsey R. Harmon of the Office of Scientific Personnel, National Academy of Sciences—National Research Council for letting me exploit the resources of their registry of doctorates; to Janice Harris Hopper and her staff in the office of the American Sociological Association; to Joseph Tanenhaus for arranging for our use of New York University's statistical laboratory; and to numerous individuals cited in footnotes throughout the report for making available unpublished data.

I am indebted to those members of the American Sociological Association's Committee on Training and Professional Standards who have read the manuscript and offered constructive comments: to Edgar F. Borgatta, Albert K. Cohen, Walter Firey, Walter T. Martin, and especially to Robert K. Merton whose numerous incisive criticisms are reflected in the revised text.

For excellent secretarial and research assistance I am indebted to Norma O'Donnell (now Mme. François Blaquart) and to Ruth Gerard Poley. Mrs. Poley deserves particular credit for her accurate and intelligent statistical work. In the latter stages of manuscript revision Mary A. Knight's help has been invaluable. And I must publicly thank my wife for expurgating bad rhetoric, bombast, and jargon from the manuscript.

E. S.

1. Introduction

IT IS TIMELY to take stock of the education of sociologists in the United States for at least three reasons. First, the basic science or discipline of sociology has continued to evolve; in particular, it has developed or adopted increasingly sophisticated concepts and methods of research and analysis, while making less widespread progress in theoretical synthesis. Second, sociologists have come more consciously to feel a need for more explicit professional standards; this feeling is fostered partly by expanding opportunities for the application of their special skills to the practical management of social affairs and partly, perhaps, by awareness that both within and outside the academic realm they face increasing competition from other professional groups that deal with some of the same problems of social relations. Third, along with many other professional and scientific fields, sociology faces an already marked and prospectively still more severe shortage of well-qualified personnel, and demands for accelerated output of advanced degrees are already growing more insistent.

As already indicated in the Preface, this report does not pretend to offer a comprehensive and balanced account of the development of sociology. It is nevertheless necessary to start with some observations on the present state of the discipline; and it may be well also to take note in passing of the fact that some contemporary critics of sociology are still saying things that were said more than a half-century ago. In assessing the current performance of the graduate schools which train sociologists, we must continually ask whether as much is being done as could and should be done to remedy the alleged shortcomings.

The Present Situation

Sociology has been trying for many decades to come of age as a science and as a professional field. It can be said now to be in a late stage of adolescence, at a time of potentially rapid maturation. To suggest that some radical improvements in the training of sociologists are urgently needed is not necessarily to censure what has been done thus far; it is rather to say that the schools will need to meet higher standards in the future than have seemed necessary or even attainable heretofore.

At present both centripetal and centrifugal tendencies are evident. Increased concern for conceptual and theoretical integration of empirical studies is reflected in much current literature. On the other hand, there are divergences which need to be kept from widening too far if sociology is to advance as an integral science. Lines of cleavage run in various directions: between verbalists and quantifiers; between empiricists and theorists; between those who use mathematics and those who do not. To the extent that these differences give rise to polemics based on mutual ignorance, they are to be deplored. Interplay between exponents of different approaches is essential to the vigorous growth of any science, and it is of critical importance that all who claim the status of professional sociologists should be able to communicate with each other, even though the time is past when one person could claim full mastery of all aspects of sociology. It is equally imperative that the builders of formal models of society should appreciate the empirical implications of their constructs, as it is that those who pride themselves on their "sociological imagination" should be prepared to submit their ideas to testing by the formal methods of science. One major obstacle to effective collaboration between the two groups just mentioned is the high prevalence of mathematical illiteracy and lack of discipline in the logic of science among otherwise well-educated sociologists.

Another aspect of the present scene calls for mention at this point: Both within and outside academic walls sociologists face

direct competition from several directions. Social anthropologists no longer confine their studies to exotic and pre-literate societies but compete with sociologists in studying contemporary cities and industrial societies; growing numbers of "behaviorally" oriented political scientists and smaller numbers of historians have entered what used to be called the fields of political and historical sociology; some economists concern themselves with the social contexts of economic behavior; psychologists, systems analysts, operations-researchers, and applied statisticians frequently deal with sociological problems without always fully recognizing them as such. This competition must be met, not by diffuse efforts to outdo the competitors on their own several grounds, but by developing standards of professional competence in sociology which will be unquestionably as high as those of the other disciplines involved.

A Retrospective Glance

Lest preoccupation with the present state of affairs cause us to lose perspective, it is well to recall briefly that the potentialities and weaknesses of sociology as a discrete science were being discussed many years ago in language that still sounds contemporary. In 1916 Albion W. Small surveyed the development of sociology in a retrospective essay which, to use a Quaker's phrase, "speaks to our condition" today. Radiating confidence in the future of his profession, he declared that sociologists must ultimately be able not merely to predict but to manipulate social behavior:

> A generation ago we heard oftener than we do today that the criterion of science is its power to predict. . . . We are content to predict only [as in the case of astronomy] when we dare not think of control. . . . We are not satisfied with predicting what chemical elements would do under hypothetical circumstances. We decide which of these things it is desirable for them to do, and we qualify ourselves to make them do it.[1]

[1] "Fifty Years of Sociology in the United States (1865–1915)," *American Journal of Sociology*, vol. 21, May, 1916, p. 863.

Yet Small was not unaware of the criticisms that were leveled at sociology; he quotes an earlier article by Frank L. Tolman:

> Sociology must define itself either as a body of doctrine, as a point of view, or as a method of research. It has tried to define itself as a body of doctrine, and it has failed in the attempt. If it is merely a point of view, it cannot be separated from the matter in discussion and must subordinate itself to the various social sciences. It has yet made no serious attempt to develop itself as a method of research, and must develop itself on these lines, and show its fruitfulness before it can demand consideration at the bar of science.[1]

The issues which concerned Small and Tolman are still alive: there is still no universally accepted body of sociological doctrine—or general theory as we would say today; there are those who deny that the adoption by other disciplines of what may be called a sociological point of view justifies the claim of sociology to the status of a science in its own right; and even the existence of any uniquely sociological methods of research is sometimes questioned. Prediction in sociology is still either intuitive or very narrowly circumscribed; and control, which Small came to regard as its ultimate goal, remains to be achieved. A recent observation by Leonard S. Cottrell, Jr., might almost be taken for something written by Tolman at the beginning of the twentieth century:

> . . . At present sociological theory is essentially a miscellaneous collection of descriptive formulations with little if any predictive power. . . . Ultimately, there will be no avoiding the disturbing question as to whether a science with methods and no theory can become in fact a science . . . explicit theory applicable to most problems encountered does not exist, but training in sociology does develop a perspective and approach which sensitizes the sociologist to see problems in a context. . . .[2]

It would be fatuous to claim that sociology, as a discrete science, has as yet fulfilled the promises of its pioneer who, many decades ago, did not blush to call it "the cap sheaf and crown of

[1] "The Study of Sociology in Institutions of Learning in the United States," *American Journal of Sociology*, vol. 8, July, 1902, p. 86.

[2] Unpublished memorandum, quoted by permission.

the sciences," and the "highest landing on the great staircase of education."[1] But while few if any representatives of other disciplines would yet be willing to grant sociology the preeminent place Lester Ward claimed for it, its current influence upon historians, economists, psychologists, and anthropologists is not hard to discern. This influence can be expected to increase only as the science of sociology itself continues to grow from within.

Popularization of sociological notions also goes on apace outside the academy despite a widespread popular predilection for ridiculing sociological jargon. Talcott Parsons has observed that "the term sociology is coming increasingly to be a central symbol in the popular ideological preoccupations of our time."[2] If sociology is to continue to infiltrate not only other academic fields but popular ideology as well, it must become scientifically more mature or those who borrow its language will confuse themselves and others. Diffusion of sociological concepts among the laity as well as among other social scientists makes it all the more important that advanced degrees in sociology should merit recognition as evidence of solid competence in a special scientific field. The popular notion that any educated man is capable of being his own sociologist will not be exorcised by proclamation; it can only be gradually dispelled by the visible accomplishments of professionally competent sociologists. As Robin Williams has wisely observed, "An obvious distinction must be drawn between recognition [by the literate public] of the importance of social factors . . . and recognition and acceptance of the profession of sociology."[3]

Scope of the Study

The basic preparation of professional sociologists is the central concern of this inquiry; no attempt has been made to examine in detail the problems involved in specialized vocational training

[1] Ward, Lester F., "The Place of Sociology Among Sciences," *American Journal of Sociology*, vol. 1, July, 1895, p. 16.

[2] "Some Problems Confronting Sociology as a Profession," *American Sociological Review*, vol. 44, August, 1959, p. 559.

[3] Williams, Robin M. Jr., "Continuity and Change in Sociological Study," *American Sociological Review*, vol. 23, December, 1958, p. 623.

for a variety of functions in which limited segments of sociology are immediately useful. Vocational aims and destinations of those who take advanced degrees in sociology must be taken into account, however, for as has often been remarked, more students enroll in graduate schools of arts and sciences for the purpose of learning to make a living than for the purpose of satisfying their pure intellectual curiosity.

Only incidental references are made to undergraduate instruction in sociology as a liberal arts discipline; the study is centrally concerned with the training of professional sociologists in the graduate schools of arts and sciences.

Sources of data and procedures of the study are described in Appendices A and B.

2. Summary of Findings and Recommendations

IN THIS CHAPTER some salient findings will be briefly summarized and some suggestions for improvement will be offered. Lest some of the specific recommendations appear by themselves to be quite arbitrary, some underlying premises will first be stated.

> First: Quality should take priority over quantity if it is not possible at the same time to expand and to raise standards.
>
> Second: Basic training in general sociology should take priority over specialized training for particular jobs.
>
> Third: Improvement of doctoral training should take priority over terminal training at lower levels.

The first proposition is, I think, valid beyond dispute, though widely honored in the breach. The second must be accepted if one admits the existence of a general science of sociology and its relevance to the problems with which graduates will deal, whatever their particular jobs. The third proposition does not imply that programs of training which terminate below the doctoral level are of negligible utility; rather, let us say more explicitly that any graduate department which purports to give training leading toward the doctorate should give first priority to the educational needs of those students who can be expected ultimately to attain the highest degree.

It would be short-sighted, in evaluating existing educational policies and practices, to be guided solely by the immediate demands of the market for sociologists as they are now trained. It would likewise be short-sighted to assume that the science of sociology itself will demand tomorrow only the same skills and

knowledge it demands today. The criterion of good doctoral training should be the graduates' readiness to continue learning and to keep abreast of unpredictable future developments in their science.

With these generalities in mind, let us turn to a quick synopsis of the present composition of the sociological profession and the numbers of future sociologists currently in training, and then to examination of several aspects of the educational process.

Some Basic Statistics

A few summary facts about the numbers of holders of advanced degrees and their occupations, and about the numbers currently studying for degrees may give perspective to the summary of findings which follows. More detailed statistics are reserved for later chapters.

There are at present in the United States 2,500 or more holders of Ph.D. degrees in sociology, and probably twice as many M.A.'s who are unlikely ever to become Ph.D.'s. Their numbers have grown at an accelerated rate since World War II; about two-thirds of the living Ph.D.'s received their doctoral degrees within the past ten years.

The occupational distributions of holders of master's and doctor's degrees are quite different—a fact that should not be ignored by sociology departments which offer terminal degrees at both levels. Fully seven out of ten Ph.D.'s today hold regular appointments in universities and four-year colleges; they identify themselves primarily as scholars. The proportion in academic positions has not changed appreciably in the past two decades and perhaps longer. In contrast, only one out of eight holders of terminal master's degrees is located in such an institution.[1] These statistics by themselves do not, however, reflect the increasing extent to which Ph.D.'s are also involved—via consultantships, part-time employment, research contracts and the like—in government, business, welfare, and other nonacademic affairs.

Between 150 and 200 Ph.D. degrees in sociology are conferred annually; the output of master's degrees is about three times as

[1] In this context an M.A. degree is considered "terminal" unless the holder says on his questionnaire that he intends to seek a doctoral degree in sociology.

great, and a substantial majority of these are terminal degrees. The increase in the number of Ph.D.'s in sociology immediately after World War II was almost exactly proportional to that of Ph.D.'s in all arts and science fields combined. The number of Ph.D. degrees conferred in sociology in the second half of the decade of the 1950's was the same as in the first half, and the number in 1960 was only slightly larger than the previous annual average. Anthropology, political science, and psychology have shown relatively more rapid and continued growth.

More than 80 institutions in the United States have at some time granted a doctoral degree in sociology; at least 70 universities currently offer the degree, but nine of them account for almost half of the degrees given in the past decade. In a recent two-year period, 141 universities and colleges gave one or more master's degrees in sociology; the total number of institutions which may offer such degrees is indeterminate. About half of the M.A. degrees are conferred by departments which also offer the doctorate in sociology. The total annual output of bachelor's degrees in sociology is over forty times as large as the output of doctor's degrees, and even the universities which offer the doctorate collectively confer more than ten times as many bachelor's as doctor's degrees in sociology. Thus in terms of gross numbers involved, teaching undergraduate courses in sociology vastly overshadows the enterprise of training candidates for advanced degrees.

The most recent nationwide data available indicate that 3,500 or more resident graduate students are currently enrolled as seekers of advanced degrees in sociology, about two-thirds of these being in departments which offer the doctorate. The total enrollment in graduate courses in sociology, however, includes considerable additional numbers of students who are not working for degrees in that field.

Calibre of Students

Is graduate study in sociology attracting sufficiently numerous students of superior ability? This question, which is paraphrased almost daily with reference to every academic and professional

field, is usually answered in the negative. Anyone who is convinced of the importance of his own calling almost inevitably feels that the world would be better if a larger proportion of the ablest members of the younger generation were to follow in his footsteps.

The average calibre of the nation's graduate students of sociology is unimpressive. Available statistics do not permit precise and unequivocal comparisons with students of other scientific disciplines, but such data as exist afford at best no ground for complacency.

The prospective expansion of demand for admission to graduate schools presents both dangers and opportunities in this regard. With more applicants among whom to choose, some departments may find themselves in a position to be more selective, provided they are willing to resist the temptation to expand rapidly. But departments in most state-supported and other universities which are committed to serving all possible demands of their local clienteles for continuing education, must expect growing pressure to keep their doors open to all who have minimal academic credentials. No longer do only students of high scholarly ability and motivation seek admission to graduate study. A master's or even a doctor's degree has come to be widely regarded as simply a necessary passport to occupational advancement, just as the bachelor's degree has long since ceased to be the mark of intellectual superiority that it once was.

A discipline such as sociology, which undergraduates have learned to regard as comparatively easy, can be expected to attract growing numbers of college graduates of mediocre or less ability, along with some who are potentially capable of high achievement. Selective admission and selective elimination must be vigorously practiced by any department which hopes to improve its intellectual climate and raise its standards of training. Many sociology departments, while avowing that the burden of inferior students hampers their efforts to raise their academic standards, appear at the same time apprehensive that more stringent admission policies would lead to an intolerable decline of their graduate enrollments. Yet their very laxity of standards

undoubtedly repels students who seek more challenging disciplines. The loss of a small number of the latter can be more serious than the loss of a greater number of less talented and less highly motivated students. For the long run, the aim ought to be to make graduate training in sociology attractive to students who are willing and able to work hard at difficult studies, even if this means making it less attractive to others.

Undergraduate Preparation for Graduate Study

A large proportion of graduate students in sociology, as we have already remarked, enter the graduate schools with little specific preparation for what lies ahead. This is true both of the third or more of them who have not majored in the subject as undergraduates and of a great many of those who have done so. The total number of undergraduates taking courses in sociology is not recorded, but from the fact that forty times as many bachelor's as doctor's degrees in sociology have been granted in recent years, it is obvious that only a very small minority of those enrolled even in advanced undergraduate courses are planning to become professional sociologists.

Under these circumstances most undergraduate colleges cannot be expected to give what could be called pre-professional training in this field. A few institutions give such training; these include a small number of independent liberal arts colleges which send a high proportion of all their graduates on to graduate study, and some large universities which have introduced special undergraduate honors programs. They account for only a small proportion of the total number of graduate students. Recipients of doctoral degrees in sociology in a recent six-year period held bachelor's degrees from more than 300 different colleges; in most of these institutions, courses in sociology and in the social "sciences" in general have catered and will continue to cater to students who do not aspire to advanced study in the same fields.

Without getting involved at this point in debate as to the desirability of pre-professional specialization in college, the fact must be faced that for some time to come future sociologists will have to be recruited largely among students who have not begun

to look forward to this career until late in their college years or even after graduation. The prospect of better articulation of undergraduate and graduate curricula in sociology for all or most students must await wider acceptance of the proposition that an introduction to the scientific study of society is a desirable part of anyone's general education. The graduate schools which train college teachers of sociology can and ought to exert more influence in that direction; they are not in a position to demand that all colleges offer explicitly pre-professional curricula in sociology, nor would it be practical at present to make such training an absolute prerequisite for admission to graduate study.

Meanwhile, those students who enter graduate school already well grounded in the essentials of scientific sociology ought to be promptly identified and allowed to advance as rapidly as they are able.

Ambiguous Objectives of Graduate Programs

A major impediment to the improvement of advanced training in sociology is the fact that most of the students entering graduate departments are destined to leave at various stages before the doctorate, a majority dropping out within the first year or two. This would be less serious if it involved simply the progressive elimination of those who reach the limits of their capacities at intermediate stages on the way toward a common goal. Actually, the presence of preponderant numbers of students who have no real intention of going all the way to the highest degree but want quick answers to questions to which there are no quick answers, has a degrading influence on the nature and quality of instruction in the first years of graduate study. A case can indeed be made for offering terminal programs of training leading to a master's degree in one or two years for those whose aspirations are limited to qualifying for particular jobs, but such programs do not lay a good foundation for higher scientific achievement.

Departments offering advanced degrees in sociology, in catering to the diverse interests of their students, have tended to spread their limited resources too thinly. And the demands of the employment market, together with the growth of numbers of

graduate students, will create increased pressures which, unless deliberately resisted, will lead to further dilution of these resources. Demands for various special kinds of partial training in sociology, even if intrinsically meritorious, ought not to be allowed to obscure the prime importance of developing a growing corps of professional sociologists who are both innately talented and well trained in all basic aspects of their science.

Akin to the problem posed by having to deal simultaneously with students destined for the most advanced training and those whose aims or realistic expectations are lower, is the problem of reconciling demands for practical vocational preparation with the need for more adequate scientific training. A small but vocal minority of sociologists advocate more emphasis in doctoral programs on formal training for specific nonacademic vocational roles, even including practical instruction in such matters as budgeting and academic administrative procedures. But the preponderant need at present is to raise the standards of training in the essential core of sociology itself. The present study is focused on this need, a need which can be obscured too readily by preoccupation with the immediate demands of a marketplace interested only in hiring people to do certain specialized jobs.

Whether a sociologist's job is to teach an undergraduate course in marriage and the family, conduct public opinion surveys, or advise a hospital staff and its patients on matters of social relations, he needs first to be well grounded in general sociology. A doctoral degree in sociology, as in any other field, should attest an acceptable level of attainment in the fundamentals of the science, whatever may be the individual's special interests. This cannot yet be categorically claimed for all advanced degrees in sociology. Even those departments which are able to offer excellent basic training in all the essentials appear frequently to permit candidates for degrees to slight those aspects of the subject in which they are least interested.

First Things First

Just as a future physician must study the basic medical sciences before he begins his clinical training and must learn anatomy

before he practices surgery, a future sociologist ought to learn first things first.

As compared with curricula in more mature scientific and professional fields, the usual sequence of studies leading to the doctorate in sociology can be described as topsy-turvy. Most undergraduate courses and most of the courses offered to first-year graduate students in sociology are at once introductory and terminal, neither presupposing any specific previous study of the discipline nor laying the groundwork for further advanced study of the same topics. This stricture is borne out by common observation despite the statements of prerequisites which appear in catalogs.

Although most of the departments visited were continually engaged in self-appraisal and several were in process of revising their programs of graduate study, one could not fail to be impressed by the generally low level of instruction to which the average beginning graduate student is subjected. True, students who are obviously exceptionally able or well prepared are often placed immediately in more advanced courses; but for many students in most departments the required "cook-book" course in research methods and the "Cook's tour" survey of names and selected dicta of sociological theorists tend to impart a specious sense of closure, leaving them with the feeling that they know as much as they need to know and dulling rather than whetting their appetites for further advanced study. One Ph.D. recently epitomized his own experience as a graduate student in the remark that "I was fortunate to come into sociology in my second year as a graduate student, thus skipping . . . the empty trash usually handed out in introductory [courses]." With due allowance for hyperbole, his observation fairly reflects the reaction of a great many Ph.D.'s to the first phase of their graduate training.

An accumulation of notes on numerous courses of this nature may have some value for an individual who terminates his studies at the M.A. level or below and pursues a vocation in which he is not called upon to cope with sociological problems on his own responsibility; it does not constitute a suitable foundation for the final phases of doctoral training.

From the time a prospective Ph.D. enters the graduate school, his studies ought to lead consecutively toward that degree. Since it is impossible in many cases to identify a prospective Ph.D. at the outset, the rule should be that every entering student in a department offering the doctorate will be presumed to be working toward the doctoral degree until it is evident that he should not. This means that first-year graduate courses should not be terminal courses but courses which lay foundations for further advanced work. Unless these foundations are laid at the outset, they are unlikely ever to be laid. The discouragement of some who are impatient to finish their studies is a price that must be paid if those who go farther are not to discover fundamental weaknesses in their training when it is too late to remedy them.

Such a policy would doubtless lead to the earlier departure of numerous students who under present practices linger on for a year or two, or even longer, without committing themselves to a definite goal and without confronting any very rigorous tests of their fitness to become professional scientists. It would likewise discourage some who might have met the presently prevailing requirements for a terminal master's degree; but that is a price that may have to be paid for a much-needed substantial improvement of doctoral standards.

What has just been said applies especially to departments which offer both Ph.D. and terminal M.A. degrees, but it must be added that some departments which make it their policy to admit only prospective Ph.D.'s also tend to let beginning students spend too much of their time in superficial courses, postponing till a day which does not always come some of the elements of a well rounded scientific education.

More systematic assessment of students' early progress is conspicuously needed in some of the large graduate departments. This would be more feasible if some of the following recommendations for curricular reform were adopted. Under present conditions not only do many students largely waste a year or more of their own time, but their presence is detrimental to the intellectual climate of the department.

Uniformity and Diversity Among Graduate Schools

Obviously, not all of the seventy-odd schools which now offer the Ph.D. degree, and few of the additional scores of schools which regularly or occasionally grant master's degrees in sociology, are equipped with the personnel and facilities needed to provide a high quality of training in the fundamentals of general sociology and in related methods and technical skills. Some of the same factors which militate against more selective admission and retention of graduate students operate likewise to encourage the perpetuation, expansion, or initiation of training programs for which teaching staffs and facilities are inadequate. The devaluation of the very name of "university" which has occurred in recent years as more and more institutions of post-high-school grade have adopted that title, has been paralleled by a multiplication of offerings of advanced degrees by institutions ill equipped to lead their students beyond the baccalaureate.

Equally obviously, few if any sociology departments can afford really good opportunities for advanced concentration in more than one or two special fields of sociology and its practical applications. A rational division of labor among institutions would permit more effective use of their respective resources.

But for the inconvenient fact, already noted, that the ultimate destinations of a large proportion of students are unpredictable when they begin the graduate studies, it would be desirable to segregate at the very outset those who are to be briefly trained for subprofessional functions and those who are to be set on the way to becoming full members of the sociological profession. Granting the impracticality of assigning each beginning student irrevocably to one or the other category, those departments which offer doctoral training would do well to insist that all entering students begin as if they were to be Ph.D. candidates. The preponderant need of the profession for more and better trained Ph.D.'s would justify the resultant hardship that might be experienced by students who decide to aim only for a master's degree. Students transferring from departments that offer only master's degrees would then have to expect to take extra time to reinforce their

basic training if they later transfer to other institutions in quest of the doctorate. And conversely, students who, after once embarking on the doctoral curriculum, decide instead to take terminal master's degrees might find it necessary to take extra time for a variety of substantive courses that would not be included in the first year of the predoctoral program. On that basis, a very desirable increase of rigor in the first stages of predoctoral training would be possible. A practical obstacle to the adoption of such a policy would be the reluctance of some institutions to lower their sights to targets they are capable of hitting.

The suggestion that some agency should be empowered to give or withhold accreditation of doctoral programs must be rejected as implying a degree of consensus that does not now exist. In the absence of dictation from any external authority, each institution should reassess its own capacities, and ask whether its resources would be better used if they were devoted exclusively to doctoral training or to terminal training at some lower level. Some large departments might offer both, but might well differentiate the two more clearly, while some other departments might confine themselves to advanced work in special fields, admitting students only after they had received basic training elsewhere.

More uniform standards of basic training would permit freer transfers of students between schools, thus enabling them to go for the later stages of doctoral training to the schools best prepared to serve their special interests.

Orientation Toward Professional Goals

The first graduate year should be a time not only for laying sound intellective foundations but also for initiation into the subculture of the profession. In sociology perhaps more than in almost any other field, first-year students have difficulty in reorienting themselves as neophytes in a profession of whose goals, values, and demands upon its members they have brought with them only vague or erroneous notions. They need, in social-psychological language, to be re-socialized, to assimilate new self-images. It is not only students of mediocre ability and low aspirations who frequently suffer from *anomie;* some of those

who suffer most are among the ablest and most highly motivated, who become disillusioned by the low intellectual plane of their courses and bewildered by the seeming irrelevance of the faculty's specialized preoccupations to their own interests in finding large answers to the pressing problems of society. Particularly in large departments, they need more opportunities for personal contact with their seniors from whom they can gain a sense of what it means to be a sociologist.

Seminars should be substituted as far as possible for lecture courses in which opportunities for personal interaction with the teacher are minimal;[1] systematic provision should be made for meaningful contacts between new students and assigned faculty advisers—contacts not limited to having an adviser place his initials on one's registration card once a semester; advanced graduate students might be employed as counselors to new students; ideally, first-year students should have opportunities to work as assistants under the guidance of faculty members or mature students. Expensive though any of these arrangements would be, their absence is costly in terms of failure to get students started early on the way to professional maturity.

"The Core": "Theory" and "Methods"

Published prospectuses of institutions offering the doctorate in sociology reveal some consensus on what every candidate must study. The various rubrics appearing in different catalogs can be subsumed under a few categories: general sociological theories, the structure and functions of social groups and organizations, the psychology of social interaction, and methods of empirical re-

[1] Albert K. Cohen has suggested that the gains expected from substitution of seminars for lectures may entail some losses:

> "The extensive use of seminars in lieu of courses . . . may be one reason why 'advanced' sociology seems so shapeless. . . . The teacher . . . is relieved of the burden of ever having to put his own thoughts in order . . . but can get away with responding *ad hoc* to points raised in seminar." (Letter, quoted by permission)

His comment may serve as a reminder of the need for systematic presentation of theories, facts, propositions, and issues; it does not gainsay the beginning students' needs for personal interaction with their teachers, and for a sense of active participation in their own education.

search both quantitative and nonquantitative. To these universal requirements, many if not most departments add the study of culture as developed by the adjacent discipline of anthropology.

In actuality, however, the minimum level of attainment demanded in each of these areas is exceedingly low. A student who is not spontaneously attracted to theorizing may have only to memorize the names of a number of theorists and to associate them with certain clichés; one who shrinks from mathematics (as many do) may satisfy the requirement in statistical methods by being once led through the motions of computing a few indices whose meaning he only vaguely apprehends; a student specializing in demography may earn his degree without troubling himself much about the social-psychological context of the human behavior his data reflect; another with a flair for intuitive thinking may be excused from really learning how his conclusions could be subjected to objective tests. In short, even those departments whose faculties include well-qualified specialists in all of the basic areas are content to let doctoral candidates pass too lightly over aspects of theory and method in which they are not primarily interested.

In each of the areas included within what by common consent must constitute the "core" of sociological training, some graduate students are highly interested; but in any particular area a majority of students are likely to be motivated rather by the desire to get a degree than by scholarly interest in the subject. At the same time, the faculty members respectively specializing in general theory, social structure, social psychology, and research methods are naturally inclined to give most of their attention to those students who choose to specialize in their own fields, and to tolerate very superficial work on the part of others who take their courses or examinations only because they are required to do so.

It is thus possible for a student, unless he has early developed a strong interest in a particular approach to sociology, to reach a late stage in his graduate study without being challenged to any strenuous intellectual exertion. One hears of students who have

passed the "core" examinations of a prominent graduate department with only the preparation they had received as undergraduates.

More substantial basic training than this should be demanded of all students before they are considered ready to devote themselves to intensive work in one or a few areas of concentration. Standards of "core" training in each of the several areas just mentioned should be higher than they generally are, and more attention should be given to integration of the several elements. Conceptualization and theoretical synthesis should not be treated as something quite separable from empirical observation; courses in methods of research should not be confined to imparting technical rules-of-thumb but should include an introduction to methodology in its broader sense, to develop awareness that methods condition the scope and nature of the general propositions that can be tested or derived.

Convergence of empirical and theoretical interests has been a significant trend in sociology in recent years; it represents progress toward maturity of the science. But it is not easy to devise a curriculum whereby beginning students quickly come to comprehend this. It is easier to offer them an introductory course in "theory," involving little more than rote memory of selected dicta of a number of writers. A common complaint of the more intelligent graduate students is that they have not had the experience of systematically analyzing certain theories and exploring their relevance to empirical problems and findings; nor have they, conversely, been taught to seek broader theoretical implications in the specific things they have learned in other courses. All students should participate in courses or seminars where those who are empirically inclined would learn the need for theoretical integration, and those of speculative bent would be challenged to subject their theorizing to the tests of experience. There are fortunate instances of the latter kind of instruction, but the former remains widely prevalent.

The superficiality of "core" courses in general theory is at least matched by the lack of rigor in conventional required courses in scientific methods and techniques. Although courses or examina-

tions in statistics and in various nonstatistical research methods are universally required of doctoral candidates, and almost universally of candidates for master's degrees, the minimum requirements are so slight that in most schools a student can attain the doctoral degree without having learned to use formal methods independently and responsibly or to be able to assess critically the work of those who do use them.

A prerequisite of high proficiency in formal methods of research and analysis of data is more competence in mathematics than most students of sociology possess when they enter graduate schools. The heavy dependence of empirical sociology upon statistical data and statistical inference cannot be denied. But it is not only as a basis for statistical techniques that training in mathematics is necessary or useful to a sociologist. While there are still some who regard as a mere fad the current efforts of some sociologists to construct mathematical models of society and to derive empirically testable predictions from them, an irreversible trend to more formal methods in the social sciences is only somewhat less far advanced than in the sciences which deal with nonhuman phenomena. Unless they are prepared to keep abreast of such a trend, sociologists will find themselves losing ground in competition with scholars and practitioners trained in more rigorous disciplines. If their preparation in the former respect continues to be as largely neglected as it is, sociologists will be unable to hold their own in competition with technically facile graduates of other disciplines who will not hesitate to offer answers to social problems on the basis of most naive conceptions of the nature of society.

The prevailing methodological weakness of sociologists in comparison, for example, with economists and psychologists, is a handicap that will grow increasingly serious unless vigorous steps are taken to remedy it. Yet up to the present only a handful of departments of sociology have even strongly urged that applicants for admission to graduate study should come equipped with a reasonable amount of mathematical training; and not a single department, so far as can be discovered, actually specifies and enforces such a prerequisite.

As a practical matter not many students, once having entered graduate school in a state of mathematical illiteracy and with a firmly engrained distaste for mathematical thinking, can be persuaded to take the very considerable amount of time that would be needed to acquire a tolerable command of the language of mathematics. The prevailing lack of mathematical training is discussed in more detail in a later chapter, where the problems involved in removing this deficiency are also examined at greater length.

On the other hand, those students who take mathematics seriously, being a minority, run the risk of isolating themselves from the majority and becoming a cult which makes an end in itself of what should be a means: of becoming what one psychologist has aptly called "methodolatrists." This situation, which is unfortunate both for those who can and those who cannot think mathematically, could be greatly improved only by insistence on some mathematical training as a prerequisite for admission to graduate study.

A plea for better training in formal methods and in the rigorous mathematicological thinking which is their indispensable underpinning, must not be taken as disparaging other equally indispensable elements in the training of a sociologist. To say that all sociologists ought to know some mathematics is by no means to suggest that they should be blind to everything that cannot immediately be counted or measured. In fact, much naive and fallacious quantification that ought not to have been undertaken can be blamed upon the mathematical incompetence of many present and past sociologists. A well-qualified scientist knows when not to try to force his materials into a particular mold as well as when to do so. He must have learned that both formal and informal methods—both rigor and intuition—have their respective places in science, and that virtuosity in manipulating data without unifying theory does not by itself make a scientist.

Would insistence on a considerably greater allocation of first and second-year students' and teachers' time to the basic essentials stifle individuality and originality, and tend to formalize a discipline that is not yet ready to be crystallized in monolithic

form? The possibility that this could happen cannot be overlooked, but fortunately there will always be some creative individuals who will balk at any constraints. Much of the students' freedom that would have to be sacrificed is actually wasted in more or less aimless pursuit of bits and pieces of knowledge. Probably a majority of graduates would admit in retrospect that they have spent appreciable amounts of time unprofitably in assorted and often redundant lecture courses. Reduction of this wastage should release a substantial amount of time for a more coherent program of essential studies without postponing the time when students should be ready to work intensively in their special fields of interest.

Heads of numerous departments offering the Ph.D. degree, including some of the most highly regarded, report that in the course of the past decade or longer their departments have been placing increased emphasis on training in general sociology rather than attempting to offer something in all possible specialties. The fact remains, however, that few if any of them can yet claim that all of their candidates for advanced degrees are being adequately prepared in all essential respects, however highly trained they may be in some.

Research Apprenticeship

No amount of formal instruction in methods and no amount of discussion of others' research can take the place of the first-hand experience of undertaking to translate an unstructured situation into a problem or problems amenable to scientific investigation, and then proceeding to seek solutions. Every candidate for an advanced degree in a scientific discipline ought to serve an apprenticeship in research, beginning as soon as he has completed a necessary modicum of formal study of methods. The term *apprenticeship* is used here in default of a better one to denote learning by working under the personal direction of a mature professional person. It should not be construed to connote the excessive dependency involved in an exclusive discipleship. Systematic study of methods should not stop when practice in research begins; on the contrary they should go on together, for

if the research experience is well chosen and wisely supervised, the novice will perceive as he goes along that he needs to delve more deeply into matters of methodology which previously seemed to him unnecessary. At every stage from the beginning onward, the student-apprentice should be doing things he can be expected to understand, not merely performing routines whose relation to the whole research enterprise is beyond his comprehension. Research training for every doctoral candidate should include a period of first-hand observation and systematic data-collection in "the field."

By the time a student receives the master's degree, or by the end of two years' study at most, he should have participated consecutively, under guidance, in all phases of at least one piece of research that demands both insight in formulating hypotheses and conclusions, and the use of more than one kind of formal method in gathering and processing data. At later stages of doctoral training the student should progress to increasingly independent and responsible research, but still under the critical eyes of his seniors.

The foregoing has been a trite description of what would constitute a desirable program of research training. Before turning to contrast it with the actual experience of many candidates for advanced degrees in sociology, one further observation should be added: Early and prolonged apprenticeship in research is also important as the most effective known means of acquiring a sense of commitment to a scientific profession. In this regard the relationship between apprentice and master may be of more consequence than the concrete tasks the apprentice is called upon to perform. A job running an IBM machine, coding hundreds of questionnaires, or compiling uncritical bibliographies has in itself little educational value, unless it happens to bring a student into continuous association with a sympathetically interested mentor.

Actually, only a fortunate minority of students of sociology have such a well-guided, progressive sequence of research experience as would be desirable. In some of the smaller departments research activity is sporadic, depending upon one or two faculty members' interests and their success in obtaining grants or con-

tracts that will enable them to support student assistants. In large departments where a great deal of research is carried on, the directors of research bureaus, centers, or institutes are usually under constant pressure to produce results for the clients on whose fees their organizations depend for their livelihood; hence they are inclined to hire and rehire as assistants those students who are already proficient in particular skills, choosing them for their usefulness to the project rather than because they might benefit more from the experience.

Although more funds than are currently available in most institutions would be needed to provide ideal opportunities for research apprenticeship for all students, some reallocation of existing resources might bring about considerable improvement in many places. As a first step, responsibility for trying to see that each student's program will include appropriate research experience at appropriate times should be definitely assigned to a particular faculty member.

Research on master's and doctor's theses should be planned as stages in a graded series of research experiences, not merely as tasks set to test the student's attainment of certain levels of competence. Too often, students plan and write their doctoral dissertations without having previously had any appreciable amount of experience in research. Plunging into the task of producing a dissertation without due preparation is for many candidates an experience that contributes little to their competence in research and may even discourage them from further efforts to remedy deficiencies in their scientific training.

In institutions that rely on graduate assistants to carry much of the work of teaching large undergraduate classes, capable advanced graduate students are often subjected to increasing pressure to continue serving in that capacity long after the rate of educational returns to them approaches zero. A department committed to seeing that its doctoral candidates receive the best possible scientific training should scrupulously avoid urging or even allowing them to be thus diverted. The same paradox applies to teaching as to research assistantships: the value of a student assistant's work to the department is sometimes inversely

proportional to its educational value for him. The fact that this paragraph (and many others in this report) could as well have been written with reference to other disciplines does not detract from its relevance to the education of sociologists.

Sociology departments, including some that are able to offer the best opportunities for research to those students who seek them, have been generally delinquent in not making sure that all of their students have at least some guided research experience both in the laboratory and in the field. With respect to requiring laboratory work, they have on the whole lagged behind departments of psychology, for example; with respect to field work, they have lagged behind departments of anthropology. Yet it is as important for a sociologist as for an anthropologist to have first-hand contact with the raw subject matter of his science.

Acceleration of Doctoral Training

Almost half of the recent recipients of doctoral degrees in sociology had received their bachelor's degrees at least ten years earlier. The median interval of 9.9 years between the two degrees was nearly two years longer in this field than in the life sciences, and nearly three years longer than in the physical sciences. Whatever justification there may be for longer postponement of the doctorate in some fields than in others, any proposal that would lengthen the average duration of the predoctoral stage in the education of sociologists would be intolerable. In fact, the interval is already undesirably long, and as we have already observed, a growing shortage of qualified sociologists will surely give rise to increased pressure for acceleration or even curtailment of their graduate training. How can the foregoing prescriptions for more solid training be implemented without further retarding the production of Ph.D.'s? The question calls for a review of several factors that contribute to the delay.

Late beginning of graduate study in sociology accounts for a substantial amount of delay. Among a more or less representative number of students recently interviewed, fully a quarter had begun graduate study in some other discipline before shifting to sociology; a number of others had not entered graduate school immediately after graduating from college, but had first spent

some time in nonacademic activities. Perhaps at least a year of the average interval between A.B. and Ph.D. degrees can be ascribed to late starts.

Most of the delay occurs after a student has begun graduate work in sociology, some for reasons that are not peculiar to this field of study, but much of it for reasons about which sociology departments could, if they would, do something.

Among the circumstances sociology departments themselves cannot control is the fact that many graduate students' family responsibilities oblige them to work for a living at jobs irrelevant to their studies, despite the expansion of fellowship programs and the increase in number of research assistantships available in recent years.

Much avoidable delay in attaining the doctoral degree is attributable to the candidates' uncertainty as to what they are expected to learn, and to the prevailing practice of permitting students to postpone fulfillment of stated requirements. It is not only "slow learners" who thus linger too long, but also students of average or superior ability. It will, of course, be argued that a graduate student, or at any rate a graduate student of one or two years' standing, ought to be a self-directing adult who no longer needs external discipline. But even adults, with rare exceptions, need deadlines to spur them to finish work that tends otherwise to drag on interminably.

One reform that might very substantially reduce the wastage of students' time in many departments would be firmer insistence that examinations on the required core of general sociology and basic methods be taken within a specified time. Under prevailing practices, students tend to postpone not only examinations in their elective fields of specialization but also general examinations in basic theory and methodology. Apart from the waste of time in dilatory preparation for them, postponement of general examinations until near the end of a student's period of residence frequently makes the examinations themselves perfunctory, for by the time they are taken the candidate's achievement or lack of it has already been demonstrated to the faculty members under whom he has been working. If a student who is distinguishing himself in his chosen specialty takes his general examinations at a

late stage, gaps or weaknesses in some areas of his basic preparation are likely to be condoned. And faculties find it hard to insist that even a mediocre candidate who is already far beyond the usual school-leaving age should further postpone getting his doctoral degree in order to learn some things he ought to have been obliged to learn in the first year or two, if not even before admission to graduate school. Setting a reasonably early date for completion of general examinations would also have the added virtue of assuring that the student would lay a good foundation of general knowledge before turning to erect a superstructure in his chosen field of concentration. Examinations in special fields of concentration, if considered necessary, should logically be scheduled some time after the general examinations.

The practice current in some departments of giving preliminary qualifying examinations quite early but not setting a definite time for the final examinations on general theory and methods virtually leaves it to the individual student to set his own pace during the middle stage of his graduate studies, and the pace too often turns out to be undesirably slow.

A great deal of the total time elapsing before doctoral degrees are obtained represents the interval between beginning and finishing work on the dissertation. As a general rule, the practice of preparing dissertations *in absentia* after leaving the graduate school should be permitted only if the particular project can be carried on more advantageously elsewhere, under suitable supervision. Sometimes economic necessity dictates taking a regular job as soon as all doctoral requirements save the dissertation have been fulfilled, but in many cases the candidate's impatience to become independent after several years of resident graduate study leads both to long deferment of his final accreditation as a Ph.D. and to an unprofitably great expenditure of time and energy in work on a dissertation which contributes little to his further development as a sociologist. Briefer dissertations, planned more with a view to providing experience in the process of research than to producing a magnum opus (which few candidates are yet capable of producing), should be encouraged.

An obviously easier alternative response to pressure for acceleration of graduate training in sociology would be to lower stand-

ards. This would indeed be dangerously easy, considering the prevailing loose definition and even looser enforcement of existing doctoral requirements.

Postdoctoral Study or Internship

Assuming a total span of five years to be spent in preparation for a professional career in sociology, there is much to be said for conferral of the doctoral degree after three or four years, followed by a postdoctoral internship usually somewhere else than in the department where the degree was earned. The degree would signify readiness to undertake more independent work or to specialize more intensively; it would not be presumed to signify that the holder had accumulated all the specific knowledge he would need for some particular job. Far from implying lower standards, this conception of the Ph.D. degree as a certain milepost on the way to a scientific professional career should call for more clearly focused and more rigorous basic training than now prevails.

Even without a year of formal postdoctoral fellowship, a graduate of four years' systematically planned work for the doctorate should be at no permanent disadvantage vis-à-vis one who had spent a longer time in devious pursuit of the degree and had perhaps picked up more miscellaneous information on certain topics peripheral to the essentials of sociology.

A major advantage of a postdoctoral year's internship over an additional year of predoctoral study is that it can more readily be spent wherever the best opportunities are offered for pursuit of the individual's special interests, whether in a foreign area, or working under a pioneering scholar at some point on the intellectual frontier of sociology, or gaining greater mastery of some particular method.

A postdoctoral internship would also appear preferable as a rule to prolongation of the predoctoral period of study for those who plan to enter such fields as health and medical care, for example, where they will need to create roles for themselves within the subculture of another profession. A sociologist entering one of these fields without the doctoral degree is more likely to be relegated to a narrowly technical role.

3. Number of Sociologists and Their Occupations

THE NUMBER OF PROFESSIONAL SOCIOLOGISTS in the United States depends upon the definition used. On various grounds, figures ranging from two or three thousand to as many as seven thousand could be derived. In round numbers there are now in the United States, as indicated earlier, some 2,500 holders of doctoral degrees and more than 5,000 of terminal master's degrees in sociology. But as will presently be seen, it would be an exaggeration to say that there are 7,500 professional sociologists, for a large percentage of holders of advanced degrees in sociology cannot be so regarded on the basis of their occupations. Active members of the American Sociological Association, who under its by-laws must have a "major commitment to sociology," numbered 2,700 in 1961. The Association's 2,000 associate members included perhaps another seven or eight hundred who hold master's degrees in sociology and regard themselves as primarily sociologists.[1]

Most of the Ph.D.'s are members of university and college faculties, while a substantial majority of those holding only master's degrees are employed in nonacademic positions or in teaching in institutions below the collegiate level. It may come as something of a surprise to find that the proportion of sociology Ph.D.'s wholly or primarily employed in nonacademic positions has not appreciably increased over the past two decades. On the other hand, it is a matter of common observation that the in-

[1] For detailed analysis of the Association's membership and its changes, see Riley, Matilda White, "Membership of the American Sociological Association, 1950–1959," *American Sociological Review*, vol. 25, December, 1960, pp. 914–926.

volvement of academically based Ph.D.'s in nonacademic activities on a part-time or intermittent basis has been growing greatly, though no precise measure of this growth over a period of years is available.

The occupations of sociologists are treated in more detail in later sections of this chapter.

Number of Degrees Conferred

Ever since the late 1920's the annual number of Ph.D. degrees given in sociology has approximated 2 per cent of the total number in all academic fields. In relative numbers, anthropologists, political scientists, and psychologists have multiplied more rapidly than sociologists. After more than doubling immediately after World War II, the annual output of Ph.D.'s in sociology remained about constant during the 1950's. In the three years 1960–1962, as Table 1 shows, the rate has averaged about 12 per cent higher.

TABLE 1. AVERAGE NUMBER OF DOCTORAL DEGREES CONFERRED ANNUALLY IN SOCIOLOGY AND CERTAIN OTHER FIELDS, 1926–1962

Period	*Sociology*	*Anthropology*	*Economics*	*Political Science*	*Psychology*	*All Academic Fields*
	Annual Average Number of Degrees Conferred					
1926–1929	31	5	103	35	71	1,583
1930–1934	45	8	130	45	97	2,332
1935–1939	48	21	108	54	111	2,700
1940–1944	54	22	108	61	103	2,919
1945–1949	64	20	119	76	141	3,168
1950–1954	156	43	306	166	545	7,737
1955–1959	156	53	277	195	621	8,887
1960–1962	173	68	257	211	708	10,675
	Indices of Relative Growth (1926–1939 Annual Average = 100)					
1960–1962	*412*	*566*	*225*	*469*	*745*	*475*

SOURCES: 1926–1935—Marsh, C. S., editor, *American Universities and Colleges*. American Council on Education, Washington, 1936, Table XI, p. 74.

1936–1953—Office of Scientific Personnel, National Research Council, *Doctorate Production in United States Universities 1936–1956*. Washington, 1958, Publication 582, Table 1, p. 7.

1954–1962—U. S. Office of Education, *Earned Degrees Conferred by Higher Educational Institutions*. (Annual).

Some necessarily very rough actuarial computations suggest that currently between 50 and 100 Ph.D.'s annually leave the field of sociology by death or retirement. Thus the net annual increment of Ph.D.'s is certainly smaller than the combined academic and nonacademic employment market could readily absorb. No computation is necessary to convince anyone who has recently tried to hire a sociologist that the current supply of well-qualified sociologists falls short of the demand. It is easy today to forget that only about a generation ago a leading American sociologist was warning his colleagues of overproduction of Ph.D.'s, and estimating that only a half dozen of them annually could expect to find employment fully befitting their qualifications.[1]

National statistics of bachelor's and master's degrees in sociology have been compiled only in recent years. Since the middle 1950's, as shown in Table 2, only the output of bachelor's degrees has consistently increased since 1955; and it has grown at a rate slightly less than that of all bachelor's degrees.

TABLE 2. DOCTOR'S, MASTER'S, AND BACHELOR'S DEGREES CONFERRED IN SOCIOLOGY, 1954–1962

Year	*Number of Degrees Conferred*		
	Ph.D.	M.A. and M.S.	A.B. and B.S.
1954	184	440	5,702
1955	167	474	5,533
1956	170	402	5,916
1957	134	515	6,383
1958	150	397	6,583
1959	157	461	6,877
1960	161	440	7,182
1961	184	504	7,519
1962	173	578	8,183

SOURCE: U.S. Office of Education, *Earned Degrees Conferred by Higher Educational Institutions.* (Annual)

In the field of sociology 44 times as many bachelor's as doctor's degrees were conferred in a recent year. This ratio is between three and four times as high as in the physical sciences, in which a much larger proportion of undergraduate majors continue to higher degrees. Comparison of the ratios of first degrees to second

[1] Chapin, F. S., "The Present State of the Profession," *American Journal of Sociology*, vol. 39, December, 1934, pp. 506–508.

and to third degrees in several disciplines and fields is presented in Table 3. The fact that classes in sociology at each level contain exceptionally large numbers of students who will not pursue the discipline much further has implications for professional training which will be explored in a later chapter.

TABLE 3. RELATIVE NUMBERS OF LOWER AND HIGHER DEGREES CONFERRED IN SELECTED FIELDS, 1958–1959

Field	*Ratio of A.B.'s to Ph.D.'s*	*Ratio of A.B.'s to M.A.'s*
Sociology	44	15
History	42	8
English, foreign languages, and philosophy	40	7
Economics	35	12
Political science	33	10
Biological sciences	15	8
Psychology	12	6
Physical sciences	9	5
Anthropology	8	4

SOURCE: U.S. Office of Education, *Earned Degrees Conferred by Higher Educational Institutions, 1958–1959*, Washington, Table 15.

Occupations of Ph.D.'s

Universities and four-year colleges employ three-fourths of the Ph.D.'s in sociology in the United States.[1] Very few of the remainder teach in junior colleges or lower schools, the rest being about equally distributed among four categories of employment: health, welfare, correctional, and educational agencies; other governmental agencies; business and industry; and miscellaneous other employment. Three-fifths of those in nonacademic positions report that research is their principal activity. Details are shown in Tables 4 and 5. Our sample is too small to permit precise estimation of the number of Ph.D.'s in each particular category of employment, but the number on the staff of universities and four-year colleges is probably about 2,000, and the total number otherwise employed about 500 or 600.

[1] Unless otherwise indicated, the occupational data presented in the text of this chapter are from mailed questionnaires, Schedules II and II-B addressed to Ph.D.'s of 1936–1959, and Schedule V addressed to M.A.'s of 1953–1958. Schedules, sampling, and response rates are presented in Appendix B.

TABLE 4. PRIMARY EMPLOYMENT OF PH.D.'s

Location	*Per Cent*
Universities and four-year colleges:	
Members of Association of American Universities	24
Other members of Association of American Colleges	30
Nonmembers of the above groups in the United States	18
Foreign institutions	2
Subtotal, universities and four-year colleges	75
Junior colleges, technical and other schools	3
Educational agencies except schools	2
Health, welfare, and correctional agencies	5
Other government agencies	4
Business and industry	5
Other voluntary and nonprofit organizations	3
Miscellaneous and unspecified	4
Total	100[a]

[a] Throughout this report, rounded percentages are not forced to total 100.

SOURCE: Schedule II (401 respondents).

TABLE 5. PRINCIPAL ACTIVITIES OF PH.D.'s

Field	*Per Cent*
Teaching (including teaching combined with research, and academic faculty positions not otherwise specified)	73
Research, including administration of research (excluding research combined with teaching)	15
Consulting and administration	7
Social work and kindred activities	1
Editing, writing, lecturing	1
Ministry	..[a]
Not employed (including retired and unspecified)	3
Total	100

[a] Less than 1 per cent.

SOURCE: Schedule II (401 respondents).

Among those on university and college faculties, about a third are located at major universities which are members of the Association of American Universities, a slightly greater number are employed by other universities and colleges included in the Association of American Colleges, while a smaller number are at institutions belonging to neither of the former groups. Thus more

than half of all Ph.D.'s are on the faculties of fully accredited institutions of higher education.

The categories of activity listed in Table 5 are fairly clear with the exception of "consulting and administration," whose scope can best be seen from a list of the titles of 18 individuals so classified in our sample:

Federal Government:
- International Cooperation Administration, Community Development Adviser (3 persons reported this title)
- National Institutes of Health, Social Sciences Consultant U. S. Army, Executive Assistant (logistics)

State and Local Governments:
- Territorial Development Administration, Adviser on Economic and Social Development
- State Board of Education, Director of Community Junior Colleges
- City Board of Education, Staff of Committee on Human Relations
- City School District, Chairman of Counseling Department
- State Health Department, Research Director, Alcoholism Unit
- City Health Department, Director, Social Science Activities

Nonprofit Associations:
- Associated YM-YWHA's, Associate General Director
- Association for Family Living, Director

Industry, Business:
- Oil Company, Adviser on Foreign Regional Public Relations and on Communications Research
- Manufacturing Company, International Administrator
- Management Consulting Firm, Executive
- Gasoline Station Chain, General Manager

Self-Employed:
- Consultant in Consumer and Personnel Research

Academic Positions Outside Sociology Departments

Among the three-fourths of the Ph.D.'s who are on the faculties and staffs of universities and colleges, one out of eight is not primarily attached to the department of sociology. The distribution of Ph.D. sociologists in various branches of universities and colleges is shown in Table 6; while the small number in our

TABLE 6. PRIMARY POSITIONS OCCUPIED BY PH.D. SOCIOLOGISTS IN UNIVERSITIES AND COLLEGES

Location		*Per Cent*
Sociology department (or not otherwise stated)		87
Professional schools and institutes:		10
Medicine, nursing, public health	5	
Welfare, social work	2	
Business, engineering	2	
Law, education, religion	1	
Academic administration		2
All other positions		2
Total		100

SOURCE: Schedule II (301 respondents).

sample makes percentages subject to large random errors, some broad outlines can be perceived. Schools of medicine, nursing, and public health taken as a group employ the largest number of sociologists outside sociology departments; the only other professional schools or institutes with which appreciable numbers of sociologists are affiliated are those of business, engineering, welfare, and social work. Schools of law, education, and religion are represented in the sample by a very small number. Appointments in various other academic departments, in special institutes, and in general academic administration account for the rest.

Employment of Men and Women Ph.D.'s

The occupational distributions of men and women in sociology differ appreciably; female Ph.D.'s in sociology are underrepresented on the staffs of universities and four-year colleges, and are found in disproportionately large numbers in subcollegiate teaching and miscellaneous educational services, and among those not in the labor market. Table 7 presents the comparative data. Women are in fact less likely than men to attain the higher ranks in the sociological profession. Table 8 reflects their attrition between successive stages of training and employment: from a majority of recipients of bachelor's degrees, the feminine component shrinks to one-eighth of the Ph.D.'s employed in universities and four-year colleges.

TABLE 7. PERCENTAGE DISTRIBUTIONS OF MALE AND FEMALE PH.D.'S, BY PRIMARY EMPLOYMENT

Employment	*All Men*	*All Women*	*Employed Women*
Universities and four-year colleges	76	56	64
Other schools and educational agencies	4	12	14
All other nonacademic employment	20	19	22
Not employed	..[a]	13	..
Total	100	100	100
Number of respondents	*341*	*60*	*53*

[a] Less than 1 per cent.

SOURCE: Schedule II.

TABLE 8. PERCENTAGES OF WOMEN AMONG SOCIOLOGISTS AT SEVERAL STAGES

Stage of Advancement	*Per Cent of Women*
1. Bachelor's degrees conferred	55
2. Graduate students enrolled in doctoral departments but not yet accepted as Ph.D. candidates	37
3. Master's degrees conferred	32
4. Graduate students accepted as Ph.D. candidates	19
5. Ph.D. degrees conferred	14
6. Ph.D.'s employed in universities and four-year colleges	12
7. Ph.D.'s employed elsewhere	19

SOURCES: 1, 3, 5—U. S. Office of Education, *Earned Degrees Conferred by Higher Educational Institutions*, 1957–1958 and 1958–1959.
2, 4—Schedule I.
6, 7—Schedule II.

Trends of Occupational Distribution

Two-fifths of the Ph.D.'s now in nonacademic work had previously been regularly employed for a year or longer as members of college or university staffs; of those currently in academic positions nearly one-fourth had previously been regularly employed in nonacademic work; the latter are actually more numerous than those who have shifted in the opposite direction. At least until mid-stream in one's career, shifting back and forth between academic and nonacademic work is not uncommon. Occupational mobility is generally less easy for older persons, while many graduate students deliberately plan to get some experience in the "real world" before eventually settling down to academic life.

As already indicated, the proportion of Ph.D.'s in sociology employed in primarily nonacademic positions appears not to have increased appreciably in recent years. Hollis reported that in 1940, 75 per cent of Ph.D.'s in sociology were employed in universities and colleges, 4 per cent in other schools and educational agencies, and 22 per cent in nonacademic positions; his figures coincide almost exactly with those of our present survey.[1]

Matilda Riley's comparative analysis of the membership of the American Sociological Association in 1950 and 1959 revealed that the percentage of active members—predominantly Ph.D.'s—in academic positions was the same in both years, 79 per cent.[2] In both years 18 per cent of the active members were in nonacademic posts, and the occupations of the remaining 3 per cent were unspecified. Further analysis of the same data by Arthur Liebman[3] shows that of nearly 700 Ph.D.'s who were members of the Association both in 1950 and in 1959, about 6 per cent had shifted from academic to nonacademic positions and 3 or 4 per cent had shifted in the opposite direction.

TABLE 9. PERCENTAGES OF PH.D.'S IN NONACADEMIC EMPLOYMENT, BY AGE GROUPS

All ages	25
Under 35 years	22
35 to 39	32
40 to 44	23
45 to 54	23
55 and over	24

SOURCE: Schedule II (401 respondents, 46 in smallest age group).

Within the universities, employment of sociologists in professional schools and other departments than the academic sociology department appears to be on the increase, about one-eighth being so located at present. In her previously cited study, Mrs. Riley found that in the nine-year interval 1950–1959 the percentage of all active members of the American Sociological Association attached to professional schools in the universities had risen from 7 to 12 per cent, or nearly doubled.

[1] Hollis, Ernest V., *Toward Improving Ph.D. Programs*, American Council on Education, Washington, 1945, Table 8, pp. 74–75.

[2] Riley, Matilda White, *op. cit.*

[3] Unpublished M.A. thesis, Rutgers University, 1961.

Contrary to the prevalent impression that increasing proportions of new Ph.D.'s in the sociological profession are entering nonacademic careers, Table 9 shows that among our respondents the proportion of Ph.D.'s in nonacademic employment is not appreciably correlated with their ages. If there were a marked trend toward nonacademic employment, larger percentages of the younger Ph.D.'s might be expected to be so employed.

As will be shown later, the number of M.A.'s in nonacademic positions is much larger and presumably growing both relatively and absolutely.

Earnings

Purely economic considerations clearly are not the major factor determining the vocational choices of Ph.D.'s, for as Table 10 shows, median earnings in nonacademic positions consistently exceed those in academic employment for every age group. The absolute figures in the table must be viewed with caution, as the questionnaire item "approximate annual earnings" was not further defined; and it should be unnecessary to add that the

TABLE 10. MEDIAN ANNUAL EARNINGS OF PH.D.'S IN ACADEMIC AND NONACADEMIC EMPLOYMENT, BY AGE GROUPS

	Academic Employment	*Nonacademic Employment*
All ages	$ 9,000	$12,000
Under 35 years	7,800	9,500
35 to 39	9,000	10,800
40 to 44	10,600	12,500
45 to 54	10,300	13,000
55 to 64	10,500	12,000

SOURCES: Schedules II, II-A (534 respondents).

cross-sectional data on earnings by age groups must not be taken as representing the lifetime earning cycle of a cohort. For example, the fact that average earnings of the academic group are highest between ages forty and forty-five reflects without doubt the current excess of demand over supply for young faculty members trained in methods which their elders did not learn. But the consistent excess of nonacademic over academic earning in every

age group can reasonably be regarded as significant. Despite economic incentives to move outside, most individuals prefer to make the university or college their home base.

Secondary Employment

The fact, however, that about three-fourths of the Ph.D.'s in sociology remain attached to universities and colleges does not imply that they are exclusively concerned with teaching and cultivating it as a liberal discipline. Not only are small but growing numbers regularly employed in professional schools, but a larger and presumably also growing proportion of Ph.D.'s engage in a wide variety of secondary employment in nonacademic spheres. The prevalence of secondary employment, in terms of percentage of total earnings derived, is shown in Table 11. Nearly one in ten reports that secondary employment yields 25 per cent or more of his earnings. Tables 12 and 13 show the nature of the secondary employment reported. Health, welfare, and kindred agencies give secondary employment to the largest number of Ph.D.'s, followed by educational institutions and agencies, business and industry, and other government agencies in descending order. Comparing the first and second columns of Table 13, it will be noticed that although more than one-fourth of the respondents reported some employment as consultants, only one respondent out of nine derived as much as 5 per cent of his earnings from this secondary activity. Secondary employment yielding at least 5 per cent of their total annual earnings was reported by more than one-third of the Ph.D.'s primarily employed in universities and colleges and by one-fourth of those primarily nonacademically employed. Despite the absence of any statistics for earlier years, there can be no doubt of the trend toward more widespread involvement of sociologists in nonacademic activities.

Occupations of M.A.'s[1]

The occupational distribution of those whose sociological training terminated with the master's degree differs sharply from that

[1] For brevity M.A. will be used throughout this report to refer to both M.A. and M.S. degrees.

TABLE 11. PERCENTAGE OF TOTAL EARNINGS OF PH.D.'s DERIVED FROM SECONDARY EMPLOYMENT

Earnings	*Per Cent of Ph.D.'s*
Reporting secondary employment:	
Per cent of total earnings derived from secondary employment	
None or not stated	14
Less than 5 per cent	18
5 to 14 per cent	14
15 to 24 per cent	8
25 to 49 per cent	6
50 per cent or more	3
Reporting no secondary employment	36
Total	100

SOURCE: Schedule II-B (357 respondents).

TABLE 12. PERCENTAGE DISTRIBUTIONS OF PH.D's, BY CLASSES OF EMPLOYERS

Employment	*Per Cent*
Health, welfare, correctional, religious, community agencies	21
Universities, colleges, educational agencies	14
Business, industry	10
Nonprofit scientific organizations	8
Other government agencies	6
Miscellaneous and unspecified	4
No secondary employment	36
Total	100

SOURCE: Schedule II-B (357 respondents).

TABLE 13. PERCENTAGE DISTRIBUTIONS OF PH.D.'s, BY TYPES OF SECONDARY EMPLOYMENT

Employment	*Per Cent Reporting Any Secondary Employment*	*Per Cent Reporting Secondary Employment Yielding 5 Per Cent or More of Total Earnings*
Teaching	4	3
Research	18	12
"Consultation"	27	11
Writing, editing, lecturing	10	3
Other and unclassified	5	3
No secondary employment	36	..
Less than 5 per cent of earnings from secondary employment	..	68
Total	100	100

SOURCE: Schedule II-B (357 respondents).

of the Ph.D.'s. In Table 14 the M.A.'s are divided into those who do and do not indicate the intention of sometime obtaining the Ph.D. degree. Quite a number of the former will without doubt ultimately abandon the quest for the higher degree; during the year preceding the survey a third of them had done no work toward the degree, and at least as many planned to do only "spare time" work or none at all during the ensuing year. Only about one-eighth of the "terminal" M.A.'s as compared with nearly three-fourths of the Ph.D.'s are on the faculties of degree-granting colleges and universities.

TABLE 14. PERCENTAGE DISTRIBUTIONS OF PH.D.'S AND M.A.'S, BY PRIMARY EMPLOYMENT

Employment	*Per Cent of Ph.D.'s*[a]	*Per Cent of M.A.'s*[b]		
		"Terminal"	"Non-terminal"	All M.A.'s
On teaching and research staffs of universities and four-year colleges	73	13	62	30
Other teaching and educational service	5	25	6	18
Research in nonacademic positions	12	5	10	7
Health, welfare, religious, correctional work	2	27	10	20
Other consultation and administration in nonacademic positions	2	10	2	8
Employment not classified above	3	8	1	6
Full-time students	..	1	6	3
Not employed	2	10	2	7
Total	100	100	100	100
Number of respondents	*357*	*176*	*95*	*271*

[a] Figures for Ph.D.'s differ slightly from those in Table 4 because of exclusion of 44 who did not return Schedule II-B.

[b] M.A.'s classified as "nonterminal" are those who state that they expect definitely or probably to take the Ph.D. degree in sociology.

SOURCES: Schedules II-B and V.

The more detailed occupational distribution of the "terminal" M.A.'s in Table 15 reveals that the master's degree in sociology does not lead to any one or a few occupations, but to a wide variety. The meaning of the rubric "Other consultative and

TABLE 15. DETAILED OCCUPATIONAL DISTRIBUTION OF "TERMINAL" M.A.'s

Employment	*Per Cent*
University and four-year college teaching and research staffs	13
Junior college teachers	2
Elementary and secondary school teachers:	
Social studies	2
Other and mixed fields	7
Miscellaneous work in educational agencies:	
General administration	4
Counselors, admissions officers, psychologists	3
Extension and special teaching	4
Librarians and others	2
Nonacademic research workers	5
Correctional agencies:	
Probation and parole officers	6
Wardens, police officer, classification supervisor	2
Social caseworkers	3
YMCA and Campfire Girls workers	2
Other work in welfare and employment services	4
Church and missionary workers	7
Workers in health agencies	2
Other consultative and administrative workers[a]	10
Unclassified	8
Not employed	11
Total	100

[a] See text for specific titles.

SOURCE: Schedule V (176 respondents).

administrative workers" can best be interpreted by listing the actual job titles of the 22 M.A.'s so classified:

Federal Government:
- Civil Service Commission, Appeals Examiner
- U. S. Information Agency, Public Affairs Officer
- Peace Corps, Country Desk Officer

State and Local Governments:
- State Department of Education, Consultant for Deaf and Hard of Hearing
- Urban Redevelopment Land Agency, Community Organization Program Evaluator
- City Industrial Expansion Committee, Executive Director

Industry, Business:
- Management Consulting Firm, Educational Consultant
- Life Insurance Company, Systems Analyst
- Oil Company, Industrial Relations Analyst
- Manufacturing Company, Coordinator of Employee Relations
- Manufacturing Company, Supervisor of Labor Relations

Manufacturing Company, Personnel Manager
Manufacturing Company, Regional Director of Recruitment
Manufacturing Company, Assistant Supervisor of Insurances
Publishing Company, Vice President (research, public relations)
Wholesale Trading Company, Manager
National Trade Association, Secretary-Treasurer
Claims Adjustment Service, Claims Manager

Self-Employed:
Consulting Sociologist (consumer-oriented market research)

Two other individuals are employed as psychologists, and one other person as legal counsel; all of these hold degrees in other fields in addition to the master's degree in sociology.

Estimating the total number of "terminal" M.A.'s to be about 5,000, some 600 appear to be regular members of university or four-year college teaching staffs, about 1,200 teaching at lower levels (often in fields other than social science) or performing miscellaneous functions in educational agencies, 2,500 or more in nonacademic occupations, and 500 not employed.

Comparing the occupational distributions of men and women who have terminated their sociological training with the master's degree, fully a third of the women are found not to be currently employed. Not unexpectedly, this proportion is more than twice as great as the percentage of women Ph.D.'s who are currently out of the labor market. (See Table 7, page 51.) If only the currently employed women M.A.'s are considered, their distribution among the three employment categories shown in Table 16 does not differ greatly from that of the men.

TABLE 16. PERCENTAGE DISTRIBUTIONS OF MALE AND FEMALE "TERMINAL" M.A.'s, BY PRIMARY EMPLOYMENT

Employment	*All Men*	*All Women*	*Employed Women*
Universities and four-year colleges	13	13	20
Other schools and educational agencies	27	21	32
All other nonacademic employment	59	31	48
Not employed	2	35	..
Total	100	100	100
Number of respondents	*124*	*52*	*34*

SOURCE: Schedule V.

While the rapid upward trend of enrollment in junior colleges may presage greatly expanded demand for M.A.'s as teachers, there is as yet no reason to expect that the master's degree will become an acceptable credential for teachers in high-standard degree-granting institutions. Most of those who terminate their sociological training with the M.A. degree are destined for nonacademic employment.

Earnings

For holders of master's degrees, as already noted for Ph.D.'s, nonacademic work is more remunerative than academic, reported median earnings of M.A.'s being about $8,000 and $6,500 in the respective fields. Earnings of those employed by industrial and business concerns tend to be higher than in other nonacademic positions, those in health and welfare agencies being lowest; but our sample data do not permit reliable measurement of these differences. Comparison of the average reported earnings of M.A.'s with those of Ph.D.'s in our samples would be invalid because the M.A. sample underrepresents older persons whose earnings are normally larger.

Career Goals in Relation to Present Occupations

In considering the occupational data just presented it must be kept in mind that a person's present job is not always in the occupation he will ultimately make his career. An academic position is the avowed career goal of a great majority of Ph.D.'s; those who are not currently in academic positions but aspire ultimately to enter them are more numerous than those who say they hope to move in the opposite direction. As Table 17 shows, 24 per cent of nonacademically employed Ph.D.'s state that they aim to enter academic work, while among those now in academic positions only 1 per cent specify nonacademic career goals.

With M.A.'s as with Ph.D.'s, those in nonacademic positions are more prone to aspire to academic careers than are the university and college staff members to aspire to nonacademic careers. Table 18 presents the stated career goals of M.A.'s in relation to their present employment.

TABLE 17. PRESENT EMPLOYMENT AND CAREER GOALS OF PH.D's

Present Employment	*Percentage Distributions of Career Goals*					*Number of respondents*
	Total	Academic: teaching or administration[a]	Research: either academic or non-academic	Other specified goals	Unspecified	
Total	100	65	3	12	20	*401*
University or college	100	79	3	1	17	*301*
All other	100	24	6	44	26	*100*[b]

[a] Includes "teaching and research."

[b] Includes 8 persons not currently employed.

SOURCE: Schedule II.

TABLE 18. PRESENT EMPLOYMENT AND CAREER GOALS OF M.A.'s

Present Employment	*Percentage Distributions of Career Goals*					*Number of respondents*
	Total	Academic: teaching or administration[a]	Research: either academic or non-academic	Other specified goals	Unspecified	
Total	101	41	5	43	12	*244*
University or college	100	88	5	5	2	*84*
All other	100	16	5	63	16	*160*

[a] Includes "teaching and research."

SOURCE: Schedule V.

Implications for Education

In the nation as a whole, the annual number attaining the Ph.D. degree in sociology has increased in almost exact proportion to the increase in all academic fields combined; thus sociology departments in general cannot claim to have been harder pressed than other departments by growing hordes of students. In the not distant future, however, these departments like others can expect to encounter both larger numbers of applicants for admission and demands for more graduates to satisfy the wants of the employment market. If some current predictions of the coming demand for graduates with advanced degrees are fulfilled, graduate schools will be subjected to increased pressure to admit larger numbers of students and to accelerate their training. While

this pressure may be no greater in the field of sociology than in many others, its effects can be particularly serious for a discipline such as sociology whose standards of training and professional competence are none too well established. It will require both courage on the part of individual departments and concerted action among those in many institutions to resist the temptation to increase the output of degrees at the expense of the quality of education.

The foregoing discussion of the employment and activities of holders of advanced degrees in sociology has suggested some issues of educational policy which must be explored further in later chapters. Although the preparation of Ph.D.'s is the dominant educational goal of the graduate department, about twice as many students terminate their formal education with master's as with doctor's degrees; the different vocational destinations of M.A.'s and Ph.D.'s must be taken into account. As will be discussed later, a case may or may not be made for separate educational programs for masters and for journeymen, leading respectively to the doctorate and to the terminal M.A. degree; in either event the actual presence of large numbers of graduate students with lower aspirations and career expectations cannot be ignored.

Whereas about three-fourths of all Ph.D.'s in sociology are primarily employed in academic positions in universities and degree-granting colleges, only an eighth of the more numerous holders of terminal M.A. degrees are so engaged. Thus although graduate education in sociology in most institutions is designed as preparation for academic careers or has taken that orientation as a matter of course, in terms of absolute numbers about two-thirds of those who hold some kind of advanced degree in sociology are employed outside the walls of institutions of higher learning. It by no means follows that graduate programs ought to devote twice as much effort to training for other vocations as to training scholars; but the fact remains that many graduate students are less interested in learning to be scholars and scientists than in learning how to earn a living in the nonacademic world. The latter include not only those committed to non-

academic careers; they include also many of those who look forward to being teachers but are essentially interested in transmitting received knowledge and perhaps some native wisdom to their pupils, whether in high school or college. A majority of graduate students in sociology today are individuals whose vocational destinations (as we have seen) and whose own aspirations (as we infer) are nonscholarly. Their presence gives rise to demands for quickly usable and marketable knowledge, demands which are sometimes incompatible with the process of learning to be an autonomous scholar and scientist.

It would be unthinkable to capitulate to the occupational statistics by forsaking the scholarly and scientific ideals. The training needs of growing numbers of journeymen must somehow be met while raising the educational standards for the minority on whose accomplishments the development of a more substantial science and profession of sociology will depend.

4. The Graduate Schools

ACCORDING TO THE MOST RECENT STATISTICS of the United States Office of Education, 3,277 resident students were working for advanced degrees in sociology in the fall of 1960. Our own survey indicates that about two-thirds of these were in departments which offer the doctorate in sociology, the remaining third being in at least as many other institutions which offer master's but not doctor's degrees. Of approximately 2,600 graduate students in departments offering doctoral programs, about three-fifths were reported by their chairmen to be prospective Ph.D.'s.[1] Although it is the announced policy of some departments to admit only students who give reasonable promise of attaining the doctoral degree, there are in a great majority of departments substantial numbers of graduate students who have entered with no intention of becoming doctoral candidates and, of course, some who are destined to abandon that goal on either their own or the faculty's initiative.

The distributions of first, second, and third degrees conferred by different categories of institutions, shown in Table 19, further emphasize the preponderant role of the doctoral departments in training at the master's, as well as at the doctor's level, three-quarters of all M.A. degrees in the given year having been conferred by institutions which also offer the Ph.D. degree.

Eighty-three institutions in the United States appear to have granted at least one Ph.D. degree in sociology at some time, though some of them may not actually confer even a single doctoral degree in any given year; the 68 institutions listed in

[1] Schedule I. The figure 2,600 includes some students who are not seeking any degree.

TABLE 19. BACHELOR'S, MASTER'S, AND DOCTOR'S DEGREES CONFERRED IN SOCIOLOGY, BY TYPES OF INSTITUTIONS, 1958–1959

Institutions	*Bachelor's Degrees*		*Master's Degrees*		*Doctor's Degrees*	
	Number of Degrees	Number of Institutions	Number of Degrees	Number of Institutions	Number of Degrees	Number of Institutions
Universities which offer doctor's degrees in sociology	1,905	68	339	62	168	49
All other universities	1,922	173	91	37	..	..
Liberal arts colleges	3,088	392	39	13	..	..
Teachers colleges	24	5	2	1	..	..
Professional and technical schools	28	3	..	..	..	..
Total	6,967	641	471	113	168	49

SOURCE: U.S. Office of Education, *Earned Degrees Conferred, 1958–1959*, Table 18. Classification of institutions adapted from U.S. Office of Education, *Education Directory 1957–1958, Part III, Higher Education.*

Table 20 had active programs leading to that degree in 1960–1961. Already, since the survey reported in this volume was made, it appears that a few additional institutions have announced or may be about to announce the offering of Ph.D. degrees in sociology. Among the 70 universities included in our survey, a considerable number can hardly be expected to afford tolerably high standards of doctoral training. Pressure to offer doctoral degrees comes sometimes from university administrations eager to enhance the supposed prestige of their institutions, but in some cases the initiative appears to come from the sociology faculty itself. As enrollments grow, so no doubt will the temptation to offer substandard doctorates.

The total number of institutions giving master's degrees from time to time is indeterminate; 113 institutions gave degrees in the year 1958–1959, including 51 which do not offer doctoral training. In the preceding year 28 other institutions also gave one or more master's degrees, making a total of 79 in addition to the institutions which offer the doctorate. The list in Table 21 of these 79 institutions will give an idea of their heterogeneity. In the absence of any sanctioned or generally accepted requirements of staff or facilities, the number of institutions which may if they

TABLE 20. DOCTORAL DEGREES CONFERRED, RESIDENT GRADUATE STUDENTS, AND FACULTY MEMBERS, IN EACH INSTITUTION OFFERING PH.D. DEGREE IN SOCIOLOGY

Institution	*Ph.D. Degrees Conferred, 1950–1960*[a]	*Graduate Students in Residence, 1960*	*Faculty Members, 1960*[b]
University of Chicago	198	73	17
Columbia University	128	109	18
Harvard University	103	47	12
Cornell University[c]	84	43	19
University of North Carolina	73	55	15
University of Wisconsin	72	65	20
Ohio State University	71	32	22
University of Minnesota	59	53	14
New York University	56	196	10
Yale University	54	28	12
University of Southern California	53	53	9
University of Pennsylvania	52	43	18
Michigan State University	50	59	23
University of Washington	50	58	17
University of California (Berkeley)[d]	42	132	22
University of Michigan	40	84	25
Catholic University	35	46	6
State University of Iowa (Ames)	35	39	9
University of Pittsburgh	35	31	9
University of Illinois	30	36	15
Louisiana State University	28	33	11
New School for Social Research	28	108	6
Pennsylvania State University	24	22	10
Washington University (St. Louis)	21	30	12
Duke University	19	18	13
Indiana University	19	41	13
Northwestern University	19	27	9
Washington State University	18	20	10
Iowa State University	16	23	10
University of Texas	16	34	14
Stanford University	15	31	12
Vanderbilt University	15	11	5
University of Kentucky[d]	14	19	15
University of Missouri[e]	14	34	15
American University	13	30	6
Boston University	13	21	10
University of Nebraska	13	16	7
Fordham University	12	43	3
St. Louis University	11	25	5
Syracuse University	11[e]	[f]	[f]
University of Calif. (Los Angeles)	10	44	16
Florida State University	8	14	9
University of Florida[d]	8	10	8
University of Notre Dame[d]	8	23	8
University of Utah	8[e]	[f]	[f]

TABLE 20. DOCTORAL DEGREES CONFERRED, RESIDENT GRADUATE STUDENTS, AND FACULTY MEMBERS, IN EACH INSTITUTION OFFERING PH.D. DEGREE IN SOCIOLOGY (Continued)

Institution	*Ph.D. Degrees Conferred, 1950–1960*[a]	*Graduate Students in Residence, 1960*	*Faculty Members, 1960*[b]
University of Colorado	7	37	8
University of Maryland	7	48	12
University of Oregon[d]	7	25	10
Purdue University[d]	7	37	12
University of Kansas	5	15	8
Princeton University	5	13	10
Tulane University[d]	5	21	5
Emory University[d]	4	14	6
Brown University[d]	3	14	7
University of Connecticut[d]	3	23	9
St. John's University	3	13	4
Wayne State University[d]	3	152	16
Western Reserve University	3	44	6
Bryn Mawr College	1	2	1
North Carolina State College	1	11	12
Utah State University	1	10	6
Brigham Young University[d]	0	12	11
University of Buffalo[d]	0	26	8
Johns Hopkins University[d]	0	9	3
Loyola University[e]	0	39	7
Mississippi State University[d]	0	8	7
University of Tennessee[d]	0	16	8
Tufts University[d]	0	6	4
	1,766	2,554	719

[a] Data for 11-year period, except as indicated by note e.

[b] Assistant professorial and higher ranks only, including part-time members.

[c] Combined data for general and rural sociology departments.

[d] Ph.D. program inaugurated since World War II.

[e] Data for 1950–1959 only.

[f] Figures not available.

SOURCES: Degrees conferred, 1950–1956, National Research Council, *Doctorate Production in U. S. Universities, 1936–1956*, Publication 582, Washington, 1958; degrees conferred, 1957–1959, U.S. Office of Education, *Earned Degrees Conferred* (Annual); degrees conferred, 1960, Schedule I. Students and faculty, Schedule I.

see fit offer the M.A. degree in sociology is almost indefinitely expansible, though the aggregate number of M.A. degrees sporadically conferred by institutions primarily concerned with undergraduates is actually but a small fraction of the total.

TABLE 21. INSTITUTIONS CONFERRING ONE OR MORE MASTER'S DEGREES IN THE TWO-YEAR PERIOD 1957–1959 BUT NOT OFFERING THE DOCTORAL DEGREE IN SOCIOLOGY

Atlanta University, 24 degrees; University of Rochester, 14; Sam Houston State Teachers College, 12; Temple University, 12; Kent State University, 8; Montana State University, 7; West Texas State College, 7; Los Angeles State College, 6; Marshall College, 6; Trinity University (Texas), 6; University of Detroit, 5; Hunter College, 5; College of St. Thomas, 5.

FOUR DEGREES EACH: Bowling Green State University; Fisk University; George Peabody College for Teachers; Scarritt College; Tennessee A. & I.

THREE DEGREES EACH: Arkansas State Teachers College; Brooklyn College; University of Hawaii; Jackson College; University of Kansas City; University of Mississippi; North Carolina College at Durham; University of North Dakota; University of Omaha; South Dakota State College; Texas A. & M.; Texas Christian University; Texas Woman's College; University of Tulsa.

TWO DEGREES EACH: University of Arizona; University of Arkansas; City College of New York; University of Denver; De Pauw University; George Washington University; University of Louisville; University of Massachusetts; St. Bonaventure University; St. Lawrence University; Sul Ross State College; Texas Southern University; Whittier College.

ONE DEGREE EACH: Adelphi College; University of Alabama; University of Cincinnati; Colgate University; Colorado State University; University of Delaware; Drake University; East Texas State College; Gonzaga University; Haverford College; Howard University; Kalamazoo College; Kansas State College; Miami University; University of New Hampshire; University of New Mexico; North Texas State College; Oberlin College; Ohio University; Pacific University; Prairie View A. & M. College; University of Rhode Island; St. Bernardine of Siena College; St. Michael's College; San Jose State College; Smith College; Southern Illinois University; Southern Methodist University; Stetson University; Texas Technological College; Wellesley College; Wells College; West Virginia University; University of Wichita.

(79 institutions)

The production of Ph.D.'s is highly concentrated. Three institutions gave about a quarter, 9 institutions almost half, and 23 institutions gave four-fifths of the doctoral degrees during the period 1950–1960, as shown in Table 22. Since the end of World War II the number of institutions conferring doctoral degrees in sociology has increased by a third and the average output per department has doubled (Table 23). From year to year addi-

TABLE 22. DISTRIBUTION OF INSTITUTIONS BY NUMBERS OF DOCTORAL DEGREES CONFERRED, 1950–1960

Average Annual	*Institutions*		*Degrees*	
Number of Ph.D.'s	Number	Per Cent	Number	Per Cent
9 to 18	3	4	429	24
5 to 8.9	6	9	415	23
2 to 4.9	14	21	556	31
1 to 1.9	17	25	259	15
Less than 1	28	41	107	6
Total	68	100	1,766	100

SOURCE: Table 20.

TABLE 23. NUMBERS OF PH.D. DEGREES CONFERRED AND NUMBERS OF INSTITUTIONS CONFERRING, 1936–1956

7-Year Periods	*Number of Ph.D. Degrees Conferred*	*Number of Institutions Conferring These Degrees*	*Mean Annual Number of Ph.D.'s per Institution*
1936–1942	384	43	1.3
1943–1949	398	45	1.3
1950–1956	1,153	61	2.7

SOURCE: National Research Council, *Doctorate Production in United States Universities 1936–1956.* Publication 582, Washington, 1958, Tables 1 and 6.

tional institutions announce new doctoral programs. Eighteen of the 68 institutions which were offering the Ph.D. degree in 1960–1961 had inaugurated their doctoral program since 1946; at the time of our survey 7 of the 18 had yet to confer their first doctoral degree, and only two had conferred more than 10.

A few institutions continue to dominate the field of sociology in terms of numbers of Ph.D.'s produced. With respect to the number of institutions giving doctoral degrees and to the concentration of output in a few of these, the situation in sociology is approximately similar to that in economics and political science. Only about half as many institutions currently offer the doctorate in anthropology.

The character of graduate education is affected in various ways by the size of the student body. About a third of the departments offering Ph.D. degrees had fewer than 20 resident graduate students in 1960, while several of the largest enrolled more than 100; Table 24 shows the distribution. The 13 departments with 50 or more graduate students include several that are located in

metropolitan centers and attract considerable numbers of part-time students.

The number of faculty members in a department also affects the character of the educational process. Knowledge has become so complex that no one teacher can be a competent specialist in all areas of a single discipline. Moreover, it is important that there should be faculty members whose approaches to matters of

TABLE 24. DISTRIBUTION OF NUMBERS OF RESIDENT GRADUATE STUDENTS IN DEPARTMENTS OFFERING PH.D. DEGREES, 1960

Number of Students	*Number of Departments*
100 or more	5
50 to 99	8
40 to 49	8
30 to 39	12
20 to 29	13
10 to 19	18
1 to 9	4
Unknown	2
Total	70

SOURCE: Schedule I.

common interest are different. Table 25 shows that two-thirds of the graduate sociology departments have between 5 and 15 faculty members of assistant professorial or higher rank, the median number being about 10. Only 5 departments offering doctoral degrees report fewer than 5 faculty members. Student-faculty ratios provide a crude indication of the amount of individual attention the average student may expect. Table 26 shows that the modal ratio of graduate students to faculty members of assistant professor or higher rank is between 2 and 3. The correlation between size of department and student-faculty ratio is positive but not very high. All of the 13 institutions with student-faculty ratios of 5 or higher are located in large metropolitan areas. Except in these departments, an excessive number of graduate students per faculty member can certainly not be offered as an excuse for shortcomings in graduate education. It is not, in most instances, the number of graduate students he must supervise, but the burden of other activities that limits the

attention a faculty member gives to individual candidates for advanced degrees in sociology.

TABLE 25. NUMBERS OF FACULTY MEMBERS IN SOCIOLOGY DEPARTMENTS OFFERING PH.D. DEGREES

Number of Faculty Members[a]	*Number of Departments*
20 to 25	5
15 to 19	9
10 to 14	21
5 to 9	28
1 to 4	5
Unknown	2
Total	70

[a] Assistant professorial and higher ranks only.
SOURCE: Schedule I.

TABLE 26. STUDENT-FACULTY RATIOS IN DEPARTMENTS OFFERING PH.D. DEGREES, 1960

Student–Faculty Ratio[a]	*Number of Departments*
10 or more	3
8 to 9.9	1
6 to 7.9	4
5 to 5.9	5
4 to 4.9	5
3 to 3.9	14
2 to 2.9	24
1 to 1.9	11
Less than 1	1
Unknown	2
Total	70

[a] Resident graduate students per faculty member of assistant professorial or higher rank.
SOURCE: Schedule I.

Prestigious and Other Departments

It would greatly simplify the task of assessment if a single institution or a group of institutions could be taken as the criterion of excellence, as Flexner, early in the twentieth century, was able to measure the quality of other medical schools against that of the Johns Hopkins. But in the field of sociology today there is no such obvious criterion. Nevertheless it will be useful in various contexts to compare departments that enjoy high

prestige in the eyes of their academic colleagues elsewhere, with departments that are less generally regarded as distinguished. Rather than bear directly the burden of such invidious discrimination, we shall resort to the ratings of departments published by Hayward Keniston, who asked the chairmen of departments in 25 leading universities to rank the departments offering doctoral degrees in their respective fields with regard to "the quality of their Ph.D. work and the quality of the faculty as scholars."[1] Later in this report some comparisons will be made between 15 prestigious departments and all other departments that offer doctoral training, and for some purposes six departments heading the list will be differentiated from the next nine, without imputing validity to the ranking of individual departments.

TABLE 27. GRADUATE STUDENTS IN RESIDENCE, 1960, AND PH.D. DEGREES CONFERRED, 1950–1960, BY PRESTIGIOUS AND OTHER INSTITUTIONS

	Students		*Degrees*	
	Number	Per Cent	Number	Per Cent
In 6 most prestigious departments	463	14	595	34
In 9 next most prestigious departments	405	12	460	26
In 53 other departments offering the Ph.D. degree	1,606	49	711	40
In departments not offering the Ph.D. degree	803	25	..	..
Total	3,277	100	1,766	100

SOURCES: U.S. Office of Education data on total fall enrollment, 1960; all other data from Schedule I. Figure for nondoctoral departments obtained by subtraction.

In 1960 the 15 most prestigious institutions enrolled one-fourth of all graduate students of sociology; during the years 1950 to 1960 they gave six-tenths of all Ph.D. degrees (Table 27). A relatively larger proportion of their resident students were candidates for the doctoral degree. In 1960 they gave more Ph.D. than M.A. degrees, while the remaining institutions offering the doctorate gave more than twice as many M.A. as Ph.D. degrees.

[1] *Graduate Study and Research in the Arts and Sciences at the University of Pennsylvania.* University of Pennsylvania Press, Philadelphia, 1959, p. 115.

In short, the more prestigious departments as a group devote a greater part of their attention to advanced doctoral students.

Holders of doctoral degrees from the eleven departments at the head of Keniston's list are, as would be expected, relatively likely to be appointed to the staffs of leading universities; scarcely any of them are found teaching in junior colleges or lower schools. Conversely, the universities belonging to the American Association of Universities seldom appoint Ph.D.'s from universities outside that group. On the other hand, as can also be seen in Table 28, nonacademic employment draws roughly equal proportions of the graduates of prestigious and other departments.

TABLE 28. PRESENT EMPLOYMENT OF PH.D.'S AND SOURCES OF THEIR DEGREES

Sources of Ph.D. Degrees	*Percentage Distribution by Employment*					*Number of Respondents*
	Total	Universities in American Association of Universities	Other Universities and Colleges	Junior Colleges and Lower Schools	Non-academic Employment	
All sources	100	21	54	3	22	*401*
Eleven most prestigious departments	100	30	45	1	23	*211*
Other universities in American Association of Universities	100	14	63	5	18	*125*
All other universities	100	5	64	5	26	*65*

SOURCE: Schedule II.

Further evidence of the predominant influence of a small number of departments is the fact that the chairmen of nearly three-fourths of all departments offering the doctoral degree in sociology are graduates of the 15 most prestigious departments, almost a third being from Chicago, Columbia, or Harvard.

Not surprisingly, Ph.D.'s from the prestigious schools tend to command higher salaries than those from less prominent institutions. The reader must be left to speculate as how closely the differences in earnings shown in Table 29 correspond with differences in ability and quality of training.

TABLE 29. EARNINGS OF PH.D. GRADUATES OF PRESTIGIOUS AND OTHER SCHOOLS, 1960

Employment and Source of Ph.D. Degrees	*Mean Annual Earnings*	*Per Cent of Respondents Earning $15,000 or More*	*Number of Respondents*
In Academic Positions:			
Graduates of 15 prestigious departments	$9,900	9	197
Graduates of other departments	8,700	2	81
In Nonacademic Positions:			
Graduates of 15 prestigious departments	13,300	31	49
Graduates of other departments	10,100	8	26

SOURCE: Schedule II.

Departments Embracing Two or More Disciplines

Twenty-six departments that offer doctoral training in sociology bear the title of sociology and anthropology, and one other combines the same labels in the reverse order. In a majority of these joint departments sociologists outnumber anthropologists among both faculty and students, and in many of them only the cultural or social aspects of anthropology are represented. Only seven of the departments offer the Ph.D. degree in anthropology; nine others offer master's but not doctor's degrees in anthropology. At least three major universities, Cornell, Illinois, and Wisconsin, have very recently replaced joint departments with separate departments of anthropology and sociology. Several combined departments in less prominent institutions report that they have recently increased their offerings in anthropology.

The Harvard Department of Social Relations is unique in embracing sociology, social anthropology, social psychology, and clinical psychology in a single department. In only one institution, Iowa State University at Ames, sociology is administratively combined with economics, and the joint title of sociology and social work is now found only in the Utah State University at Logan. The recently established Johns Hopkins University Department of Social Relations and the Department of Sociology and Rural Life at Mississippi State University complete the list of departments whose titles indicate that their interests are not confined to sociology.

Rural Sociology Departments

In two universities, Cornell and the University of Missouri, separate departments of general and rural sociology independently offer doctoral degrees. Four other departments offering doctoral degrees are predominantly rural in orientation though not so entitled.

These six departments enrolled in 1960–1961 only about 4 per cent of the graduate students in sociology departments offering the doctoral degree, and conferred only about 3 per cent of all Ph.D. degrees and 4 per cent of the master's degrees given by the same departments. About 5 per cent of the respondents to our survey of Ph.D.'s reported that they had specialized in rural sociology. It appears that rural sociology as a special field is not only relatively small at present but declining in comparison with other fields. In a study a number of years ago, Ray Wakeley estimated that between 40 and 50 Ph.D. degrees had been given in rural sociology during the years 1930 to 1945; this would represent about 5 per cent of all Ph.D.'s in sociology for that period.[1]

Vocationally versus Academically Oriented Departments

While certain departments appear on closer acquaintance to be more preoccupied than others with preparing their students for particular vocations, the lines are not clearly drawn. Virtually all departments offering the doctoral degree in sociology are actually training students who will pursue both academic and nonacademic vocations; none turns out exclusively academic scholars or exclusively nonacademic professional workers. Indeed, the percentages of nonacademically employed Ph.D.'s differ relatively slightly among graduates of the more and less prestigious departments. In our sample, 24 per cent of Ph.D.'s from six highly prestigious departments, 24 per cent of those from all other member institutions of the Association of American Universities, and 31 per cent of those from universities not mem-

[1] *Rural Sociology*, vol. 13, June, 1948, pp. 183–188; also personal communication, March, 1962.

bers of the Association were in nonacademic positions. While our sample is too small to yield reliable rates for individual institutions, the percentages for nine departments each represented in our survey by at least 15 graduates ranged only from 15 to 33 per cent.

Migration of Graduate Students Among Institutions

The total amount of shifting among institutions in the course of studying to become a sociologist is great enough to affect significantly the ability of any given department to insist on a uniform sequence of training for all of its students. Some of the migration is an obvious consequence of the fact that many institutions which offer master's degrees have no doctoral program.

Students who change schools undoubtedly do so for many different kinds of reasons, not always on the basis of completely rational calculation of educational advantages. Sometimes the fortunate result is that after becoming well oriented toward a career in sociology through intimate contacts with the faculty in a small graduate department, the student is ready to take immediate advantage of the greater opportunities offered by the larger school to which he transfers. Could increased attention to the problem of orientation and socialization when counseling prospective graduate students on the choice of schools advantageously lead more of them to follow this pattern? Could the idea be carried to the extreme point at which some leading graduate departments would admit only students at the M.A. level?

Some of the leading schools might thus divest themselves of the burden of introductory courses and apply more of their personal and material resources to the vital work of advancing rather than merely transmitting knowledge, but some of the facts of life are clearly against such a radical step. Schools offering only advanced doctoral training would have to abdicate direct control over the basic preparation of their graduate students, and would have to depend upon other institutions to do a better job than is now generally done in preparing them for advanced work. Gains in early socialization of students might in some cases be offset by poorer substantive and methodological learning. Graduate

schools of lesser size, resources, and academic standing might regard the step as tending to institutionalize and perpetuate their inferior status. Certainly universities in general feel a strong compulsion to offer the doctoral degree in as many fields as possible, and many of them would strenuously resist efforts to take their most promising students away from them after they were well started on the road to maturity.

Among some 900 students newly enrolled in the departments offering the doctorate in sociology, 72 per cent had done no previous graduate work in sociology, while about 28 per cent had transferred from other graduate departments of sociology, among them 18 per cent with master's degrees and 11 per cent without. With two exceptions, no striking relation appears between the size, prestige, or other characteristics of universities and the proportion of new graduate students coming from other graduate schools. The exceptions are a group of relatively small sociology departments in "ivy league type" universities where an unusually high percentage of new enrollees have already studied in other graduate departments of sociology, and the Catholic universities to which relatively few students transfer after beginning graduate study in sociology elsewhere.[1]

The net volume of migration during the years of graduate study, from departments with limited staffs and facilities to the larger and more prestigious departments, appears less than might be expected. As Table 30 shows, 15 prestigious departments admitted only a very slightly greater proportion of new students who had previously been graduate students of sociology elsewhere than did the remaining departments which offer Ph.D. degrees. Another clue to the frequency and direction of migration is found in Table 31. In recent years, 37 per cent of the Ph.D.'s graduating from prestigious departments, and 32 per cent of all others, had taken master's and doctor's degrees at different institutions. These fragmentary data give a little evidence of selective migration of students toward more prestigious departments in the course of their graduate study, but less than might have been expected and perhaps less than would be desirable.

[1] Schedule I.

TABLE 30. PERCENTAGES OF GRADUATE STUDENTS NEWLY ENROLLED WITH AND WITHOUT PREVIOUS GRADUATE STUDY IN SOCIOLOGY ELSEWHERE

Educational Background	*All Departments*	*Fifteen Prestigious Departments*	*Other Ph.D.-Giving Departments*[a]
Without previous graduate study in sociology elsewhere	72	70	73
With some graduate study but without M.A. degree	11	14	9
With M.A. degree in sociology from another institution	18	17	18
Total	100	100	100
Number of new students	*876*	*302*	*574*

[a] Data from four departments unavailable.

SOURCE: Schedule I.

TABLE 31. PERCENTAGES OF PH.D.'S WITH MASTER'S DEGREES FROM SAME OR DIFFERENT INSTITUTIONS

Educational Background	*All Departments*	*Fifteen Prestigious Departments*	*Other Ph.D.-Giving Departments*
Without M.A., or with M.A. from same department	66	63	68
With M.A. from another of the 15 prestigious departments	9	12	6
With M.A. from another nonprestigious Ph.D.-giving department	14	14	16
With M.A. from a department not offering the Ph.D. degree	11	11	10
Total	100	100	100
Number of Ph.D.'s	*427*	*247*	*180*

SOURCE: Data on Ph.D.'s of 1957–1959 from Office of Scientific Personnel, National Research Council.

5. The Students: Aptitude, Motivation, and Educational Background

HAVING SURVEYED THE DEMOGRAPHY of sociologists and the distribution of graduate students among various categories of schools, we turn to what might be called the natural history of sociologists-in-training. While our central interest is in what happens during the years of study for advanced degrees, we must begin farther back with the students' aptitudes, motivations, and antecedent education. Much that is to be said on these subjects may be applicable to students of the social sciences in general, but we shall be especially concerned with those aspects which are peculiar to sociology.

Students' Aptitudes

Sociologists share with other professional groups a conviction that their particular profession deserves to recruit a larger share than it does of the nation's brightest and ablest youth. They also exhibit a common tendency to ascribe shortcomings in their professional curricula to their students' inadequacies rather than vice versa.[1] While it is a truism that no profession can transcend the limitations of its members' innate capacities, we have been appropriately reminded by Robert Faris in his presidential

[1] A number of years ago the author of this report argued that in the absence of positive evidence of inherent inferiority of their graduate students, social science departments should adopt the pragmatic view that what comes out of the graduate school is determined mainly by what takes place within it; that they should not make the assumed lack of talent an excuse for low educational standards. *The Recruitment, Selection, and Training of Social Scientists*, Social Science Research Council, Bulletin 58, New York, 1948, chap. 2.

address to the American Sociological Association that while individuals' innate abilities differ, few actually reach or even approach the limits of their capacity for learning.[1] Still, leaving aside the question of innate capacities and considering available indices of aptitude, the average quality of students entering graduate study in sociology appears decidedly unimpressive. There are no wholly unequivocal comparative data on the aptitudes of these students and those in other fields, but the existing evidence, while inconclusive, gives a consistently bleak picture.

Dael Wolfle, in his meticulously executed analysis of intelligence test data on students in scientific and professional fields, did not present separate norms for graduate students of sociology but included them under the rubric of "other social sciences" which apparently embraces students of sociology, political science, and smaller numbers from some other disciplines.[2] This group ranked near the bottom of his list of 19 fields, typical of those below it being education, home economics, and physical education. But before being quite discouraged by this finding we may note that Wolfle's data were drawn largely from two graduate schools, neither of which could claim to be outstanding in the social science fields.

A widely cited source of psychometric data which does single out students of sociology is the Graduate Record Examinations. Its verbal and quantitative aptitude tests are designed to be as independent as possible of advanced training in any field, and have been found to correlate significantly with general academic performance. Norms for verbal and quantitative aptitudes are shown in Tables 32 and 33, respectively, for two different groups of students: prospective graduate students tested in 1955–1957, and candidates for National Science Foundation graduate fellowships in 1959–1962.

When the students of the earlier group are classified by the 16 fields in which they took advanced tests—usually the fields in which they majored in college and intended to pursue graduate

[1] Faris, Robert E. L., "The Ability Dimension in Human Society," *American Sociological Review*, vol. 26, December, 1961, pp. 835–842.

[2] *America's Resources of Specialized Talent.* Harper and Bros., New York, 1954, pp. 198 ff.

TABLE 32. GRADUATE RECORD EXAMINATIONS VERBAL APTITUDE SCORES

Major Field of Study[a]	*Mean Score*	*Top Quartile (approx.)*	*Bottom Quartile (approx.)*
	Students Tested in National Program for Graduate School Selection, 1955–1957[b]		
Philosophy	627	720	560
Physics	625	700	560
Literature	623	700	560
Mathematics	602	700	530
French	600	690	530
History	591	680	520
Psychology	590	680	530
Government	572	680	500
Economics	571	680	480
Spanish	557	640	470
Chemistry	555	660	480
Engineering	548	620	490
Sociology	*546*	*640*	*450*
Biology	537	620	460
Geology	535	610	470
Education	454	530	380
	Candidates for National Science Foundation Graduate Fellowships, 1959–1962[c]		
Psychology	650		
Physics	640		
Economics	640		
Sociology	*630*		
Mathematics	620		
Chemistry	600		
Geology	590		
Engineering	580		
Biology	570		

[a] Fields in which candidates took advanced tests; in most cases the fields in which they planned graduate study.

[b] *Score Interpretation Handbook for Deans and Advisers.* Educational Testing Service, Princeton, N. J., November, 1957, pp. 14–17. Number of cases for each field except Spanish is over 200.

[c] *Graduate Record Examinations Special Report 62–4.* Educational Testing Service, Princeton, N. J., December, 1962, p. 10. Number of cases: sociology 98; economics 116; each other field over 600.

study—students of sociology stand near the bottom of the arrays for both quantitative and verbal aptitude. This is true both of mean scores and of top quartile scores, the latter measure being important as indicative of the superior minority of students on whom the future advancement of a field depends. Mean scores of candidates for National Science Foundation graduate fellowships

TABLE 33. GRADUATE RECORD EXAMINATIONS QUANTITATIVE APTITUDE SCORES

Major Field of Study[a]	*Mean Score*	*Top Quartile (approx.)*	*Bottom Quartile (approx.)*
	Students Tested in National Program for Graduate School Selection, 1955–1957[b]		
Physics	712	780	660
Mathematics	699	790	640
Engineering	695	760	640
Chemistry	636	720	570
Economics	603	700	520
Geology	577	670	490
Philosophy	553	640	470
Psychology	544	630	470
Biology	535	620	460
Government	527	620	430
History	518	610	430
French	510	600	430
Literature	510	600	430
Spanish	507	600	420
Sociology	*491*	*580*	*400*
Education	456	530	370
	Candidates for National Science Foundation Graduate Fellowships, 1959–1963[c]		
Physics	730		
Engineering	730		
Mathematics	710		
Economics	670		
Chemistry	670		
Geology	630		
Psychology	610		
Sociology	*580*		
Biology	570		

[a, b, c] See notes to Table 32.

are generally higher, show relatively less variance among fields, and place sociology just above the middle of the array in verbal aptitude, but once again next to the bottom in quantitative aptitude.

As was the case with the data previously cited from Wolfle, the 1955–1957 G.R.E. data may be biased by underrepresentation of students entering the leading graduate departments of sociology, very few of which require applicants for admission to take this examination.[1] The same cannot be assumed with respect to the

[1] List of "Institutions in Which at Least One Department Requires or Recommends Graduate Record Examinations. . . ." Educational Testing Service, April, 1961.

candidates for National Science Foundation graduate fellowships, all of whom are required to take the Graduate Record Examinations.

The two sets of norms leave no doubt of the prevalence of mathematical ineptitude among undergraduate students of sociology, and they fail to give evidence of countervailing superiority in aptitude for verbal expression and comprehension.

Results of the competition for Woodrow Wilson National Fellowships are ambiguous with reference to the quality of prospective graduate students in sociology. As measured by ratios of numbers of fellowships awarded to numbers of bachelor's degrees conferred in sociology and in all other arts and science fields, candidates for graduate study in sociology appear to have won only about one-third of their pro rata share of awards.[1] But as measured against numbers of master's or doctor's degrees conferred, they appear to have done between three-fifths and four-fifths as well as the average of those in all other disciplines. Were the candidates in sociology actually less promising on the average than others, or should we try to discount the evidence by assuming that the selection committees were biased in favor of other fields of study? The evidence remains ambiguous, but at best not affirmatively indicative of superiority.

The global scarcity of superior intellectual talent has been so amply impressed upon the public's consciousness that it would be needless to document here the fact that sociology departments face extremely severe competition for able students. Committees charged with the problem are prone to propose that lucrative fellowships be offered to attract more promising students. It cannot be denied that many young people's choices of careers have been influenced by the levels of financial support offered in different fields of advanced study. But those most susceptible to this form of bribery are not as a rule the most brilliant or likely to become the most firmly committed to the professions for which they are preparing. The abler, the more

[1] Fellowship data for 1961 supplied by Hans Rosenhaupt, director, Woodrow Wilson National Fellowships; data on degrees conferred from U. S. Office of Education, *Earned Degrees Conferred, 1959–1960.*

self-confident, and the more farsighted students set their goals first and then find the ways and means to pursue them.

Students' Motivations

It is widely observed that interest in human society as an object of scientific inquiry seldom appears among the very young. High-school and even grade-school pupils frequently exhibit, and are encouraged to cultivate, serious interests in the natural sciences; very seldom is this true of the social sciences, and among the latter sociology is perhaps the least likely to be perceived as a possible vocation. A youngster's imagination may have been fired by hearing an anthropologist tell of his visits to exotic societies, or his high-school teacher of history may have become the object of his emulation; but unless he happens to be personally acquainted with a sociologist, the chances are that he has never apprehended what a career in sociology may be like, much less felt inclined to choose it for himself. Typically, graduate students of sociology are individuals who have developed during their undergraduate college years a yearning to understand and to reform society or to palliate its evils. Only some time after he has begun his graduate studies does a typical student consciously take on the motivation of a scientist. Some, to be sure, reach this stage as undergraduates, and some never do.

It follows that, although ideally a prospective sociologist ought to anticipate during his early college years his need for training in the basic methods and techniques of science, most of them (as will presently be noted in some detail) enter the graduate school very deficient in these respects. Most of the graduate students interviewed in several universities said that they had at least reached the latter years of college and almost half of them, as seen in Table 34, had already graduated from college before deciding to pursue graduate study in sociology. Slightly less than half of the students who were asked said that they had entered graduate school immediately after graduating from college.

There is no positive evidence of any marked trend toward earlier choice of social science vocations. In the absence of earlier data relating specifically to students of sociology, it is of

TABLE 34. GRADUATE STUDENTS' TIME OF DECISION TO PURSUE GRADUATE STUDY IN SOCIOLOGY

Time of Decision	*Number*	*Per Cent*
Before entering college	0	0
Early in college	3	8
Sometime in college	10	25
In junior or senior year	8	20
After college graduation but before entering graduate school	8	20
After beginning graduate study in another field	11	28
Total	40	100

SOURCE: Interviews with graduate students, 1960–1961.

some interest to find that of about 500 individuals canvassed in 1946, who had been graduate students of the social sciences in the 1930's or 40's, 59 per cent reported that they had decided while still in college and 41 per cent had not made the decision to undertake graduate study in their respective fields until after college graduation.[1]

The tendency to choose sociology at a late stage in one's education is further reflected in the fact that as many as one-fifth of recent Ph.D.'s in sociology hold master's degrees in other disciplines, about half of these in fields other than social sciences.[2]

Undergraduate Institutions from Which Graduate Students Come

Although various studies have directed attention to the high percentages of future scientists and scholars among the graduates of some of the better independent liberal arts colleges of the United States, a large absolute majority of recipients of advanced degrees in sociology, as in other fields, are graduates of the undergraduate colleges of universities. Data on the undergraduate origins of all graduate students in sociology are not available; Table 35 shows the origins of those who became Ph.D.'s in recent years. The 326 American colleges represented in

[1] Sibley, Elbridge, *op. cit.*, Table 3, p. 20.

[2] Unpublished data on Ph.D.'s of 1957–1959 from Office of Scientific Personnel, National Research Council.

this table turned out on the average only one future Ph.D. sociologist every other year; only the colleges in universities which themselves offer the doctorate in sociology averaged a little more than one per year. Thus, in terms of the numbers of students involved, few if any undergraduate departments of sociology can be expected to be primarily concerned with the preliminary preparation of future Ph.D.'s.

TABLE 35. SOURCES OF BACCALAUREATE DEGREES OF RECENT PH.D.'s

	Number of Institutions	*Ph.D.'s Holding Bachelor's Degrees from These Institutions*	
		Per Cent of all Ph.D.'s	Average Yearly Number per Institution
Institutions in the U.S.:			
Universities which offer the doctoral degree in sociology	64	46	1.25
Other universities	103	24	0.4
Liberal arts colleges	130	19	0.25
Teachers colleges and technical schools	29	4	0.25
Institutions in foreign countries	..	7	..
Total	326[a]	100	0.5

[a] Not counting institutions in foreign countries.

SOURCES: National Research Council, *Doctorate Production in U. S. Universities, 1936–1956*, Table 10.
National Research Council, *Baccalaureate Origins of Doctorates in the Arts, Humanities, and Social Sciences Awarded in the U. S., 1936–1950*, Table 6.
Data on 1,036 recipients of Ph.D. degrees in the years 1951–1956.

About a fifth of the new students admitted in 1960 to departments which offer the Ph.D. degree held bachelor's degrees from the same respective institutions. It may be considered positively desirable that a student should have a change of scene after spending four years in one college, but the fact that potential Ph.D. candidates are drawn from many and diverse undergraduate colleges obviously limits the ability of a particular graduate department to determine what specific preparation its students shall have had.

Not surprisingly, the leading graduate departments of sociology recruit a relatively large proportion of their future Ph.D.'s from undergraduate colleges of high standing. In a recent period, 23

per cent of the recipients of Ph.D. degrees from 15 prestigious departments, and only 6 per cent of those from other departments, held bachelor's degrees from 28 universities and colleges identified by Knapp and Greenbaum as highly productive of future scholars.[1]

Undergraduate Preparation in Sociology

Not quite half of the recent recipients of advanced degrees in sociology had majored in that subject as undergraduates. Table 36 shows the variety of fields in which they concentrated. The last column of the table shows that two-thirds of those who recently began graduate study in sociology departments which offer the doctoral degree had majored as undergraduates in the same discipline. On its face this last figure might appear to indicate that increasing proportions of recruits to the sociological profession are entering graduate schools already somewhat versed in sociology. But comparison of the first two columns in the table casts doubt on such an inference. A greater percentage of recent M.A.'s than of recent Ph.D.'s had majored in sociology as undergraduates, while the percentage of undergraduate majors among entering graduate students is still greater.

A more likely interpretation, confirmed by extensive conversations with both graduate students and faculty members, is that the relevance of undergraduate training in sociology diminishes as one advances from the earlier to the later stages of graduate study. Undergraduate courses which are essentially unscientific expositions of popular ideology and discussions of familiar social problems in an esoteric language may well inspire some students to pursue further study in the same field, but many of these drop out after a year or two in graduate school.

If forced to choose between admitting a student who had majored in sociology in a mediocre undergraduate college and one who had made a good record in some other field in a college with high academic standards, most graduate faculty members

[1] Data on Ph.D.'s of 1957–1959 from Office of Scientific Personnel, National Research Council; undergraduate institutions from Knapp, Robert H., and Joseph H. Greenbaum, *The Younger American Scholar*, University of Chicago Press, Chicago, 1953, Appendix I.

TABLE 36. UNDERGRADUATE MAJOR FIELDS OF PH.D.'S, M.A.'S, AND BEGINNING GRADUATE STUDENTS IN SOCIOLOGY

Undergraduate Major Fields	*Per Cent of Ph.D.'s*[a]	*Per Cent of M.A.'s*[b]	*Per Cent of Beginning Graduate Students*[c]
Sociology	41	49	67
Anthropology	..[a]	..[a]	
Economics	7	1	
Political Science	2	1	
Miscellaneous social studies	5	12	
History	6	2	
Psychology	7	7	
Humanities, Literature, Arts	12	13	33
Physical and Biological Sciences	3	2	
Mathematics, Statistics	..[a]	..[a]	
Education	4	4	
Other Vocational Fields	4	6	
All other fields	8	4	
Total	100	100	100
Number of respondents	*465*	*271*	*629*

[a] Less than 1 per cent.

SOURCES: [a] Unpublished data from the Office of Scientific Personnel, National Research Council, Ph.D.'s of 1957–1959.
[b] Schedule V.
[c] Schedule I.

would probably choose the latter. The chairman of one of the nation's leading sociology departments, looking back at his own undergraduate training in sociology, said, "If I were to begin over, I would concentrate my efforts on mathematics, philosophy, biology, history, and economics. A very few sociology courses would cover what is worth knowing." The fact that large numbers of graduate students have not majored in sociology is not in itself as important as the fact that those who have done so are often no better prepared for advanced scientific work than those who concentrated in other disciplines in college.

For reasons already indicated, it would be quite unrealistic to expect rapid development in any but a few institutions of undergraduate programs in which sociology is presented as a preprofessional discipline. Perhaps, as suggested earlier in this report, the institution of more undergraduate honors programs in universities having strong graduate departments of sociology may offer the greatest immediate hope of facilitating the socialization of a

considerable number of new recruits to the profession. The Ph.D.-giving universities, whose undergraduate colleges are attended by nearly half of the future graduate students of sociology, are in some respects the most strategic sites for innovations in the early preparation of those destined to become sociologists. In all but a few of these universities the same faculty teaches both undergraduates and graduates, often in the same classes. Unpropitious aspects include the often very large size of classes and the relatively very small number of undergraduates majoring in sociology. As an extreme example one university reports 1,000 enrollments in sociology courses but only 15 juniors and seniors majoring in sociology.

Undergraduate Preparation in Other Respects

Whether or not they have majored as undergraduates in sociology or in any other social science, an unfortunately large proportion of those who seek advanced degrees in sociology come to graduate school without enough knowledge of one or two foreign languages to pass the examinations which most universities require of doctoral candidates in all fields. And a great majority have not had even one course in the calculus, without which one cannot be considered ready for more than superficial study of a "hard" science involving quantitative methods or formal models.

No statistics are available to show how many of the future sociologists, apart from the tiny minority who have majored in scientific disciplines, have had during their undergraduate years any serious exposure to rigorous scientific study, but it is certain that many have taken only the undemanding kind of science courses customarily offered for students not primarily interested in science. The curiosity about social problems or zeal for social reform which typical students bring with them to graduate school is not as a rule accompanied by a strongly scientific orientation or a desirable amount of training in skills which is basic to science in general.

6. Admission, Elimination, and Progress Toward Degrees

IN THE SELECTION of applicants for admission, elimination of those whose ability or performance proves inadequate, and enforcement of a reasonable time schedule for completion of work for degrees, the practices of most sociology departments are quite loose. Only a few very prestigious departments have highly selective admission policies and turn away all but a minority of applicants; and even such departments tend to allow students once admitted to proceed pretty much at their own chosen pace.

Admission to Graduate Study

Most departments which offer advanced degrees in sociology nominally require for admission to full graduate status either a bachelor's degree in sociology or the accumulation of a certain number of credit-hours—typically about 15—in undergraduate courses in the subject. However, the prospectuses of a number of prestigious departments mention no such requirement. The published admission requirements of 35 departments whose announcements are relatively explicit are abstracted in Table 37. On paper, it appears that departments which cannot count on attracting intellectually superior and generally well-educated students are as a rule the more prone to specify definite prerequisites of training in their own discipline. Catalogs and brochures, however, do not give a complete and realistic picture of actual practices. The decision that a given student need or need not pass certain undergraduate courses or special examinations before being admitted to full graduate status appears usually to be left to the discretion of the department head or some other

TABLE 37. PUBLISHED REQUIREMENTS FOR ADMISSION TO GRADUATE DEPARTMENTS OF SOCIOLOGY

AMERICAN—graduation from an accredited four-year college with major in sociology or anthropology; nonmajors admitted with deficiency until required background work is made up; minimum undergraduate course requirements are 12 hours in sociology or satisfactory score on Graduate Record Examinations advanced test in sociology.

BROWN—undergraduate major, with minimum B average, in sociology or an allied social science with some work in sociology; deficiencies in background must be removed by taking appropriate courses in addition to those normally required for the degree.

BUFFALO—background approximately equivalent to requirements for the senior comprehensive examinations in the department of sociology, including knowledge of general sociology, social theory, elementary statistics; deficiencies to be made up in courses or successful completion of general examinations; undergraduate grade average of B or better in all studies.

CALIFORNIA (BERKELEY)—bachelor's degree from accredited institution; satisfactory scholarship.

CALIFORNIA (LOS ANGELES)—bachelor's degree in anthropology or sociology or its equivalent; if lacking, student must make up subject deficiencies before proceeding with advanced degree program.

CHICAGO—bachelor's degree or equivalent; insufficient background in sociology must be made up; student must be able to pass placement examination in high school mathematics or make up deficiencies revealed by examination; must have completed an introductory course in statistics.

COLUMBIA—minimum 15 hours of undergraduate sociology including statistics, research methods, theory.

CONNECTICUT—B average for last two years of undergraduate work; if undergraduate background not adequate in chosen field, it must be made up with noncredit courses or special examination.

CORNELL (COLLEGE OF ARTS AND SCIENCES)—general background in human biology, the social sciences, humanities, also some knowledge of basic concepts and applications of social statistics; deficiencies in latter can be made up during graduate work.

DUKE—at least 12 hours undergraduate work in sociology; more may be required in some cases; students who do not have adequate preparation will be required to take additional undergraduate courses.

HARVARD—bachelor's degree based on a distinguished record of college work; no specific undergraduate major but background in psychological and social sciences expected; undergraduate work in humanities, natural sciences, and mathematics also considered appropriate; if sufficient preparation is lacking, additional courses may be required; Miller Analogies Test and Graduate Record Examinations aptitude test and advanced test in any special field the applicant may choose.

ILLINOIS—grade average of at least 3.5; minimum of 9 hours undergraduate work in sociology; a course in quantitative research methods in sociology;

TABLE 37. PUBLISHED REQUIREMENTS FOR ADMISSION TO GRADUATE DEPARTMENTS OF SOCIOLOGY (Continued)

15 hours in one or more of the following: anthropology, economics, history, mathematics, philosophy, political science, psychology; deficiencies in above must be removed during first year by taking courses without credit; training in logic, philosophy of science, mathematics and statistics is "strongly recommended."

STATE UNIVERSITY OF IOWA—minimum 24 hours in sociology and anthropology including a basic introductory course; undergraduate majors in other social sciences may be admitted provisionally; deficiencies must be removed as soon as possible.

JOHNS HOPKINS—undergraduate training in one of the social sciences, including some sociology, is desirable; mathematics through calculus is desirable but not required; Graduate Record Examinations must be taken by all applicants.

KANSAS—25 hours of undergraduate courses in sociology, economics, political science, of which at least 15 are in sociology; deficiencies must be removed before M.A. candidacy will be accepted.

LOUISIANA STATE—average of not less than 1.5 (C+) for entire record; average between 1.0 and 1.5 may obtain conditional admission; must complete 12 hours of B or better with no grade lower than C and condition is removed.

MARYLAND—undergraduate major (minimum of 24 hours) in sociology or 12 hours in sociology (including 6 hours advanced courses) and 12 additional hours of comparable work in economics, political science, or psychology; grade average at least B in major and closely related subjects; if above not met may be given provisional admittance and take additional courses without credit.

UNIVERSITY OF MICHIGAN—minimum 15 hours undergraduate sociology courses including a course in statistics; if lacking, a number of hours sufficient to make up the deficiency will be added to the graduate program.

MINNESOTA—Miller Analogies Test; may require Graduate Record Examinations; 18 quarter credits in undergraduate sociology.

MISSISSIPPI STATE UNIVERSITY—graduates of Mississippi State University will be admitted upn their academic record; from other institutions must meet following: fully recognized and accredited four-year senior college; overall academic record of B or better for unconditional admission; may require Graduate Record Examinations aptitude and advanced tests; 18 hours undergraduate courses in sociology and anthropology and 12 undergraduate hours in the minor field.

MISSOURI (COLLEGE OF ARTS AND SCIENCES)—18 hours undergraduate social science courses including 12 hours sociology or anthropology; if less, student must make up deficiency by enrolling in courses for undergraduate credit concurrently with graduate work; in exceptional cases deficiency may be met by taking a written examination; may require a systematic examination to determine gaps in training and background.

MISSOURI (RURAL SOCIOLOGY DEPARTMENT)—bachelor's degree from accredited college or university; minimum 12 hours in sociology and/or rural sociology.

TABLE 37. PUBLISHED REQUIREMENTS FOR ADMISSION TO GRADUATE DEPARTMENTS OF SOCIOLOGY (Continued)

NEBRASKA—undergraduate sociology major or equivalent; deficiencies may be met by taking courses or special examination; students with bachelor's or master's degrees from other institutions who have not taken Graduate Record Examinations in sociology with satisfactory results required to take a qualifying examination given by department.

NORTHWESTERN—acceptable college, scholarship, etc.

OHIO STATE—bachelor's or professional degree from an approved college or university; average 2.7 in all undergraduate work; "prerequisite training that will enable student to pursue effectively the graduate courses of the department in which he wishes to specialize."

OREGON—three letters of recommendation (academic); Miller Analogies Test; average of 3.0 or better in undergraduate work in the field (if sociology major) or average of 3.0 or better in all social science courses taken (if not sociology major); preparation in statistics and research methods or student must make up deficiency without credit.

PITTSBURGH—bachelor's degree or its equivalent.

PRINCETON—bachelor's degree in a broad program of general education; Graduate Record Examinations aptitude and advanced tests.

PURDUE—English requirement and Graduate Record Examinations aptitude test; 12 undergraduate hours in sociology or student must make up deficiency.

STANFORD—undergraduate preparation in sociology is desirable; under special circumstances applicant will be admitted without it.

VANDERBILT—undergraduate sociology major desirable but not required; nonmajors may have to take course work beyond minimum requirements.

UNIVERSITY OF WASHINGTON—completion of undergraduate requirements of the department of sociology; Graduate Record Examinations aptitude and advanced tests strongly recommended; if admitted without having taken the tests, student must take them during first quarter of study; if undergraduate work in sociology inadequate, student must pass qualifying examination before admission to graduate courses; undergraduate with average grades below B advised against graduate work.

WASHINGTON UNIVERSITY (ST. LOUIS)—may require Miller Analogies Test or Graduate Record Examinations; three letters of reference; strong liberal arts and sciences background; if student does not have 12 hours undergraduate work in sociology and anthropology he must make up the deficiency before graduate credit will be allowed.

WESTERN RESERVE—minimum 15 hours undergraduate sociology; may consider courses in related fields such as anthropology, social psychology, statistics as part of requirement; if student does not have the above, he may be permitted to make up deficiencies without credit.

WISCONSIN—undergraduate major in sociology or its equivalent; 70 hours of academic work outside the major with appropriate subject-matter distribution; undergraduate average of 2.75.

SOURCE: Catalogs and departmental brochures, 1960 or 1961 in most cases.

faculty member, and one gains the impression that the brighter students are usually admitted without much regard to formal prerequisites.

Virtually all graduate school authorities establish a minimum grade average in college as prerequisite for admission to programs leading to advanced degrees in any academic subject. Prevailing thresholds do not, however, exclude any great proportion of individuals who want to enter, for the simple reason that graduate study is unlikely to have much appeal except to those who have done well enough in their undergraduate studies to derive some satisfaction from them and to expect to derive further satisfaction from more advanced studies. Self-selection and the general rules of graduate schools may exclude most students whose work has not been of at least B or B-minus quality by prevailing undergraduate college standards. But the advancement of an academic or a professional discipline demands a higher standard for doctoral candidates. Two conditions are necessary if a given graduate department is to raise the average quality of its students above the level of minimum competence. First, superior students in sufficient numbers must apply for admission; second, those of little aptitude must be excluded. Actually, it appears that most sociology departments currently accept almost any student who measures up to the minimum set for the graduate school as a whole.

With a few conspicuous exceptions, graduate sociology departments appear to have admitted all minimally qualified applicants, and to be unwilling to raise their standards at the cost of smaller enrollments. In the face of a growing shortage of new teachers and expanding opportunities for nonacademic employment for sociologists, the pressure on graduate schools to turn out larger numbers of M.A.'s and Ph.D.'s is increased. Pressure to admit larger numbers of graduate students of limited aptitude and motivation and without specific preparation is further increased by the evidently growing propensity of students to view a year or more of graduate study as offering a chance to avoid for a while the necessity of making an irrevocable vocational choice. A discipline like sociology which, in undergraduate colleges, has acquired a reputation of soft permissiveness, can

expect numerous such applicants for admission to graduate study. Many departments of sociology may find it increasingly difficult to choose quality in students rather than quantity if they cannot have both.[1]

Some data on the disposition of applications for admission to a few sociology departments are summarized in Table 38. Comparable data were unavailable in many institutions. All of the private universities represented in this table are institutions whose graduate schools enjoy generally high repute; the public institutions differ more in this respect. In two of the three institutions which reported separately the new students enrolled with and without conditions, very few were conditioned; the one institution in which about half of the new students were conditioned had offered admission to 100 per cent of its applicants. While fragmentary, these data lend some support to the casual impression that nominal requirements of undergraduate training in sociology are seldom firmly enforced.

The fact that only between a fifth and a half of those offered admission actually enrolled in these departments has two implications: that students frequently apply for admission to several institutions and choose the one promising the most favorable financial assistance; and that many offers of admission unaccompanied by assurance that the student will be given a grant or an opportunity to earn a stipend are tantamount to nonadmission. One large and prestigious department (not represented in Table 38) in a recent year offered admission to 107 applicants but promised financial assistance to only 20. Reliance on withholding financial aid to deter unqualified students from enrolling is doubtless effective in a great majority of cases, but it does not represent as explicitly rigorous selection as would be desirable in a field which badly needs to raise its standards. Public institutions in particular find it embarrassing to refuse admission to any holder of nominally acceptable credentials—that is to say, any A.B. with a reasonably good academic record.

[1] Some departments have reported greatly increased numbers of applications. It is too soon to tell whether this indicates a corresponding increase of the number of superior applicants or whether it largely reflects an increase in frequency of multiple applications by individuals seeking advantageous financial support.

TABLE 38. ILLUSTRATIVE DATA ON DISPOSITION OF APPLICATIONS FOR ADMISSION TO GRADUATE DEPARTMENTS, 1959 OR 1960

Institutions	*Number of Applicants*	*Per Cent of Applicants Accepted for Admission*	*Per Cent of Applicants Actually Enrolled*
State Universities:			
A	300	33	23[a]
B	93	100[b]	55
C	85	94	30
D	58	76[c]	31
E	..	70	15
Private Universities:			
F	56	46	27
G	34	71	29
H	25	40	30

[a] 2 per cent conditionally enrolled.

[b] 41 per cent conditionally accepted.

[c] 21 per cent conditionally accepted.

SOURCES: Interviews and correspondence with heads of departments.

In allocating the fellowships, scholarships, and assistantships at their disposal, department chairmen and committees generally give preference to applicants who show the most promise of scholarly achievement. But their hands are not always completely free in this regard. Teaching assistantships must be reserved for more advanced graduate students. Unrestricted university fellowship funds are seldom adequate to support any large proportion of the students in a given department. Many of the fellowships under the National Defense Education Act are earmarked for training in foreign area studies or other special fields. An increasingly widespread source of support for graduate students is the research grant or contract under which the department, a related research institute, or an individual member of the faculty can hire student assistants. As a consequence of being almost wholly dependent on this type of assistance for its new students, at least one sociology department has been able to attract only students who have already learned enough of elementary research techniques to warrant their immediate employment as assistants. It has been unable to recruit some other applicants for admission whose records indicate greater promise of intellectual achievement.

Comparative statistics of applications and admissions of new students to graduate study in sociology and other fields are scarce. Letters to a number of graduate school deans have elicited insufficient information to warrant any generalization.

Attrition and Elimination of the Unfit

Surprisingly few data are available on rates of elimination and withdrawal from graduate study in various institutions, though it is well known that a majority of students leave for one reason or another before attaining the doctoral degree. Formal and informal procedures for sifting out unqualified students not only differ from place to place but frequently change from year to year in the same department. Nearly everywhere a considerable exodus takes place at the end of the first year and another on receipt of the M.A. degree. Once a student has surmounted the M.A. hurdle and has been permitted to continue work for the Ph.D. degree, expulsion for failure in final examinations is quite rare.

Given the prevailing absence of rigid requirements which must be met at stated times, it is not easy to identify and count those who have been dismissed by the faculty as unqualified for further study, and those who have left voluntarily for many different reasons. In some of the largest departments, senior faculty members seldom become well acquainted with students in their first year. The results of routine evaluation of students' progress at the end of the first year in one large and highly prestigious department are summarized in Table 39. It is deplorable, to say the least, that after a whole academic year the faculty was unable to assess the progress and potentialities of even half of the students.

A smaller department which has undertaken with unusual vigor to weed out the incompetent has in effect dismissed about three out of ten students by the end of their first year. Some of these have been formally dropped for failure in courses; others have been informally but firmly advised not to return.

The faculty's control over the annual reallocation of fellowships and assistantships on which most students depend for their maintenance is quite properly used as a selective device, though

considerations of academic and professional promise are sometimes tempered by compassion for a mediocre student who needs academic credentials for employment. It is virtually impossible to form any objective judgment of the frequency with which mercy prevails over objective assessment of a student's achievement and promise.

TABLE 39. REVIEW OF STUDENTS' PROGRESS AT END OF FIRST GRADUATE YEAR IN A LARGE PRESTIGIOUS SOCIOLOGY DEPARTMENT, JUNE, 1960

	Number of Students
Encouraged to continue at least to the M.A. and probably to the Ph.D. degree	13
Permitted to continue to terminal M.A. degree only	2
Dismissed as unqualified to continue	3
Not evaluated, for lack of sufficient evidence	25
Total	43

"Counseling a student out" when he receives the M.A. degree is somewhat less painful to both faculty and student than dismissing him at an earlier stage. But in one fairly large department in a state university the chairman estimated that 85 to 90 per cent of those receiving master's degrees are encouraged by the faculty to pursue the doctorate, and that 55 to 65 per cent of them actually become Ph.D.'s. While his estimate of the percentage of students attaining the doctoral degree seems unusually high, the implied reluctance of the faculty to discourage ill-qualified students from seeking it is not unfamiliar.

Responses of M.A.'s to our question why they did not go on to the Ph.D. degree are summarized in Table 40. Taken literally, the responses would indicate that sociology departments very seldom tell a student frankly that he is unqualified to continue beyond the M.A. level. But regard for the faculties' judgment demands the assumption that many of the respondents were simply reluctant to report that they had quit because they were told that they had not "made the grade" as prospective Ph.D.'s.

Other screening devices include examinations which are supposed to be passed at stated times, but by widespread custom may be deferred until the student feels ready, and re-taken until they are passed. The nature and normal timing of these differ from department to department, a fairly common pattern embracing a general qualifying examination during the second year of graduate study, and final examinations (some in prescribed

TABLE 40. REASONS GIVEN BY M.A.'s FOR DECIDING NOT TO SEEK THE PH.D. DEGREE IN SOCIOLOGY

Reason for Decision	*Per Cent*
Failed or was advised to discontinue studies	3
Lost interest in sociology or chose to take a degree in another field	31
Found Ph.D. degree unnecessary in chosen vocation	31
Miscellaneous reasons of health, finances, family responsibilities	35
Total	100

SOURCE: Schedule V (153 respondents).

and some in elective fields) later in the course. Students themselves tend to postpone the critical points at which their progress is formally assessed. The incompetent and the diffident may take an unreasonably large number of courses before taking preliminary examinations. When one large department introduced a new set of required first-year "core courses" which were supposed to prepare students for a qualifying examination, many students still contrived to postpone taking the examination until the end of their second year.

The data in Table 41 showing the stages of progress toward the doctoral degree that a number of students had reached when interviewed during their third and later years of graduate study are too sparse to yield reliable statistics, but will serve to illustrate the tendency to delay. Thus in the absence of tests which must be passed at specified times, students in sociology often continue in graduate school long after their presence has become unprofitable to themselves and to the school. While data are lacking for statistical comparison with other disciplines, the eliminative

TABLE 41. STAGES OF PROGRESS TOWARD THE PH.D. DEGREE

Stage	*Proportions of Students Who Had Already Reached Certain Stages When Interviewed During Their Third to Fifth Years in Graduate Schools*[a]		
	THIRD YEAR	FOURTH YEAR	FIFTH YEAR
Master's degree requirements fulfilled (or waived)	three-fourths	five-sixths	practically all
Foreign language requirements fulfilled	about half	about half	three-fifths
All qualifying and special field examinations passed	about one-fourth	about half	a small majority
Work begun on doctoral thesis	less than one-tenth	about one-fifth	nearly nine-tenths

[a] Roughly estimated from interviews with students in a dozen institutions.

processes can be assumed to be more efficient in those fields whose content is more standardized and whose curricula are more cumulative.

Resistance to proposals for more rigorous elimination of those who fail to meet prescribed requirements at prescribed times arises from the persistent hope that an important flash of insight may yet strike a student whose performance has so far been mediocre. The parable of Pasteur rejected by the Academy of Medicine sometimes appeals so strongly to exponents of a science which is still immature that they relax for obviously mediocre students rules which should be waived only for those who have given some token of exceptional promise. There is, of course, no sure escape from this dilemma, but on the whole sociology departments can be fairly charged with erring on the side of laxity. In some places, simple fear of shrinking enrollments and the attendant threat of budgetary cuts may be rationalized as solicitude for rough crystals which might turn out to be diamonds.

Elapsed Time

If John Fiske's theory is valid, that prolongation of infancy is characteristic of the higher stages of evolution, Ph.D.'s in sociology must represent a very high order of beings, for in terms of the average time elapsing between bachelor's and doctor's degrees they are tied with historians for first place on the list of social scientists, with a median interval of 9.9 years. The medians

given in Table 42 refer to Ph.D.'s of 1958–1959; fragmentary data for earlier periods show no definite trend toward a longer or shorter average interval. The median age at receipt of the doctor's degree in sociology has recently been about 32½ years; it was slightly higher for the generations whose studies were interrupted by World War II, but is now close to the prewar level.[1] It closely approximates the median ages for doctorates in other social sciences, and is higher than those for the physical sciences.

TABLE 42. MEDIAN INTERVALS BETWEEN A.B. AND PH.D.: RECIPIENTS OF PH.D. DEGREES IN 1958 AND 1959

Field of Study	*Years*
History	9.9
Sociology	9.9
Political science	9.8
Economics	9.5
Anthropology	9.4
Psychology	8.4
Life sciences	8.1
Physical sciences	7.1

SOURCE: Data from Office of Scientific Personnel, National Research Council, by courtesy of Lindsey R. Harmon.

For the social sciences as a whole, Berelson has estimated that only about half of the total time between degrees is devoted to full-time graduate study.[2] This appears to be true also of sociology, on the basis of some approximate data from the Office of Scientific Personnel of the National Research Council, showing that for sociology Ph.D.'s of 1958–1959, the median A.B.—Ph.D. interval of 9.9 years included 5.4 years of "predoctoral professional experience."[3] It is evident from this that a considerable proportion of Ph.D. candidates work only intermittently or incidentally for their degree.

About half (47 per cent) of the resident graduate students interviewed in the present investigation had begun graduate

[1] Schedule II.

[2] Berelson, Bernard, *Graduate Education in the United States*. McGraw-Hill Book Co., New York, 1960, p. 160.

[3] Letter from Lindsey R. Harmon.

study in sociology immediately after receiving their bachelor's degrees; the others had begun after intervals ranging from one to fourteen years, the mean interval for all (including those who did not delay) being two years and the median less. Most of the long lapse of time between degrees occurs after rather than before graduate study is begun.

The median interval between A.B. and M.A. degrees for respondents to our survey of M.A.'s was 3.7 years; their median age on receipt of the master's degree was about 29 years.[1] The median age at receipt of the master's degree was about 1½ years older for those terminating their studies at the M.A. level than for those intending to become Ph.D.'s. This difference, however, is wholly attributable to the considerable number who received terminal M.A. degrees after their fortieth birthdays; in other words, it appears that students who continue in graduate school soon after finishing college take on the average about the same length of time to attain the master's degree, whether or not they are en route to the doctorate.

Although the average interval between bachelor's and doctor's degrees has recently remained approximately constant, there are some signs of a trend toward longer average periods of residence in graduate schools. If the added time spent in residence were always devoted to the student's own education, the total time elapsing before receipt of the doctoral degree might actually be reduced. Some departments report that larger proportions of their candidates than heretofore are remaining to complete their dissertations in residence, as opportunities for research on university campuses have grown more plentiful. As will be argued later in a different context,[2] there is much to be said for not leaving the graduate school until the dissertation is finished; and staying longer in residence may actually hasten its completion. But for many students, resident graduate study tends to become virtually an indefinitely prolongable career in itself, rather than a preparatory stage whose duration ought to be no longer than necessary.

[1] The group included an appreciable number whose studies had been delayed by military service.

[2] See Chapter 10.

It is reported from one large state university that today's Ph.D. candidates spend on the average as much as six years in residence, while not long ago the modal period of residence was nearer four years.

On the opposite side of the picture are the very considerable numbers of doctoral candidates who leave the graduate schools as "A.B.D.'s" intending to complete doctoral dissertations while working at regular jobs elsewhere.

Efforts to reduce the undesirably long total lapse of time between degrees should be directed at reducing the amount of time consumed in activities which do not contribute to the candidate's professional education. The average time actually devoted to study and research could not be greatly reduced without lowering existing standards which are at best none too high.

7. Initiation Into the Profession

AN ESSENTIAL FUNCTION of graduate education, in addition to imparting a certain body of knowledge and skills, is the development of a sense of identification with a profession. In the case of sociology this process of professional socialization, of internalizing professional norms (to use the current terminology) is often slow and difficult for several reasons. First of all, while the public at large has fairly vivid perceptions of the professional roles of physicians, lawyers, engineers, or even some kinds of scientists, it tends to have only vague and often distorted notions of what a professional sociologist is and does. In the second place, as was noticed in earlier reference to the undergraduate backgrounds of graduate students, few college curricula in sociology are primarily designed as preparation for graduate study in this field. In college or even before, numerous students see in their teachers models for their own future careers, and some of these elect sociology as an interesting field in which to teach, while others are attracted by the "social problems" with which their courses deal. But early commitment to sociology as a science is rare indeed.[1]

The First Graduate Year

A student who has graduated from a four-year college and has chosen to prepare himself for a career in a scientific field might reasonably expect to be challenged, in his first year as a graduate student, to study more intensively and more purposefully than before. This expectation is too often disappointed, for reasons which though familiar deserve careful re-examination. The first

[1] See Table 34, p. 84.

year of graduate study in departments offering the doctoral degree is, according to the usual official prospectus, mainly devoted to laying or reinforcing general conceptual, theoretical, methodological, and technical foundations for later specialized study and training leading to advanced degrees. In actuality, superficial and even perfunctory courses are not uncommon in the first year of graduate study in sociology, and aimlessness or perhaps more precisely *anomie* (in Durkheim's sense of the term) is prevalent among first-year students. A number of contributory factors are implicit in what has already been said about the students' motivations, previous education, and their vocational aims and prospects.

The prescribed courses of the first graduate year are often unchallenging both to those who teach them and to the abler students. Despite the prevailing rule that students admitted without prerequisite work in sociology must make up the deficiency before entering the regular graduate curriculum, those who have and those who have not previously taken many undergraduate courses in the subject are actually thrown together in introductory courses which presuppose virtually no common fund of knowledge. Those relatively few students whose undergraduate training in sociology has been firmly scientific, as well as really bright students who may have had no previous introduction to scientific sociology, learn little that they do not already know or could not readily learn by a reasonable amount of independent reading.

Exceptionally well-prepared first-year students are sometimes exempted from pursuing the usual introductory courses, either on the basis of passing special examinations, or at the discretion of their faculty advisers. Particularly in large departments, however, it appears that students frequently waste time in such courses before their lack of need for them comes to the attention of the faculty. And after all, a faculty member responsible for teaching an introductory course may be understandably reluctant to dismiss a superior student who enlivens his class.

Courses required or customarily taken by first-year graduate students are typically open also to upper-class undergraduates,

and they are also frequently taken by graduate students majoring in other academic or vocational fields whose interest in sociology is tangential. This admixture can hardly fail to depress the level of instruction and to foster a tendency to treat each course as terminal rather than introductory to further systematic study. In some courses graduate students majoring in sociology are expected to do more intensive work than others, but in one institution visited the faculty member responsible for advising new students reported his impression that graduate students were graded more leniently than the undergraduates in the same courses. Whether or not that is an exceptional situation, the mixed courses in which beginning candidates for advanced degrees are commonly placed cannot be as challenging as could be desired.[1]

But the low intellectual plane of courses is by no means the only reason that many first-year students are disillusioned and feel that they are wasting time. Their frustrations stem largely from the fact that they either have no clear conception of the roles for which they are to be prepared, or have conceptions which are unrealistic or are at variance with those of the department and the profession. Those who want to be teachers and have chosen sociology only as one of various possible fields for teaching are likely to have little motivation to learn how to do rigorous research. Others may envisage themselves as making careers in empirical research and see no reason to be concerned either with theoretical synthesis or the derivation of methodological propositions; what they want is to learn rule-of-thumb methods with a minimum of intellectual effort. Still others are

[1] One correspondent, at least, takes a different view of the matter: "The segregated course, for graduate students only, presumably in order to get rid of the juvenile prattlings of undergraduates and leave the field free for mature graduate-type talk, can also serve as a device for relaxation of standards. . . . Briefly, it protects second-rate graduates from competition with first-rate (or sometimes second-rate) undergraduates. It is easy to persuade one's self that a given graduate performance is really 'not bad' and deserving of a 'B' if there are no minor leaguers with whom to compare the graduate. But if run-of-the-mill undergraduates do better than the graduate does, self-deception does not come so easily. This suggests that what we need is not a categorical graduate-undergraduate division, but courses of graded difficulty and sophistication, to which students are admitted on the basis of demonstrated competence in less advanced courses. This would presumably mean that some undergraduates would be admitted to 'graduate' courses, and possibly even to graduate courses to which some graduate students would not be admitted." (Letter from Albert K. Cohen, quoted by permission.)

imbued with desire to reform society; these may be either rigidly dogmatic or diffusely benevolent. The list could be extended to include some who are only groping for a calling. All of them find difficulty in gaining a sense of identity as neophytes in a scientific profession. Until they attain it, many of the basic educational requirements are bound to seem irrelevant to them.

It is hardly necessary to observe that what has just been said could be said also of graduate study in other fields, but because the professional roles and norms of sociology are less visible to the public at large than those of the older professions, and because the disparity between what is taught as sociology in most colleges and what is required of a professional sociologist is exceptionally great, beginning graduate students of sociology are especially subject to bewilderment and frustration.

First-year *anomie* is especially highly prevalent in some of the same large departments that have the most to offer a student once he has become oriented. These departments should make greater efforts to remove the obstacles that isolate the new student from closer contact with both faculty and more advanced students. It is no mere coincidence that, in interviews with a hundred or more graduate students of sociology in several universities, the most articulate expressions of disaffection came consistently from first-year students in large graduate departments who had graduated with honors from small liberal arts colleges well known for their high intellectual standards and student morale. They felt that the intellectual commitments they had already made during their latter college years were unappreciated and stifled by the regimen under which they were thrown along with the majority of less well-educated and less aspiring students. Perhaps if they have stayed on at the universities they may by this time have discovered the intellectual challenges which they found painfully lacking in their first year; but the fact remains that their first year as graduate students had been largely wasted. Their case is important, far out of proportion to their number.

The contention of some teachers that a period of floundering is a necessary and wholesome phase in the development of a

sociologist cannot, however, be dismissed lightly. As long as students come with extremely heterogeneous educational backgrounds and vague or unrealistic aims, some sifting process will have to take place. To some extent, no doubt, the prevailing frustrations of the first year can result in natural selection and survival of those fittest to be sociologists. But there is also a large measure of sheer wastage, doubtless including the loss of very able students who are disaffected because too little rather than too much is expected of them during their first year. Docile students who meekly accept whatever instruction is offered them can survive this kind of a selective process, but the progress of sociology as a science depends on the commitment of intelligent and stubborn individuals who are potentially creative. As the numbers of entering students grow, it will become correspondingly even more urgent to improve the early selective processes and to hasten the professional initiation of the ablest.

If several categories of students—those destined to become full-fledged and, hopefully, creative scientists; those who aspire to be humanistically oriented teachers; those who look forward to non-academic work for which less prolonged preparation is necessary—could be identified in advance and assigned to different schools or separate curricula, the prevailing frustrations of beginning graduate students might be reduced. But this discrimination is exceptionally difficult in a field such as sociology in which students have so little opportunity before coming to graduate school either to see for themselves the alternative careers open to them or to demonstrate their latent interests and capacities. Premature foreclosing of alternatives might easily prove fully as wasteful as the prevailing practice of laissez faire and natural selection.

"Orientation" lectures by senior professors, counseling by individual faculty members and student assistants, faculty teas and receptions, and the organization of graduate-student clubs are all familiar devices for hastening the induction of new students into the professional community, but their efficacy is limited. The testimony of students themselves leaves no doubt that the one most effective means is involvement in some col-

laborative enterprise with one or more faculty members or advanced graduate students.

Logically there appear to be three possible ways in which the high prevalence of first-year *anomie* might be reduced. First, the large graduate departments might devote more effort to accelerating the socialization of new students. Second, undergraduate programs in sociology might be revised so as to lead more directly toward professional education. Third, students might be encouraged to begin their graduate work in smaller departments, then transfer to the major schools when they are ready to take advantage of the broader opportunities which the latter can offer them. These three lines of attack on the problem of setting the beginning graduate student's feet firmly on a well marked road to becoming a sociologist are not mutually exclusive alternatives. At this stage in the development of advanced education all three need to be exploited as far as practical.

Assistantships and the Development of Professional Commitment

As a rule it is only when a graduate student becomes actively involved in teaching or research that he begins to identify himself as an active though still very junior member of his profession. Until then, he tends to act much like an undergraduate.

Although virtually all students who survive to become Ph.D.'s hold teaching or research assistantships, or both, at some time, the timing and duration of their tenure are not always best adapted to furthering their education. In this regard again, the situation of sociology is peculiarly difficult because the usual undergraduate education has not prepared students to serve as assistants during their first graduate years. Doing chores for the teacher of an undergraduate introductory course in sociology—the only type of teaching assistantship for which many new graduate students are ready—is likely to be a valuable experience only to the extent of involving informal personal contact with a faculty member. More responsible teaching assignments that contribute more of a sense of professional identity must be

reserved for a later stage. The education derived from working as research assistant to an individual faculty member may be great; it may include both learning some sociology and gaining a sense of identification with the profession. In small departments, opportunities of the latter type are sporadic, dependent on the current research activity of some member of the faculty. In larger departments where organized research programs are maintained, student assistantships are more widely available, but first-year student research assistants who lack special skills may be relegated to routine tasks like coding and card-punching, and thrown into contact with workers like themselves rather than with those with whom they need to become identified.

Ideally graduate students in the arts and sciences ought to be apprentices from the very beginning. But it is cheaper both in dollars and in demands upon the faculty to let them continue for a year or two in the same kinds of courses to which they have been accustomed as undergraduates. Especially is this true in departments that have large numbers of beginning graduate students. In the departments visited in the course of the present investigation, which included both some of the largest and some smaller ones, scarcely any first-year students held teaching assistantships, and less than a third were research assistants. About one out of ten of the students in their second graduate year was a teaching assistant and about one-third of them were serving as research assistants. Of those in the third and later years, four out of five held some kind of assistantship, roughly equal numbers of these being in teaching and research.

This situation is somewhat at variance with the pattern reported in a large-scale study by the National Opinion Research Center, in which 23 per cent of first-year graduate students in all social sciences held teaching assistantships and 8 per cent held research assistantships.[1] Insofar as the NORC data are comparable with our own, students of sociology appear to be relatively deprived of opportunities to become integrated into their professional community by serving as assistants at a very early stage.

[1] Davis, James A., and associates, *Stipends and Spouses*. University of Chicago Press, 1962, Chicago, Table 6.2, p. 199.

It would be impossible to justify an attempt to overcome this disadvantage by employing more unqualified young teaching assistants, for this would only further degrade undergraduate education. Granting that beginning students make inefficient research assistants, consideration should nevertheless be given to planning research programs in which they would benefit from involvement. This would have its price in the higher cost of turning out research results, but its contribution to graduate education might be well worth the price. In the interest of improving the education of sociologists, the fact should be boldly faced that graduate students need the educational benefits of experience as assistants before they are mature enough to be highly productive members of a research team. To the extent that it is not feasible to provide paid assistantships, some other provision should be made to bring the beginning students into continuing close working relationships with more mature members of the sociological profession.

This is not the place for a general discussion of the financing of graduate students, but in passing it should be observed that as the number of duty-free fellowships increases, relatively fewer students may have the benefit of experience as assistants in the early years of graduate study. Some recent writers on graduate education have advocated a uniform pattern of support by fellowships requiring no services during the first year, followed by two or three years' experience as teaching or research assistant or both, and finally a year free from such duties while writing a dissertation.[1] But if students could somehow be involved earlier in assisting professional sociologists, their commitment to professional goals and their transition from passive to active learning might be considerably accelerated. Not only professional socialization but also intellective learning is at stake here: a student who encounters a need for methods or theory applicable to a problem on which he is actually working will be motivated to learn them more quickly and effectively than one who is merely pursuing a

[1] See for example, Berelson, Bernard, *Graduate Education in the United States*, New York, McGraw-Hill Book Co., New York, 1960, p. 243.

required course in which methods and theories are taught didactically.

It is often said that a great part of the learning that occurs in graduate schools of arts and sciences takes place through the informal mutual education of students. In certain large departments it has been remarked that senior faculty members are dependent upon the student "grapevine" to make them aware of individual younger students who show promise of achievement. This promises to be increasingly true as faculty members are increasingly engrossed in their own research, extracurricular consultative work, and other activities that leave them little time for personal contact with any students except those serving as their assistants. Unless the large departments are able to allocate more of the time of their faculties to contacts with students outside lecture courses and seminars too large to permit much give-and-take with individual students, the initial acculturation of prospective sociologists will rest more and more in the hands of other students only a little more mature than themselves. The same conditions that tend to isolate beginning students from faculty members tend also, it seems, to segregate them from those students who are most advanced toward the doctorate and would be best able to induct them into the culture of the profession. Active participation in graduate student clubs in certain of the large departments visited appeared to be largely limited to students in the earlier stages.

Similar observations could undoubtedly be made in other academic fields, but it is to be emphasized that in the field of sociology—for reasons already mentioned—a beginner runs a relatively high risk of wasting much time in unaided groping for a sense of preprofessional identity.

8. Content of Graduate Training

THERE IS GENERAL CONSENSUS, reflected in actual practice, on the principle that all candidates for advanced degrees in sociology should share some amount of common basic training, and that they should subsequently concentrate their efforts more intensively in selected areas or aspects of the subject. But how broad the common area should be, and how deeply it should (or realistically, can) be cultivated are questions on which both opinions and practices are diverse. Judgments and policies also differ as to how far, along what lines, and in how many different directions, specialization should be carried in the later stages of graduate training—questions whose answers may depend on how much common groundwork has been laid at an earlier stage. Problems of interdisciplinary or cross-disciplinary training and of vocational orientation are related to the question of specialization versus total coverage of an area defined as sociology itself.

In considering the desirable scope and content of the common core, the facts must not be overlooked that many beginners in graduate study in sociology will not have decided at the outset how far to pursue their study, and that a large majority of them will not actually go beyond the master's degree.

The Master's Degree: Terminal or Preliminary

To a student, working for a master's degree in sociology may represent one or more of several things: taking a first step toward the doctorate, training for a definite vocation, tentatively exploring the field before deciding whether or not to seek a career in it, continuing one's general education for its own sake, or simply acquiring academic "credits" which will entitle him to increased

salary or promotion to a higher rank in a school system. There are, as we have seen, a variety of occupations open to M.A.'s in sociology, in which at least some of the training required for the degree is relevant, even if the degree itself is not always regarded by the employer as attesting a well-defined range and level of competence. The demand for terminal M.A. degrees is significantly large, and it will doubtless increase.

Typical M.A. programs embody compromises between the closure desired by students for whom the degree will mark the end of their formal studies, and the foundations which others need for subsequent more advanced work. The master's degree usually signifies completion of about 30 semester-hours of courses and a thesis, the degree with thesis being seldom attained in a single year's time. Roughly a quarter of the sociology departments offer the alternative of taking additional courses instead of writing a thesis; this option is usually reserved for students who do not plan to go on to the doctorate. On the other hand, the master's thesis is perhaps taken more seriously as a rule in departments that do not offer the doctorate than in those that do. Senior faculty members are understandably most attentive to their most advanced students. Thus in departments with the most distinguished faculties and the largest proportions of predoctoral students it is not surprising that the task of training M.A. candidates tends to be relegated to junior instructors.

A majority of departments expect or require candidates for the doctorate to take the master's degree en route. Seven out of ten recent Ph.D.'s had taken M.A. degrees in sociology.[1] For a Ph.D. the master's degree itself has little intrinsic significance, but requiring it as an intermediate step toward the doctorate may indeed have the wholesome effect of obliging the entering student to settle down at once to meeting some definite requirements; and if the M.A. thesis is taken seriously it can provide experience in research before the time arrives for planning and preparing a Ph.D. dissertation. Requiring prospective Ph.D.'s to qualify for the M.A. degree also affords a convenient point at which the

[1] Data from Office of Scientific Personnel, National Research Council, on Ph.D.'s of 1957–1959.

faculty can advise a weak student to abandon his quest for the higher degree. A still further reason sometimes advanced for retaining the master's degree as an intermediate step toward the doctorate is that it provides accreditation for students who wish to continue their doctoral studies in other institutions, or who may wish to resume them after some years' interruption.

At some future time, if the profession of sociology becomes more formalized and stratified, a clearer distinction between pre-doctoral and terminal M.A. programs may be feasible and desirable. For the present at least, the master's degree seems destined to remain ambiguous.

As a practical matter, then, whether or not prospective Ph.D.'s are required to take master's degrees, and whether or not a department offering the doctorate also chooses to offer vocationally oriented terminal M.A. programs for those desiring them, it is highly desirable that the first year's work should be designed to lay sound foundations for more advanced study and to test the students' aptitude for it. Where, as seems too often to be the case, introductory courses in theory and methods are at the same time terminal courses, students who go on to the doctorate later find that they must retrace many steps if they are to acquire the necessary background for more advanced work. And sometimes it seems too late to fill the gaps when they are recognized.

The "Core"

Some years ago the American Sociological Society's Committee on Training and Professional Standards was asked to consider the nature of the central core of knowledge that all candidates for advanced degrees should possess. Various items were suggested as indispensable: statistical methods, experimental design, mathematics, and social psychology were most frequently mentioned. But all of these are also taught in other academic departments. The Committee did not arrive at any formulation of strictly sociological requisites, one member maintaining that the question is gratuitous and arguing that all sociology departments, of course, teach the essentials of sociology, although in terms of different metaphors.

Sociologists need not suppose that their committee was unusually inept, for a recent conference on graduate education in psychology—a discipline generally regarded as more formalized—is reported to have reacted similarly to the same question. According to the rapporteur, there was consensus on the proposition that there is indeed a central core of psychology which all students should master, but the conferees were unwilling to specify its content.[1] Reluctance to prescribe standard curricula can be regarded as a hopeful sign insofar as it represents a desire to avoid premature rigidity in a youthful and growing discipline. But it is less encouraging if it reflects mere failure to agree on a common language in which to communicate.

Similar considerations apply to training in methods, as well as in substantive content. The views of another conference of psychologists are pertinent here. The report of a seminar on training for research, sponsored by the American Psychological Association in 1959, characterizes a creative research scholar in terms which imply that his education should be permissive to the point of anarchy: "the productive man is often narrow, preoccupied with his own ideas, unsystematic in his work methods or in his reading of the literature, and it even seems sometimes that he is productive *because* he is illogical and willing to follow his hunches instead of the implications of existing knowledge and methods."[2] But it is not realistic to assume that all graduate students fit this description; for most of them some prescribed basic training is indispensable.

In the organization of formal instruction, basic graduate training in sociology is usually subdivided into the two categories of theory and methods. The dichotomy simplifies the design of courses and facilitates rote learning, some of which is quite necessary. On the other hand, it tends to obscure the fact that theory and empirical knowledge are both essential to the development of a valid science; it predisposes some students to perceive the two as mutually irrelevant. There are involved here some general pedagogical issues that are not peculiar to sociology, full

[1] Roe, Anne, and associates, editors, *Graduate Education in Psychology*. American Psychological Association, Washington, 1959, chap. 7.

[2] Taylor, Donald W., and associates, "Education for Research in Psychology," *American Psychologist*, vol. 14, April, 1959, pp. 178–179.

discussion of which could occupy several volumes; but in this field empirical findings have so far outrun the synthesizing capacity of existing theory that the need for awareness of the interdependence of theory and method is most acute. With this in mind we turn to consider actual curricula and requirements in these two areas.

Core Requirements in Sociological Theory

Signs of convergence of theoretical and empirical approaches have been cited earlier in this report as encouraging evidence that sociology is becoming a more mature science. At the present stage in the development of scientific sociology, it is imperative to cultivate intensively a middle ground between pure empiricism and theory of extreme generality. For whether a graduate is destined to teach sociology as a liberal discipline or to deal as a sociologist with problems of practical public concern, his basic training should have habituated him to seeing the particular case in as broad a context as possible, even though it cannot yet be fitted into an all-embracing theoretical system.

Yet one gains the impression that in most universities the formal courses which all candidates for advanced degrees are expected to take at an early stage of their graduate study do not foster this development as well as could be wished. Typical comments of graduate students interviewed on various campuses suggest that, because it is convenient to teach theory in one classroom and empirical methods in another, only those students whose own curiosity leads them beyond the required minimum of "knowledge about" sociological theories come really to see that data without a unifying theoretical framework do not make a science.

In short introductory courses it is, to be sure, not easy to cultivate a constructively critical attitude toward general theory and its relevance to empirical problems. A typical beginning student is impatient for definitive answers and readily memorizable definitions. Later, finding that these simplistic formulations do not provide usable solutions to problems he encounters in his work, he is likely to discard them.

A familiar complaint of both students and graduates is that in an introductory course which touched lightly upon many theorists' ideas, there was little reflective and critical discussion of the theories in their own terms, and less exploration of their relevance to the data, methods, and propositions of empirical sociology. The content of the required theory course was frequently described as consisting essentially of a catalog of authors' names, dates, and brief excerpts from their works. Prospectuses of graduate programs cannot, of course, be expected to indicate in detail what all candidates for degrees are actually required to learn, but a survey of the announcements of doctoral programs of 49 departments reveals that 6 of the 15 "prestigious" departments but only 3 among the remaining 34 specify both study of the historical development of sociological theory and analytical study of contemporary theory.

From examination of numerous syllabi and reading lists, as well as from conversation with students and faculty members, it appears that familiarity with some of the leading ideas in several "classics" of sociological theory is generally required, but that students are seldom expected to assimilate the whole work of any one theorist. Textbooks, books of readings, and selected passages in longer works are commonly assigned. Among the authors of original treatises on 17 departments' lists of required reading in theory, the names of Talcott Parsons and Robert Merton are found on 15 lists each; Max Weber on 11, Emile Durkheim on 9, and Georg Simmel on 8. The systematic theoretical works of most of the men who dominated American sociology in the late nineteenth and early twentieth centuries—Small, Ward, Giddings, and others—have virtually been buried with their authors. The fact that a majority of the most frequently cited authors are European scholars who flourished some decades ago is suggestive of the relatively slight attention given to general theory by most contemporary American sociologists, and the correspondingly low level of theoretical sophistication that is minimally required of candidates for advanced degrees in most American sociology departments today.

The foregoing observations, it must be reemphasized, refer to what is or ought to be required as minimal basic theoretical training for all sociologists, including those who are primarily interested in empirical research. Our strictures on inadequacies in this respect are not intended to imply that sociological theory is universally neglected, nor that opportunities for more advanced theoretical study are lacking for those students who seek them. In numerous departments, a student seriously interested in sociological theory can find both faculty members able and eager to guide him, and other students to share and reinforce his interests. On the other hand—to repeat—prevailing practices leave a great proportion of those who receive advanced degrees ill prepared to adduce the best available theory to give broader meaning to discrete observations and to place particular problems in a broader setting, much less to develop even small new theoretical propositions when needed. There is widespread need for reform of "core" programs with a view to making all students, and not just a minority, aware of the necessity for a general theoretical orientation. It is gratuitous to add that a talented teacher is needed to make such a program effective.

As was also suggested earlier, the basic theoretical training of any sociologist ought to embrace and integrate theories relating both to social structures and to the psychological processes operating within these structures. A sociologist dealing with demography, for example, ought to have some understanding of the social-psychological and social-structural correlates of population growth and movements. A tendency to treat "social theory," "social psychology," and numerous subject-matter specialties as mutually irrelevant is frequently deplored by Ph.D.'s in their retrospective comments on their own doctoral training.

Core Requirements in Methods

Required introductory courses in methods of gathering and processing data typically run the gamut from surveys to clinical case study, participant observation, and use of documentary materials. Experimentation under laboratory conditions is some-

times but not always treated. Statistical techniques are usually taught in separate courses which must be taken unless a student is able to pass an examination in these techniques without taking the course, but in some departments a more general course in methods includes what little statistical training is minimally required of students who do not choose to elect more.

In the light of what has already been observed about the motivation and previous preparation of beginning graduate students, it is not surprising that the courses in methods required in the first year are often frustrating to both students and teachers. Comparatively few students find abstract study of techniques intrinsically interesting; those who come with the strongest interests in substantive problems are impatient to get down to the business of finding common-sense answers. The instrumental importance of formal methods can be preached, but the preaching falls on deaf ears if it is not paralleled by involvement of the students in research that seems to them significant. Yet it would be impractical to wait for graduate students to recognize for themselves the necessity of training in research methods before insisting that they study them. An early formal introduction to the various methods of sociological inquiry is indispensable; but lectures, textbooks, and illustrative exercises should ideally be accompanied by more realistic experience in research.

Emphases in introductory courses on methods vary, of course, with the instructors' special interests and their judgment of what is important. Some idea of the prevailing content of these courses can be gleaned from the list in Table 43 of books frequently required.

Survey techniques receive a large share of attention because they can be relatively easily expounded to previously untrained students and survey data for illustrative purposes are easily accessible, while methods that can be well assimilated only by first-hand experience are more lightly treated. Exercises in "secondary analysis" of partially digested data from completed surveys are often assigned.[1]

[1] See "The Card-Shuffling Method of Graduate Education" (editorial), *Human Organization*, vol. 19, Winter, 1960–1961, p. 169.

TABLE 43. MOST FREQUENTLY PRESCRIBED WORKS ON METHODS[a]

Greenwood, *Experimental Sociology* (9)
Hyman, *Survey Design and Analysis* (9)
Stouffer, and associates, *Studies in Social Psychology in World War II* (8)
Lazarsfeld and Rosenberg, *The Language of Social Research* (7)
Chapin, *Experimental Designs in Sociological Research* (6)
Festinger and Katz, *Research Methods in the Social Sciences* (6)
Goode and Hatt, *Methods in Social Research* (6)
Jahoda, Deutsch, and Cook, *Research Methods in Social Relations* (6)
Zetterberg, *On Theory and Verification in Sociology* (5)
Berelson, *Content Analysis* (4)
Cohen and Nagel, *An Introduction to Logic and the Scientific Method* (4)
Fisher, *The Design of Experiments* (4)
Parten, *Surveys, Polls and Samples* (4)
Pearson, *The Grammar of Science* (4)

[a] Figure in parentheses shows number out of 19 departments listing each work as required reading for all graduate students.

Classroom discussion of the methodology of selected published research reports is another common feature of introductory courses. This can afford a broader perspective on methodological problems, and is a valuable supplement to the systematic presentation of particular methods. It is not, however, a substitute for the experience of encountering a methodological problem in the course of actually doing a piece of research. Only such an encounter can be counted on to motivate a student to learn more than he is required to know in order to pass an examination.

Still another instructional practice, found in more than one department, is open to question on similar grounds. This is the course in which students without previous experience in real research are called upon to formulate a design for a hypothetical research project. As the project is not actually carried out, the students may be left with a specious impression of being adequately versed in research methodology.

It would be unreasonable to expect beginning students to gain more than a preliminary acquaintance with any particular methodological approach in a semester's or a year's course, but it is important that they should be left with a realization of their

need for further training rather than with a sense of having heard all they need to learn about methods.

In a sound program of scientific training, systematic provision ought to be made for practice in research concurrently with the formal introductory instruction in research methods, not deferred until some later time. Admittedly this provision would be expensive, calling for funds not currently at the disposal of all sociology departments. Under present conditions some M.A.'s and a larger percentage of Ph.D.'s at some time in the course of their graduate study have had practical experience in applying methodological precepts and acquiring research skills under mature guidance, but a great many have only the cook-book kind of knowledge of methods, supplemented by the experience of preparing a master's or doctor's thesis which may have demanded no more than this.

Fields of Specialization

Departmental policies vary as to the number of different fields of specialization in which each doctoral candidate must qualify, and as to the range of choice open to the individual. The number of special fields required ranges from one to five, the modal department requiring three, as shown in Table 44. The number of different fields specifically listed in departmental prospectuses varies from 3 to 17; the actual range of choice is still wider, for many departments indicate that individual candidates may be permitted to offer specialties other than those named. The larger and more prestigious departments as a rule offer larger numbers of optional fields, but require a student to concentrate in a smaller number than do the less prominent departments. The number of options offered bears no consistent relation to the size of the departmental faculty: nearly a third of the departments list as many, or even more, optional fields of concentration than the number of full-time teachers on their staffs. Although large and small departments require on the average about equal numbers of fields of concentration, the smaller ones afford less opportunity for intensive work in narrow subfields and hence may tend, deliberately or not, to encourage more breadth at the expense of

TABLE 44. NUMBER OF SPECIAL FIELDS OFFERED AND NUMBER IN WHICH EACH PH.D. CANDIDATE IS REQUIRED TO CONCENTRATE

	Frequency Distributions of Departments			
	by Number of Optional Fields Listed		by Number of Fields of Concentration Required	
Number of Fields[a]	14 Prestigious Departments	34 Other Departments	14 Prestigious Departments	34 Other Departments
1	..	..	3	3
2	..	..	4	9
3	2	5	5	11
4	..	10	1	9
5	4	2	1	2
6	..	5	..	..
7	..	4	..	..
8	1	4	..	..
9	3	..	..	..
10	1	1	..	..
11	1	..	..	..
12	1	2	..	..
17	1	1	..	..
Total number of departments	14	34	14	34
Median number of fields	8.5	5.5	2.5	3

[a] Exclusive of "theory" and "methods," which are universally required.

SOURCE: Catalogs and prospectuses, circa 1960.

less depth. There are exceptions, for example, Brown's emphasis on demography, and Johns Hopkins' on mathematical models.

Optional fields of concentration listed in the prospectuses of 45 departments are arrayed in a frequency distribution in Table 45. Here a much greater number of specific titles have been roughly combined in broader categories. The breadth of the fields of specialization presumably varies somewhat inversely with the number of different fields listed by a given department.

Social psychology, which is listed as an optional field of specialization by a vast majority of sociology departments offering the doctoral degree, is also reported by many departments to be a major focus of emphasis in the training of all of their students.[1] It also appears frequently in the list of interdisciplinary programs in which sociology departments participate along with depart-

[1] See Table 46, pp. 127–129.

TABLE 45. OPTIONAL FIELDS OF CONCENTRATION LISTED IN PROSPECTUSES OF 45 DEPARTMENTS

Field of Concentration	*Number of Departments Listing*
Social psychology (including subfields)	41
Social organization (including "formal organization," "organizational behavior")	33
Demography	30
Anthropology (including ethnography, archaeology)	22
Family and marriage	19
Social disorganization (including crime, delinquency, deviance)	18
Industrial sociology (including sociology of occupations)	15
Urban sociology, community	14
Comparative institutions, nonindustrial societies, non-western societies, area studies	14
Rural sociology[a]	13
Social change	11
Social stratification	10
Sociology of religion	7
Sociology of medicine and health	7
History of sociological thought	7
Political sociology	4
"Social problems"	3
Other special fields	8

[a] Separate departments of rural sociology are not represented in this table.

ments of psychology. In certain universities, interdepartmental relations have dictated the use of some other term such as "interaction" to designate social psychology courses taught in the sociology department; in some others, both sociology and psychology departments independently offer courses in social psychology, and their respective students stay mostly within their own departments; elsewhere, notably at Cornell and The University of Michigan, the two departments have long collaborated in doctoral programs in social psychology; and sociology and social psychology are both encompassed under the title of social relations at Harvard. At Columbia, the former interdepartmental program in social psychology has recently been institutionalized in a separate department, most of whose faculty members, however, hold joint appointments in one or another of the departments of psychology, sociology, and anthropology. Local and even personal factors make joint arrangements which work very well in some institutions impractical elsewhere.[1]

[1] See pp. 129, 132–133.

As a rule, individual candidates are nominally free to choose their own fields of concentration. Some departments, however, require everyone to concentrate in one or two prescribed fields, in addition to one or more electives. Among 48 departments, 6 prescribe social psychology, 5 anthropology, 4 the history of sociology or social thought, 4 demography, and 2 comparative institutions. Students' choices of fields of concentration are, of course, influenced by the interests of faculty members, and in some cases by the greater availability of fellowships or assistantships in certain fields. Some of the options listed in catalogs are actually seldom chosen by doctoral candidates.

Fields of Concentration Outside the Sociology Department

Election of one field of concentration in some other department is permissible in most institutions and mandatory in a dozen or more. It is notable, however, that none of the most prestigious departments imposes this requirement. The fact that departments which require their candidates to do some of their work in other departments are generally those with lesser resources of personnel and facilities, may imply that some of them do not consider their own offerings sufficient to justify the award of a doctoral degree. It appears that the policy of requiring some concentration in another department may sometimes have been dictated rather by the limitations of the sociology department's resources than by educational philosophy. The question of requiring or encouraging interdisciplinary study deserves consideration both pro and con on its own merits. Some faculty members in larger departments have expressed regret that their own students do not more frequently venture outside the departmental boundaries, while others see no cause for concern over this.

Kinds of Breadth

In the effort to learn something about numerous subdivisions of a field, there is danger of losing sight of the unity of the field as a whole. If the unifying theoretical and methodological core of a science is inadequate, students are prone to try to encompass the

whole field by dipping superficially into many disparate topical areas. This is often true of graduate study in sociology. The desirable alternative is to limit the number of specialties and to insist that they be taught, studied, and investigated with a constant aim to understand them in terms of the most general and yet empirically relevant concepts, theories, and propositions that can be adduced. Rather than being "narrowing," this kind of study can best prepare one to deal with new substantive problems when they arise.

Abraham Flexner's strictures on efforts arbitrarily to "break down departmentalism" are relevant also to the question of intradepartmental specialization: "Knowledge advances in the first instance only by artificial simplification; departments are set up, not because life . . . is simple, but because no progress can be made by observation or experiment unless one's field is circumscribed. Once results are thus obtained, cautious integration takes place."[1] An important distinction needs to be observed between a dilettante in many different specialties, and a specialist who goes outside the traditional boundaries of his specialty when necessary in pursuit of his own central interest. Donald Young's characterization of the latter is likewise pertinent here: ". . . the scholarly specialist pursues his inquiry along whatever course he can and just as far as he can. . . . This . . . sooner or later requires the crossing of man-made boundaries and demonstrates the unity that is nature."[2]

This kind of specialization is highly necessary in the present state of sociology, even without regard to the intrinsic importance of the particular subject matter on which a student specializes, for it is only by pursuing a definite problem that one develops a genuinely scientific approach which can later be applied to quite different substantive matters. Such a scientific approach is the antithesis of memorizing a mass of facts and propositions. The number of concrete subjects on which he is immediately able to adduce data and propound ready-made propositions is a specious

[1] *Universities*. Oxford University Press, New York, 1930, pp. 113–114.

[2] Young, Donald, "In Praise of Specialization" in Boewe, C. E., and R. F. Nichols, editors, *Both Human and Humane*. University of Pennsylvania Press, Philadelphia, 1960, pp. 213–214.

index of a scientist's capability. The essential characteristic of a scientist is that he has learned to find underlying order in a seemingly chaotic situation. Achievement of this competence can be thwarted by trying to assimilate a lot of facts about every topic within the scope of sociology. It should not be the aim of doctoral programs to prepare every student to lecture or write about all such things as family life, social classes, crime, race, population, public opinion, and so on.

Specialization should not be conceived as permanently restricting a student's attention to a narrow range of phenomena, but as leading him to concentrate intensively enough on a manageable problem to discover its interrelations with other problems. It is therefore less important to ask whether a graduate department offers a wide assortment of optional fields of specialization than to ask whether it is equipped to give its students good training in those which it does offer.

Major Emphases and Trends in Doctoral Programs

The chairmen of all departments offering the Ph.D. degree were asked: "In its general doctoral program in sociology, does this department especially emphasize certain substantive or methodological areas?" Their responses, abstracted in Table 46, range from enumeration of several substantive specialties to indication of central interest in general methodology and theory. Another question asked of the same individuals was: "What is the most significant change that has taken place, or has been seriously contemplated, in your graduate program in sociology since World War II?" Replies to this question are also mixed, but increased stress on basic principles and methods is a recurrent theme. There are frequent references to more rigorous "core" requirements and to de-emphasis of courses on substantive topics. Almost every department visited during the past two years had very recently revised its curriculum and requirements for degrees, or was in process of doing so, the principal stated objective in a majority of cases being to strengthen the foundations rather than to elaborate the superstructure.

TABLE 46. SUBSTANTIVE AND METHODOLOGICAL AREAS EMPHASIZED IN GENERAL PH.D. PROGRAMS*

AMERICAN UNIVERSITY—core emphasis on method and theory; also emphasis on population and criminology

BOSTON UNIVERSITY—cultural anthropology (with dissertations in Sub-Sahara Africa), community, large-scale formal organization, criminology, and social deviance

BROWN UNIVERSITY—population, ecology and community studies, regional development

BRYN MAWR COLLEGE—limited to theory and to current interests of teachers, for example, industrial sociology, criminology

UNIVERSITY OF BUFFALO—theory, medical sociology, research methods (including methodology), sociology of literature, social problems

CATHOLIC UNIVERSITY—major emphasis on preparation for field research, also on marriage and the family, intergroup relations

UNIVERSITY OF CHICAGO—demography and ecology, social organization, social psychology, mathematical sociology and methodology

UNIVERSITY OF COLORADO—slight emphasis on theory and methodology

COLUMBIA UNIVERSITY—methodology, theory, relation of mathematics and the social sciences, historical sociology, political sociology, public opinion and mass communication

UNIVERSITY OF CONNECTICUT—rural sociology, personality and social structure, social organization and social institutions, social deviance and social control

CORNELL UNIVERSITY (COLLEGE OF ARTS AND SCIENCES)—research methods, American society, family, formal organization and bureaucracy, intergroup relations, political sociology, public opinion, small groups, social movements, sociology of religion, stratification, urban sociology, social demography—of these, heaviest emphasis is placed upon fields dealing with institutions and processes of change in social structure

CORNELL UNIVERSITY (RURAL SOCIOLOGY DEPARTMENT)—theory, methodology, organization methods, and community development

DUKE UNIVERSITY—theory, methods and statistics, social psychology, anthropology, complex social systems, social organizations and institutions, occupations and professions, medical sociology

EMORY UNIVERSITY—theory, social psychology, social organization, statistics

FLORIDA STATE UNIVERSITY—techniques of social research, population and ecology, marriage and the family

FORDHAM UNIVERSITY—industrial sociology, cultural assimilation, criminology, urban sociology, sociological analysis of the parish

HARVARD UNIVERSITY—empirical research methods, small groups, theory, community studies, stratification and mobility, the larger society as a whole, comparative studies (for example, Russia, East Asia, Islam)

* Quoted or paraphrased from responses to Schedule I.

TABLE 46. SUBSTANTIVE AND METHODOLOGICAL AREAS EMPHASIZED IN GENERAL PH.D. PROGRAMS (Continued)

UNIVERSITY OF ILLINOIS—theory, methods, large-scale organization and "institutions"

INDIANA UNIVERSITY—theory, methodology; some emphasis on criminology but less than previously

IOWA STATE UNIVERSITY—rural sociology, family sociology, statistics, and research methods

STATE UNIVERSITY OF IOWA—social psychology, urban community studies

JOHNS HOPKINS UNIVERSITY—social organization, quantitative research methods, mathematical sociology

UNIVERSITY OF KANSAS—demography and ecology, sociology of institutions (particularly the family), collective behavior (associations and small groups in public opinion process)

UNIVERSITY OF KENTUCKY—rural sociology, community

LOUISIANA STATE UNIVERSITY—general and theoretical sociology, methodology

UNIVERSITY OF MARYLAND—theory

MICHIGAN STATE UNIVERSITY—sociology, social psychology, cultural anthropology, methodology

UNIVERSITY OF MICHIGAN—social organization, population and human ecology, social psychology, survey research methods

MISSISSIPPI STATE UNIVERSITY—two major emphases; one stresses the role of the generalist in sociological teaching and research supported by work in the practice of the professions, anthropology, social psychology; the other emphasis is on rural sociology, with concentration on community, population, health, culture change; major research projects currently in community organization and rural development, agricultural communications, health, demography

UNIVERSITY OF NEBRASKA—strong empirical research orientation

UNIVERSITY OF NOTRE DAME—methods, history of theory

UNIVERSITY OF OREGON—general theory, methodology, organization of societies, social psychology, deviant behavior, populations and ecology, marriage and the family, formal organization, industrial sociology, social stratification, value and belief systems, community organization and analysis

UNIVERSITY OF PENNSYLVANIA—criminology, population

UNIVERSITY OF PITTSBURGH—empirical research

PRINCETON UNIVERSITY—comparative study

PURDUE UNIVERSITY—theory and method; strong in family, gaining strength in industrial sociology

ST. LOUIS UNIVERSITY—statistics, mathematics for social behavioral sciences, research design, quantitative methods, factoral analysis

TABLE 46. SUBSTANTIVE AND METHODOLOGICAL AREAS EMPHASIZED IN GENERAL PH.D. PROGRAMS (Continued)

SOUTHERN CALIFORNIA—family relationships and research on family interaction, human ecology and demography, social stratification and occupations —all closely associated with methodology
STANFORD UNIVERSITY—theory, methodology, large-scale complex organizations
UNIVERSITY OF TENNESSEE—methods, theory
TUFTS UNIVERSITY—criminology, social problems
TULANE UNIVERSITY—social organization (particularly urban organization), social psychology, cultural anthropology, ecology and demography
UTAH STATE UNIVERSITY—rural sociology
VANDERBILT UNIVERSITY—methods, social psychology, family, community, population
WASHINGTON UNIVERSITY—theory and general sociology, methodology including quantitative and statistical methods, social psychology, cultural anthropology
WAYNE STATE UNIVERSITY—theory, methods, social organization, social disorganization, social psychology, population and ecology
WESTERN RESERVE UNIVERSITY—research and training program in mental health, physical disability and rehabilitation, family, community, intergroup relations—developing methodology
YALE UNIVERSITY—medical sociology, small groups research

Two countervailing demands persist, however. Prospective small-college teachers feel that they must take a variety of graduate courses whose content they can hand on to their undergraduate students; and many graduate students—especially candidates for terminal M.A. degrees—plan to enter nonacademic occupations and want to be taught explicitly how to perform their future jobs.

Interdisciplinary Programs and Vocational Training for Special "Applied Fields"

The chairmen of departments offering the Ph.D. degree were also asked whether their departments offer interdisciplinary programs or "formally organized training programs for students preparing to work in 'applied' fields such as health, delinquency, family welfare, foreign service, etc." It is impossible, from the

replies, to tell whether some of the programs cited should be regarded as predominantly academic or vocational; the list in Table 47, however, includes a considerable number of programs whose vocational orientation is quite apparent. The list is undoubtedly incomplete, but it is illustrative of the variety of offerings. Even from the descriptive titles it can be inferred that the programs differ greatly in relative emphasis on general sociology and on vocational preparation.

TABLE 47. VOCATIONAL AND INTERDISCIPLINARY PROGRAMS[a]

Vocational Programs

UNIVERSITY OF BUFFALO—Ph.D. in medical sociology (3 or 4 students)[b]

CATHOLIC UNIVERSITY—M.A. in Boy Counseling (discontinued)

UNIVERSITY OF CHICAGO—joint work with departments of divinity, business, education ("very few students")

UNIVERSITY OF COLORADO—training programs are being formed in delinquency and medical sociology

UNIVERSITY OF CONNECTICUT—Ph.D. in rural sociology

DUKE UNIVERSITY—department participates at the teaching level in M.D. and M.S. in nursing programs

FLORIDA STATE UNIVERSITY—interdivisional program in Marriage and the Family (6) with the School of Home Economics and School of Social Welfare; joint program in correction with School of Social Welfare (3)

UNIVERSITY OF FLORIDA—M.S. in applied rural sociology (16)

FORDHAM UNIVERSITY—M.A. in Mission Studies (1); non-degree training program in Mission Studies

UNIVERSITY OF ILLINOIS—some joint work with Institute of Labor and Industrial Relations (1), Community Research Institute (0), and Institute for Research on Exceptional Children (2); all degrees are in sociology

IOWA STATE UNIVERSITY—M.S. and Ph.D. in rural sociology (8 M.S. and 6 Ph.D.)

STATE UNIVERSITY OF IOWA--M.A. and Ph.D. in urban community analysis (6); M.A. in criminology (4)

UNIVERSITY OF MARYLAND—M.A. and Ph.D. offered in criminology, rural sociology, industrial sociology, military sociology, mental health, family

MICHIGAN STATE UNIVERSITY—M.A. in teacher education

UNIVERSITY OF MICHIGAN—Ph.D. in social work and sociology

[a] Only departments offering doctoral degrees are represented here.

[b] Figures in parentheses are numbers of students enrolled in 1960, where reported. These lists of special programs are known to be incomplete.

TABLE 47. VOCATIONAL AND INTERDISCIPLINARY PROGRAMS (Continued)

UNIVERSITY OF MISSOURI (RURAL SOCIOLOGY DEPARTMENT)—M.Sc. in Extension Education and Methods jointly with department of extension education

UNIVERSITY OF NORTH CAROLINA—degrees in rural sociology jointly with North Carolina State College (30); training program in the sociology of health and the health professions in the social research section of the Division of Health Affairs (12)

UNIVERSITY OF NOTRE DAME—program in correctional administration leading to M.A. in sociology

UNIVERSITY OF OREGON—interdisciplinary master's program offering M.A. and M.S. in certain areas, e.g., juvenile correction. Institute of International Studies and Overseas Administration is an interdepartmental facility for training and research through which candidates for master's degrees in sociology may also work toward master's in international studies or in overseas administration (0)

PURDUE UNIVERSITY—M.S. in rural sociology jointly with department of agricultural economics; inactive for lack of students

STANFORD UNIVERSITY—program in medical sociology (3)

WASHINGTON UNIVERSITY—training program in mental health but degree is given in sociology or cultural anthropology (2 Ph.D.)

WAYNE STATE UNIVERSITY—program in cooperation with Institute of Labor and Industrial Relations with degree given in sociology (5)

UNIVERSITY OF WISCONSIN—all degrees are in sociology—concentration in correctional administration offered for master's (2); concentration in rural sociology offered for M.A. and Ph.D. (12 M.A., 14 Ph.D.)

Interdisciplinary Foreign Area Programs

CORNELL UNIVERSITY (ARTS AND SCIENCES)—minors in related departments, for example, Far Eastern Studies

UNIVERSITY OF FLORIDA—M.A. and Ph.D. in Latin-American area studies (6)

HARVARD UNIVERSITY—degree in sociology; Far Eastern Languages

LOUISIANA STATE UNIVERSITY—interdepartmental program in Latin-American studies

MISSISSIPPI STATE UNIVERSITY—joint area studies program with history department under National Defense Education Act (2)

NORTHWESTERN UNIVERSITY—degree in African studies jointly with anthropology department (1)

UNIVERSITY OF OREGON—interdisciplinary master's program offering M.A. and M.S. in certain areas for example, East Asian studies

TULANE UNIVERSITY—degrees in Latin-American studies

VANDERBILT UNIVERSITY—(discontinued—area program of Brazilian Institute involving studies and training in anthropology, rural sociology and sociology as applicable to Brazil)

TABLE 47. VOCATIONAL AND INTERDISCIPLINARY PROGRAMS (Continued)

YALE UNIVERSITY—degree in Southeast Asia area studies (0); training program in African studies (0)

Other Interdisciplinary Programs

BOSTON UNIVERSITY—a concentration in anthropology is offered but all degrees given are in sociology

UNIVERSITY OF BUFFALO—M.S.S. in social science in cooperation with departments of history, economics, philosophy, anthropology, psychology (0)

UNIVERSITY OF CALIFORNIA (LOS ANGELES)—M.A. and Ph.D. programs in anthropology-sociology (4 M.A., 1 Ph.D.)

CATHOLIC UNIVERSITY—interdepartmental program leading to M.A. in Catholic Social Thought (3)

UNIVERSITY OF CHICAGO—joint work with departments of psychology, anthropology, human development, political science ("very few"), and Committee on Communications (discontinued)

UNIVERSITY OF CONNECTICUT—M.A. in sociology-anthropology (1)

CORNELL UNIVERSITY (ARTS AND SCIENCES)—degrees in social psychology (2) and in sociology-anthropology; minors in related departments, for example Child Development and Family Relationships (7)

STATE UNIVERSITY OF IOWA—M.A. and Ph.D. in social psychology (13); M.A. in anthropology (2)

UNIVERSITY OF KANSAS—M.A. in anthropology; cooperates with Ph.D. in social psychology, which is given by psychology department (6); Human Relations interdisciplinary program which offers a minor for the Ph.D. (0)

UNIVERSITY OF MARYLAND—M.A. and Ph.D. offered in anthropology, community studies, social psychology, research methods; interdisciplinary program leading to M.A. and Ph.D. in American Civilization; integrated plans of study with departments of English, history, government, and politics

UNIVERSITY OF MICHIGAN—Ph.D. in social psychology (interdepartmental)

UNIVERSITY OF MISSOURI (ARTS AND SCIENCES)—program in social psychology under National Defense Education Act (6)

UNIVERSITY OF NORTH CAROLINA—degrees in social psychology jointly with psychology department

NORTHWESTERN UNIVERSITY—degrees in international relations with political science department (2); social psychology with psychology and anthropology departments (3)

UNIVERSITY OF NOTRE DAME—M.A. in social science offered in summer session only

UNIVERSITY OF OREGON—Institute for Community Studies, an interdepartmental basic research facility which offers graduate student research assistantships and research fellowships (6)

TABLE 47. VOCATIONAL AND INTERDISCIPLINARY PROGRAMS (Continued)

PENNSYLVANIA STATE UNIVERSITY—planning M.A. in anthropology (4)
PRINCETON UNIVERSITY—Ph.D. in sociology-anthropology (13)
ST. LOUIS UNIVERSITY—degree in anthropology-geography (2)
UNIVERSITY OF SOUTHERN CALIFORNIA—planning Ph.D. in social relations jointly with departments of anthropology and psychology
TULANE UNIVERSITY—degrees in social psychology, sociology-anthropology
VANDERBILT UNIVERSITY—M.A. in sociology-anthropology
WAYNE STATE UNIVERSITY—cooperative program in social psychology with department of psychology but no joint degree is given
WESTERN RESERVE UNIVERSITY—M.A. and Ph.D. in American Culture in co-operation with other departments

SOURCE: Schedule I.

In view of the widespread postwar interest in foreign area studies, it is notable that only nine departments mentioned that they were currently formally involved in such programs.

Much more intensive investigation of the peculiar problems of many diverse fields of application of sociology would be necessary before venturing to assess the vocational programs that are here merely listed. The present survey of the education of sociologists is in effect limited to consideration of their training in the central discipline of sociology.

9. Training in Basic Methods and Ancillary Skills

THERE ARE SOCIOLOGISTS who frankly deny the need, utility, or even the possibility of formal methodological rigor in sociology; who make no apology for comparing their work to that of novelists and journalists. There are others who reject as unscientific anything that is not stated in the language of mathematics or formal logic. These are, of course, extremists. Most sociologists admit that both intuition and formalization are indispensable, but in actual practice students are frequently allowed to neglect one or the other. Despite sociologists' proclivity for talking about scientific methods, a student who is not interested in formal methods can get a doctoral degree in sociology from almost any institution without more than the usual high-school graduate's acquaintance with mathematics. If this situation is allowed to persist, sociology will remain handicapped in competition with other sciences of human behavior. A higher minimum level of mathematical sophistication is basic not merely to the intelligent use of statistical techniques but to the rigorous conceptualization that distinguishes science from looser modes of thought.

Mathematics

All sociology departments require every candidate for an advanced degree to know something about statistics; not one, as far as can be discovered, imposes any absolute requirement of mathematical training as prerequisite either for admission or for graduation, though their prospectuses often mention mathematical training as desirable. Yet it is a plain fact that statistical methods cannot be used responsibly without some understanding of the

underlying mathematical principles. Much futile and fallacious statistical work is consequently done by sociologists, and many sociologists admit their inability to comprehend or evaluate a substantial part of the published output of those of their colleagues who are trained in mathematics.

Nonmathematically inclined sociologists have tended quite wrongly to think of mathematics as relevant to sociology only as it underlies statistical methods. Of late, however, there is growing awareness that as any empirically based science, sociology included, advances beyond the stage of common sense, the ability to conceptualize in a rigorously formal manner becomes increasingly necessary. As yet few sociologists are actually working with mathematical models of any great degree of complexity, but their number is increasing and if the history of other sciences is a guide, it will continue to increase. Among the social sciences, economics and psychology have already gone much farther in this direction, and considerably larger proportions of their students are mathematically literate.

Just as the established members of any profession react to innovators whom they do not understand, sociologists who are not mathematically inclined readily find reasons for disparaging the significance of what has thus far been accomplished and even for rejecting the idea that a meaningful sociology can ever be mathematicized. But while discounting the exaggerated claims that enthusiastic innovators are prone to make, sociologists can no longer afford to take the complacent view that mathematical models are a passing fad and that their science can continue to progress satisfactorily while relying wholly on less formal modes of thinking. If some of the pioneers in mathematical social science are rightly charged with building logically elegant superstructures on naively simplistic assumptions, they can with equal justice berate their colleagues for failing to formulate their theories in terms susceptible to any rigorous analysis and testing. Intuition and sensitivity to contextual factors that cannot yet be measured or conceptualized in formal terms must always be cultivated, but training in logico-mathematical operations is also indispensable.

With a large proportion of its members mathematically illiterate, the sociological profession runs the risk of splitting into mathematical and anti-mathematical sects, neither of which by itself will be able to develop an adequate science of sociology.

Data from three sources on the levels of mathematical training students have reached before beginning graduate study in sociology are presented in Table 48. Of the Ph.D.'s responding to our survey, more than one-fourth had no college course in mathematics. Somewhat larger percentages with no college mathematics are found in samples of graduate students, not all of whom will become Ph.D.'s. As the latter columns of the same table show, the proportion of students of sociology who have had substantial training in mathematics is comparable with those in anthropology and political science, and very much below those in economics and psychology.

A perceptible increase in the prevalence of mathematical training is found when recipients of doctoral degrees since 1950 are compared in Table 49 with those of earlier years. These data, unlike the preceding, refer to mathematics courses taken either in college or after entering graduate school, but as can be seen by comparing the percentages having taken no courses at all, very few who did not study any mathematics in college did so in graduate school. A third of the recent Ph.D.'s as compared with a quarter of the older group had reached the level of the calculus.

In both earlier and later periods, as shown in the same table, the average level of mathematical training was higher in the prestigious sociology departments than in others; but the relative difference has diminished.[1] But it is still possible to obtain a doctoral degree in sociology from almost any department, including the most prestigious, without ever having come seriously to grips with rigorous mathematical thinking.

A student who has previously had little mathematical training must be strongly motivated indeed if he is to undertake to remedy this deficiency after entering graduate school. Thus the fact that even a few actually do so can be taken as suggestive of a

[1] The relation between the actual amount of mathematics studied and graduates' reports of their own need for more mathematical training is explored on page 158.

TABLE 48. MATHEMATICS COURSES TAKEN WHILE IN COLLEGE

	Per Cent of Each Group Having Taken One or More Courses at Highest Level Shown						
			First-Year Graduate Students[c]				
	Ph.D.'s in Sociology[a]	Graduate Students in Sociology[b]	Sociology	Anthropology	Economics	Political science	Psychology
Calculus and other advanced mathematics	7	68*	8	5	22	7	19
Calculus	22		13	19	31	12	28
Pre-calculus	43		37	35	33	31	39
None	28	32	41	41	13	50	14
Total	100	100	100	100	100	100	100
Number of respondents	*357*	*100*	*83*	*80*	*144*	*225*	*176*

* Per cent having taken one or more courses at any level.

SOURCES: [a] Schedule II-B.

[b] Interviews with beginning and advanced graduate students in 1960 or 1961.

[c] Data on first-year graduate students in 1960–1961 at Chicago, Columbia, Cornell, Harvard, Michigan, Minnesota, Pennsylvania, Stanford, Wisconsin, Yale, from a panel of the Committee on Undergraduate Program of the Mathematical Association of America. *Mathematical Association of America Monthly*, June–July, 1962, pp. 515–522.

TABLE 49. LEVELS OF MATHEMATICAL TRAINING, BY SOURCES AND YEARS OF RECEIPT OF DOCTORAL DEGREES

	Per Cent Having Taken One or More College or Graduate-School Courses at Highest Level Shown					
	1936–1949			1950–1959		
	All Ph.D.'s	Ph.D.'s from 15 Prestigious Departments	Other Ph.D.'s	All Ph.D.'s	Ph.D.'s from 15 Prestigious Departments	Other Ph.D.'s
Calculus and other advanced mathematics	24	27	16	33	36	29
Pre-calculus	45	43	52	40	43	45
None	31	30	32	26	27	26
Total	100	100	100	100	100	100
Number of respondents	*108*	*83*	*25*	*249*	*162*	*87*

SOURCE: Schedule II-B.

more widely felt need. One out of six of the Ph.D.'s responding to our questionnaire had taken at least one course in mathematics in graduate school, as shown in Table 50, but it is noteworthy that only 3 or 4 per cent of the respondents had taken even one course in advanced mathematics for which the calculus was prerequisite. Most of the mathematical study indicated in this table can be assumed to have been "remedial." A recent survey by a subcommittee of the Mathematical Association of America found that about one-eighth of those who received Ph.D. degrees in sociology from ten major universities had taken at least one mathematics course in graduate school. The results of the latter survey, summarized in Table 51, show that candidates in sociology continue the study of mathematics in graduate school more frequently than do those in political science or anthropology, but less frequently than those in economics and psychology.

In interviews, a considerable number of present graduate students said that they were trying by independent study or informal consultation to overcome some of their mathematical handicaps, but only a few seemed likely to go far toward achieving their goals. This impression is confirmed by the fact that fewer than 2 per cent of the Ph.D.'s in our sample reported that they had independently studied mathematics to any significant extent while in graduate school.

Special graduate courses in mathematics for social scientists have been introduced by a number of universities in recent years, but these courses often are beyond the reach of a student who has not already attained an advanced stage in a conventional mathematics curriculum. This difficulty is strikingly illustrated in the experience of one university which has introduced an unusually extensive sequence of such courses. It is reported that very few social science graduate students are found to have the general mathematical training which is prerequisite for these courses and that practically none of those who lack it are willing to prolong their graduate study by the year or so of preliminary mathematical training that would be needed. Only students who have majored in mathematics as undergraduates are said to do very

TABLE 50. MATHEMATICS COURSES TAKEN BY PH.D'S WHILE IN GRADUATE SCHOOL

	Per Cent Reporting
A. *General Courses in Mathematics:*	
One or more courses, including at least one whole course in topics for which calculus is prerequisite	3
One or more courses, including at least one whole course in calculus	1
One or more courses, including only part of a course in calculus	1
One or more courses, pre-calculus only	11
None	84
Total	100
B. *Special Courses in "Mathematics for Social Scientists":*	
One or more courses for which calculus is prerequisite	1
One or more courses for which calculus is not prerequisite	4
None	94
Total	100

SOURCE: Schedule II-B (357 respondents).

TABLE 51. COMPARATIVE LEVELS OF MATHEMATICS STUDIED IN GRADUATE SCHOOL BY PH.D.'s IN SOCIOLOGY AND IN CERTAIN OTHER FIELDS[a]

Highest Level of Mathematics Courses Taken	*Per Cent of Ph.D.'s in Each Field*				
	Sociology	Anthro-pology	Economics	Political Science	Psychology
Calculus and other advanced mathematics	8	1	21	..[b]	25
Pre-calculus only	5	0	14	..[b]	5
None	87	99	65	99	71
Total	100	100	100	100	100

[a] Data on recipients of Ph.D. degrees in 1958–1961. Number of cases in each field over 150, except 79 in anthropology.

[b] Less than 1 per cent.

SOURCE: See Table 48, note c.

well in the special sequence, and few of these are aiming to become social scientists.

In discussing the prevailingly low level of mathematical sophistication, both teachers and students almost always make two or three observations: that only a very small number of

students—those already firmly committed to specialization in mathematical sociology—can be persuaded to afford the time to study mathematics in graduate school; that imposing a definite prerequisite for admission to a particular school would merely divert students to other graduate schools; and finally, that a majority of graduate students and their teachers alike are simply uninterested in formal methodological rigor.

If the prevailing attitude of resignation persists, the still insecure status of sociology among sciences will be impaired as those that have already attained higher levels of systematic rigor advance still farther. It will persist unless at least some graduate departments of sociology establish minimum requirements of mathematical preparation for entering students, for in even the largest departments the lowest common denominator of students' previous preparation tends to determine the level of instruction in required graduate courses. More than a decade ago Philip Hauser made a sanguine plea for enforcement of a prerequisite of mathematical training:

> If we were really serious about making training for research the major objective of our graduate schools in social science, we should refuse to give students graduate standing until they had met the obvious elementary requirements for such training. This could readily be achieved over a relatively short period of time by publishing in our catalogues, and insisting upon, prerequisites for admission to the various departments in graduate social science schools. Such prerequisites would obviously include minimum requirements in . . . mathematics. . . .[1]

Although his advice has not yet been literally adopted, its adoption has become both more urgent and more realistically possible with the passage of time. If the recent increase of emphasis on mathematics in high-school and college curricula continues, it should be less difficult than it was a decade ago to find prospective graduate students who are prepared to face mathematics without flinching.

[1] Hauser, Philip M., "Training the Social Scientist for Research," *The Social Sciences at Mid-Century*. University of Minnesota Press, Minneapolis, 1952, p. 39.

Statistics

It is unnecessary to argue the point that every sociologist, whether or not his own work is primarily statistical, needs a grasp of the rationale of statistical inference. This is not possible for a person who is mathematically illiterate.

Every department requires all its Ph.D. candidates to meet some requirement in statistics, and nearly all departments require this of M.A. candidates. It does not follow, unfortunately, that an advanced degree in sociology even from a prominent university can be taken as evidence that the holder is qualified to make discriminating use of statistical methods himself or to appraise critically the statistical work of others. Most students, as everyone knows, gain a cook-bookish acquaintance with a few formulae, overlaid with some hearsay about the logical bases of the formulae and some rule-of-thumb directives as to where to use them. If the situation is unsatisfactory for students whose work is destined to be on a low empirical level, it is far worse for those who will need the ability to integrate empirical findings at higher levels of abstraction.

It is the most common practice of sociology departments to offer their own courses in statistics, but in many places students are permitted the choice of taking instead the statistics courses offered by other social science departments or by the departments of mathematics; a few institutions have separate departments of statistics. In courses offered by social science departments, attention tends to be largely confined to the particular techniques in vogue in the respective fields, while the usual mathematics department's approach is too abstract to interest the student of sociology who is just trying to fulfill an onerous academic requirement. Only fairly large sociology departments or those specializing in formal methods can as a rule afford to maintain a first-rate full-time teacher of statistics and related methods. Departments of statistics sometimes make special concessions to social science students, offering them courses for which they refuse to give credit to their own students. Elsewhere the suitability of courses available to sociology students depends on cooperation of other

departments, or on fortunately having a sociology teacher who combines a strong methodological interest and capability with other substantive interests. Yet the prevalent shortcomings of statistical training are not to be ascribed primarily to poor teaching or poor planning of courses, but to the inexorable fact that no one can become sophisticated in statistical methods without first attaining some comprehension of mathematics.

Data on the courses in statistics taken by students do not tell the whole story, but they do provide circumstantial evidence that only a minority of those who have met the Ph.D. requirements have had more than superficial exposure to statistical principles as distinguished from formulae and techniques. In interpreting Table 52, which summarizes the statistics courses taken by Ph.D.'s in relation to their underlying mathematical training, it is to be borne in mind that the required course or two in statistics given in sociology departments is almost inevitably taught as a terminal course at a level adapted to the majority of students whose study of mathematics stopped with high-school or college algebra. Only one out of eight of our sample of Ph.D.'s had formally studied both the calculus and mathematical statistics. Another one-seventh of the respondents make the dubious claim

TABLE 52. STATISTICS COURSES TAKEN, IN RELATION TO COURSES TAKEN IN MATHEMATICS

Highest Levels of Courses Taken in College or Graduate School[a]	*Per Cent of All Ph.D.'s*
Mathematical Statistics	
and calculus	13
and pre-calculus mathematics only[b]	9
and no mathematics[b]	5
Nonmathematical Statistics	
and calculus	17
and pre-calculus mathematics only	32
and no mathematics	20
No statistics	4
Total	100

[a] In most cases the statistics courses were taken in graduate school, the mathematics in college.

[b] It seems doubtful that the courses reported on these two lines were really in mathematical statistics.

SOURCE: Schedule II-B (357 respondents).

to have studied mathematical statistics, in spite of the fact that they had taken no college mathematics courses or only courses below the level of calculus. Some of the latter were possibly correctly reporting the fact that they had taken one or more courses entitled mathematical statistics, but a recent catalog of at least one major graduate school contains this ironic description of such a course: "Mathematical Statistics—Sociology G 4181x . . . : A nonmathematical study of statistical methods used in the social sciences." The teacher of this two-semester course once described it as leaving students quite unprepared to delve seriously into the mathematical bases of statistics even if they should be so inclined. Both he and representative students who had taken the course said that it represented a less than satisfactory compromise between what needs to be understood and what can be understood by unprepared students. Similar comments were heard from faculty members and students at other universities visited.

The Mathematical Association's previously mentioned survey of ten graduate schools confirms even more emphatically our finding that few Ph.D.'s in sociology are equipped with much training in statistical principles, as distinguished from superficial learning of techniques. While 49 per cent of entering graduate students had taken one or more statistics courses in college and 84 per cent of the Ph.D.'s had taken one or more courses in graduate school, no more than 8 per cent of the latter had taken any statistics courses for which the calculus was prerequisite.[1]

A teacher of required statistics courses to first-year students in a very prominent sociology department suggested in private conversation that, given a limited amount of time to be devoted to introductory methodological training, it would be better to give up the required course in statistics and instead to require an equal amount of work in mathematics. He rests his argument on the ground that it is hopeless to try to teach anyone to use statistics well without a mathematical foundation, while on the other hand, given such a foundation, students could assimilate the minimally necessary knowledge of statistical methods without having to spend much time in courses on the subject. Radical as

[1] For sources see notes to Tables 48 and 51.

this suggestion seems, it should not be lightly dismissed, for it epitomizes the generally unsatisfactory state of the statistics requirement.

Despite all that has just been said, it has to be admitted that even the prevailing how-to-do-it courses equip students to compile descriptive statistics better than they would without benefit of any training. What they do not provide, and cannot provide in the absence of a mathematical foundation, is the ability to use statistical methods of inference responsibly and to adapt them intelligently to new substantive problems.

The Challenge of the Computer

Sociologists and those responsible for educating them cannot afford to ignore the challenge presented by the new technology of electronic computers. On one hand, it offers a seductive invitation to substitute wholesale mechanical processing of multivariate data for the strenuous thinking otherwise involved in selecting a few presumably relevant variables when analyzing a social situation. On the other hand, it can also be used to explore the logical implications of hypotheses, and to simulate the behavior of hypothetical social groups under assumed conditions. The machine has not as yet been exploited for the latter purposes by many sociologists, but its ultimate potentialities in this respect are great. The danger is that if sociologists do not understand the rationale of digital computation they, as well as the lay public, will be misled by the facile conclusions of sociologically naive systems analysts, operations-researchers, and others. The rapid spread of computer technology in business and military operations and research has given rise to a numerous corps of technical virtuosi, who have not always hesitated to pontificate where scholars reserve judgment.

Computer technology is so new and its growth so rapid that it is not surprising to find that few sociologists have as yet learned to take full advantage of it. Of 357 Ph.D.'s responding to our survey, a majority of whom became Ph.D.'s in 1950 or later, only 16 had taken a formal course, and 3 had had some extracurricular experience or informal training in the use of computers while

they were graduate students.[1] But the fact that 36, or a tenth of the whole group, said they had been formally or informally introduced to computer technology after receiving the doctoral degree portends a growing demand for the inclusion of such instruction as a requirement for candidates for advanced degrees.

The time is certainly not far off when the need for knowledge of the principles on which computers operate will be as widely felt by sociologists as the need to understand the principles of statistical inference now is. Improvement in both respects is contingent on basic training in mathematics. Without it, a person can be taught to push the buttons on a computer but cannot be trusted to do so on his own responsibility. But he does not need to know how to push the buttons; what he does need is to be able to translate sociological questions into terms on which the computer can operate, and equally importantly to be constantly aware of the losses of information and the foreclosures of alternatives that are involved in the translation.

Foreign Languages

In more than nine out of ten sociology departments Ph.D. candidates are required to pass examinations in two foreign languages; in the rest a higher level of competence in a single language is required. Candidates for master's degrees are usually required to pass only one language examination if any. There is no need to discuss here the arguments for and against this traditional requirement of Ph.D. programs in all fields.

Out of a dozen first-year graduate students interviewed at random in several prominent sociology departments, only one had passed his examinations in foreign languages; and among those in their third or later years of study for the doctorate, only about half had yet done so. The absurdity of this situation pervades the whole graduate school, however, and the only hope for improvement would lie in reform of the policies of universities; it is not a problem which sociology departments can be expected to solve by themselves. Abolition of all foreign language require-

[1] The use of computers has indeed spread so rapidly that these survey data may be already obsolete.

ments is not to be desired; American sociologists are rightly charged with ethnocentrism, and actual use of at least one foreign language in the course of their sociological training would be a wholesome experience. This would be feasible only if students were firmly required to learn the language before entering the graduate school. Perhaps the current wave of enthusiasm for more and better instruction in languages (including English) in the high schools and colleges will ultimately make it possible to insist that students come to graduate school adequately equipped with these skills; until then perfunctory fulfillment of foreign language requirements will doubtless continue to impede graduate students' progress.

About 12 of the institutions offering doctoral programs in sociology give candidates the option of substituting extra work in statistics or mathematics for one of the two required foreign languages, and in a few of these institutions some other courses in sociological methods may be substituted instead of mathematics. But in the institutions visited where such an option is offered, it appeared that most students chose to take the second language as the lesser of evils. The logic of treating training in mathematics and in foreign languages as mutual alternatives is not evident, unless both are regarded as mere obstacles erected to test the mettle of students who have no real use for either one.

Institutional policies differ on the substitution of an exotic tongue for one of the usual Germanic or Romance languages. Thus in some universities a student of sociology who proposes to work in Asia or Africa may find himself obliged to study three foreign languages, while in other universities he may substitute Swahili for German.

10. Training in Research

HOWEVER MANY "CREDIT HOURS" he may amass in courses about how research is done, no one becomes a mature scientist without undergoing the experience of translating amorphous situations into manageable problems, formulating hypothetical solutions, and then proceeding systematically to test and validate or reject them. It cannot be reiterated too often that this kind of scientific maturity is as indispensable to a responsible teacher of science as it is to one whose daily occupation is research or the application of science to new problems. Without it one can properly speak of science only in the third person, invoking the authority of someone else; as a teacher one may as well be supplanted by a programmed textbook or a teaching machine; as a practitioner one must remain a journeyman working always under the direction of a master. The process of research should be learned through a sequence of experiences in which the learner is guided by the accumulated experience of his teachers until he is prepared to go ahead independently. In a face-to-face relation with a master craftsman, an apprentice (who has already learned to read, write, and cipher, and may have studied some of the codified lore of his craft) is confronted with real problems instead of textbook exercises whose correct answers are given at the back of the book. A wise master lets his apprentice learn much by trial and error, but does not let him attempt to build a whole house before he has learned by experience to lay a sound foundation.

Wholesale production of M.A.'s and Ph.D.'s requires more formal arrangements to assure that each candidate shall have real experience in research before he is accepted as a member of a scientific profession. In this regard the practices of sociology

departments leave much to be desired. Two requisites are: first, that there be ongoing research activities of suitable kinds in which students can learn by participating under mature guidance; and second, that there be definite provisions to assure that each student actually does so. The timing of research experience is also important, for as we have observed, formal instruction in principles and methods seems sterile to a student who has not yet been sensitized to his need to learn them. Ideally, students should be involved in research from the beginning of graduate study, playing increasingly complicated and responsible roles as they progress.

The universal requirement of a doctoral dissertation does not by itself suffice to assure that each candidate will undergo an appropriate series of experiences under the guidance of mature scientists. The task of producing single-handed an "original contribution to knowledge" needs to be preceded by supervised practice in research. If the M.A. degree is to be taken as a terminal degree, the same must be said of the need for preparatory experience in research before undertaking the master's thesis.

Assignment of small pieces of research as part of the work in formal courses is a desirable first step, but it is not enough. Employment as an assistant on a faculty-directed project is usually the most effective device to involve a student seriously in research.

In most of the departments visited (all of them of more than average repute), it appeared that a great majority of doctoral candidates serve at least briefly as research assistants on faculty-directed projects before undertaking their doctoral theses, but many of them do not until a fairly late stage. A smaller percentage of candidates for the master's degree have this kind of experience. Although students generally prefer research assistantships to teaching assistantships, and in most departments the more promising students hold research assistantships, this is by no means universally the case. The prevailing preference for research assistantships may not be wholly unrelated to the fact that in some places research assistants, with equal or more generous wages than teaching assistants, receive credit for full-time work toward their degrees, while teaching assistants are

limited to part-time credit. In at least one department which produces a considerable number of Ph.D.'s, however, the corps of student-teachers enjoys such prestige that it is said to attract most of the ablest students.

While some practical experience in research is universally required of Ph.D. candidates, it is a striking fact that the prospectuses of very few departments state this requirement explicitly in terms of the extent of the experience, or set a definite time for it. The required early introduction of students at The University of Michigan to survey research, and Harvard's requirement of a total of six months' practical experience can be cited as two different approaches.

At The University of Michigan, virtually every graduate student of sociology is required to participate during his first year in the Detroit Area Study program.[1] The students, under supervision of the project director, conduct interviews in the community, tabulate and analyze their data, and write reports. However, the timing of the operation requires that the research design be developed in the spring before the students arrive, so they learn of that phase of the project only by hearsay before turning to their empirical work.

The Harvard Department of Social Relations requires each doctoral candidate in sociology to spend three months in field work involving interviewing, direct observation, or participation in social behavior, and another three months in data-processing. But these not very heavy requirements can apparently be satisfied by putting together unrelated bits and pieces of experience which add up to the stated amounts of time. The definition of "field work" has on occasion been extended to include work in the department's small-group laboratory, and library research has been construed as data-processing. Within the same department, Ph.D. candidates concentrating in clinical psychology must spend a whole year in internship, and those concentrating in social anthropology must devote a whole year to research in an alien cultural milieu. This prompts the reflection that sociology de-

[1] The alternative option of working in another research center is said to be chosen by very few students.

partments have generally shown less courage than some other departments in setting requirements for their degree candidates.

Apart from the widespread absence of specific requirements, actual opportunities for practical research experience open to graduate students of sociology often compare unfavorably with those enjoyed by students of some other social sciences. A recent annual report of a combined department of sociology and anthropology emphasizes this:

> The situation in sociology is far less satisfactory [than in anthropology]. Students have had some opportunities to participate in data collection, analysis, and processing while serving as assistants on projects. Since most of this work is on the projects of individual faculty members and extends over a period of several years, students rarely have the opportunity of following a program through to completion. Ordinarily the only students able to undertake substantial projects of their own are those who are awarded research training fellowships from extramural sources.
>
> Thus the training possibilities of an organized research facility are particularly needed for students in sociology. Such a facility would require the minimal budget and staff to permit development of long-range projects on which students can, as assistants, gain early initial experience in research procedures and development of programs into which the projects of more advanced students may be fitted and supported.

In a small department the research activity or inactivity of one or a few faculty members may determine whether all, some, or none of the graduate students receive a sound practical introduction to research. In the largest departments, whose faculty members include some outstanding research scholars, some students may get excellent research training while others avoid it. In one large sociology department that has no affiliated research bureau, a faculty member estimates that only about half of the students are at some time involved in faculty-directed research projects, about one-third being employed on a project for as long as a year.

In departments that have affiliated research centers and institutes, a minority of graduate students serve as assistants in these. At Columbia, for example, it is reported that a little more than

half of recent recipients of doctoral degrees have done some work in the Bureau of Applied Social Research and that one-fourth or fewer doctoral dissertations have been based on Bureau projects. At Harvard in a recent year, about one student out of five currently held a research assistantship in the Laboratory of Social Relations. At the University of Washington, small numbers of students have been attached to the Population Research Laboratory and to the Public Opinion Laboratory; plans were reported to enlarge their role in the department's educational program; roughly one student out of six enrolled in the department held a research assistantship in a recent year. These figures, of course, by no means give a fair indication of the percentage of students who are engaged in some empirical research under faculty members' guidance. They are cited only to show that the existence of a research bureau does not by itself assure that all students will have the needed apprenticeship in research.

Under prevailing patterns of financial support for faculty research enterprises the training needs of students are not wholly compatible with the purposes of research projects. Even permanent university-sponsored research bureaus and centers depend mainly on income from services to outside clients who contract for studies of interest to them. Both the director of a research organization and the individual investigator supported by a contract with a governmental or other nonacademic agency must produce results for their clients if they are to expect renewed financial support. In the absence of substantial funds for the training of students, the educational function of the enterprise tends to be compromised in the interest of efficiency in processing data and producing results. Lazarsfeld and Spivack have well summarized the potentialities of a research institute as an educational agency and the handicaps inherent in its economic situation:

> In an institute a beginner can be rotated from one project to the next, getting a sequence of varied assignments. There exist some administrative problems: proper supervision, not keeping the trainee too long on one type of task, noticing his strengths and weaknesses, . . .

> The balance between the needs of efficiency for the project and its educational function is a more serious problem which also has its budgetary side.[1]

Universities, they point out, make only small contributions from their regular funds to support the training function of research institutes.

> They usually provide the space and some auxiliary services; in some cases a small budget is added and some time of a faculty member is released for administrative purposes. In a few places the institute is reimbursed for the training its non-faculty members give to regular students. But whatever method of accounting is used, the contribution of the universities is small.[2]

The head of another social science research institute comments on the conflict of interest between the project director who wants to keep student assistants on the job after they have become efficient in performing particular tasks, and the students who want to get the benefit of a variety of research experience. Precisely because large-scale research projects require disproportionate amounts of coding, tabulating, computing, and interviewing, they offer students more opportunities to acquire dexterity in limited routines than to become skilled in the whole process of research.

Students who concentrate in demography are perhaps more likely than any other subspecies of sociology students to have protracted experience in the processing of data under close faculty supervision. Research and training programs in demography in several universities are relatively generously supported by special funds, but only a small minority of graduate students make this their principal field of concentration; of the Ph.D.'s included in our survey this was true of fewer than one in twenty.

While there is much to be said for the realistic experience of working on a project that must produce results acceptable to a

[1] Lazarsfeld, Paul F., with the collaboration of Sydney S. Spivack, *Observations on Organized Social Research in the United States*: A Report to the International Social Science Council. New York, August 1961, p. 31. (Mimeographed)

[2] *Ibid.*, p. 45.

client, experience wholly confined to work on such projects is likely to give a student a limited view of science. Ideally, a department should have resources to support research programs for their educational value and not merely for their immediately salable findings.

From the time a student has completed the prescribed introductory courses in research methods to the time he must get approval of a plan for his thesis, the amount and kinds of research experience he gets are often left to chance, in the sense that neither the department collectively nor any one faculty member has formal responsibility for seeing to it that every candidate for an advanced degree participates in an adequate range of research activities. Something in the nature of a required internship is needed, and the internship should be deliberately planned to involve experience in a wide range of methods and kinds of problems in which a complete sociologist should learn to be at home. A price will have to be paid in dollars, to meet the direct expenses of research, to provide maintenance for the student, and to permit enough faculty supervision. Some, but seldom enough, of the faculty's time for guiding students' research is eked out of a university's regular budget by the device of reckoning a certain amount of supervision as equivalent to a part of a faculty member's normal classroom teaching load. Until systematically planned practical research experience in the early and intermediate stages of graduate study is recognized as an indispensable part of the educational process, and explicitly supported as such, only those students who are more than ordinarily aware of their own needs and more than ordinarily fortunate in finding their own opportunities will be well prepared to profit by the experience of writing a doctoral dissertation and undertake serious independent research when they graduate. The prevailing economic basis of graduate education is conducive to research-methods courses that are relatively inexpensive in terms of instruction costs per student-hour, and to kinds of research projects that command financial support because they promise immediately useful findings, rather than because they afford the best educational opportunities for students.

One recent critic of American graduate schools has argued that a major source of their shortcomings is the fact that they are not financially autonomous but must chisel their support from budgets for undergraduate instruction.[1] In this respect, sociology departments can hardly hope for more than equality of treatment with other departments. But, short of waiting for a frontal attack on the global problem of support for graduate education, if a department is unable to find the necessary means, it ought perhaps to reconsider its own fitness to offer doctoral degrees.

In planning a doctoral program under which research training will be cumulative from the early stages through completion of the doctoral dissertation, it might be well to specify certain intermediate stages. In a department where the master's degree is prerequisite for the doctorate, certain kinds and amounts of research experience might well be made mandatory for the M.A., thus assuring that they will not be postponed until the urgency of getting the doctor's degree leads to sidestepping them. Alternatively, departments that prefer to reserve the M.A. degree for those who are not Ph.D. candidates or to eliminate it altogether, might set definite times for completion of given stages. If, for example, a qualifying examination on research methods is given, candidates might be required to have had certain practical experience before taking this examination. The Stanford sociology department has offered the option of writing an M.A. thesis or of serving a year's apprenticeship in research under a faculty member. Those taking the latter option are required to write a research report demonstrating that the apprentice's role was more than that of a clerical assistant. In the case of students transferring from one institution to another after taking the master's degree, the department where the doctoral degree is sought should impose the same requirement of research experience as it does for its own M.A. candidates. Departments which admit as candidates for the M.A. degree students who do not intend to seek the Ph.D. may feel that more flexibility is desirable.

In any case, a Ph.D. candidate, before he undertakes his own thesis, ought to have participated from beginning to end in the

[1] Carmichael, Oliver C., *Graduate Education.* Harper and Bros., New York, 1961.

planning and execution of nontrivial research. He needs to have been led through the steps from recognition of a "researchable" problem to formulation of answerable questions, collection and analysis of data, and statement of findings. Moreover, he needs to have confronted problems requiring different kinds of data and different methods, and to have been sensitized to the broader relevance of the particular facts. Until he has been guided consecutively through the process of planning and executing research, he cannot be expected to be able to plan a valid project of his own. Separate limited experiences in bits and pieces of research do not add up to this. The total cost of facilities and faculty members' time needed to provide the desirable experience for all candidates would be high, but prevailing less expensive substitutes are not satisfactory.

The Dissertation

To say that students ought to have experience in research before they plan their dissertations is by no means to suggest that completion of a dissertation should be merely evidence that a candidate's education is finished. On the contrary it should enhance as well as test his capabilities. There is much that can only be learned by independent research and writing, but this learning is unlikely to take place until after one has both studied and practiced research under guidance. To have the maximum educational value, work on the doctoral thesis should not only be preceded by substantial though less ambitious research experience, but should be carried out in close consultation with advisers. Actually, large numbers of candidates write their doctoral dissertations in sociology *in absentia* while working at full-time academic or nonacademic jobs remote from the graduate school. In these situations opportunities for the desirable supervision of the work as it progresses are lacking, and access to data and research facilities often inadequate.

Departments which in 1960 had given 166 Ph.D. degrees in sociology reported that 464 candidates who had fulfilled all requirements for the degree except the dissertation were no longer

in residence.[1] The ratio of three "ABD's" to each doctor's degree conferred in a single year is only suggestive of the prevalence of the practice of writing dissertations *in absentia*. In one large state university, which is perhaps typical of many others, the chairman reports that about half of the doctoral dissertations in sociology accepted in recent years have been completed while in residence. At another institution where much more organized social research goes on, it is reported that a still larger proportion of theses are finished in residence, but the comment is added that students in the interdepartmental social psychology program at the same university are more likely than those in sociology to qualify for the doctoral degree before they leave the campus.

One can readily think of particular individuals whose development as sociologists may have been furthered by leaving the graduate school before undertaking their thesis research; but, generally, higher standards of research training could be maintained and the average increment of training derived from work on the thesis much increased if thesis research were normally required to be done in residence, with exceptions made only to take advantage of better opportunities for research experience elsewhere. This argument rests on the premise that under prevailing patterns of graduate education most candidates for master's and doctor's degrees are not yet ready, when they begin work on their theses, to work independently at the levels indicated by these respective degrees; in other words, that preparing the thesis should be in itself an educational experience and not just an exercise demonstrating what has already been learned. Acceptance of a dissertation that has been wearily and incompetently prepared in time snatched from routine duties over a span of years too often reflects only the faculty committee's compassion for an earnest but unqualified person who needs the degree as a passport to a livelihood for himself and his family.

Reliance on the dissertation requirement, as it is commonly administered, to assure that every student will be well initiated in research is especially unsatisfactory in the case of students with an aversion to systematic empirical research methods. For it cannot

[1] Schedule I.

be expected that when they have reached the dissertation stage they will be amenable to undertaking projects which will require them to remedy deficiencies in their previous methodological training and research experience. Insistence that all dissertations meet higher standards of empirical methodological rigor without having first seen to it that all students pass through a well-designed series of research experiences would be unrealistic. It is likewise unrealistic to expect students who have not previously been challenged to find broader theoretical implications in their exercises in empirical research to do so spontaneously when they write dissertations. Measures to overcome both kinds of one-sidedness must be taken at earlier stages of graduate training.

11. Graduates' Appraisal and Criticism of Their Own Training

THIS CHAPTER deals largely with the subjective judgments of holders of advanced degrees in sociology to questions concerning the adequacy of their own training. It must be kept constantly in mind that these judgments are made in the context of the respondents' own aspirations, which are in turn affected by the norms of their schools and by their varied experiences in their subsequent careers. Data on how sociologists feel (or say they feel) about their preparation are quite relevant to our inquiry, but must not be mistaken for objective data on their actual training.

The relativity of respondents' perceptions is best illustrated with reference to mathematical training, for in that field more than in others the level of formal courses taken is an approximate index of actual attainment. The rates of deficiencies in mathematical knowledge reported respectively by those who had taken courses in the calculus, in pre-calculus mathematics only, or in no mathematics beyond the usual high-school level, are 18, 20, and 17 per 100 respondents. In other words, those who had already studied the most mathematics were quite as likely to feel a need for more, as were those who had studied none since their high-school days.

In short, a relatively high prevalence of avowed dissatisfaction may either reflect a relatively low quality of training as measured by some objective criterion, or it may reflect a relatively wide disparity between achievement and aspiration. With due regard for these ambiguities, the data about to be presented afford some clues to aspects of sociological training that deserve attention.

General Satisfaction or Dissatisfaction with Doctoral Training

To the bald question, "If you were to begin your graduate education over again, would you seek a Ph.D. degree in sociology?" Seventy-two per cent of the Ph.D.'s answered yes; 13 per cent said no, and 15 per cent gave indefinite replies. Comparable data from individuals trained in other disciplines, unfortunately, are not available. Perhaps it is not surprising, however, that as many as three out of ten sociologists should be less than completely sure of the wisdom of their choice of discipline. But there is no basis for asserting that this represents an exceptionally high or low incidence of dissatisfaction. The question itself is ambiguous, in that a negative response may imply either dissatisfaction with one's choice of a vocation or dissatisfaction with one's preparation for it. Respondents' comments on their answers point variously to one or both of these implications.

Ph.D.'s employed in nonacademic positions, as Table 53 shows, avow dissatisfaction with their choice of sociology as a field of doctoral training nearly twice as frequently as do those who occupy academic posts. Within the academic group, those who report research as a major if not exclusive preoccupation are somewhat more likely to express dissatisfaction than those who are engaged only in teaching. In the nonacademic group, however, no similar difference appears; a plausible guess as to the reason for this is that those not primarily engaged in research include many whose work does not call for specific sociological knowledge or technical skills, and who have therefore concluded that some other training might have been more useful to them.[1] Taken together, these findings may suggest that the doctoral programs are on the whole better adapted to preparing for conventional teaching careers than for careers in research or in applying social science directly to the management of social relations.

The same table also reveals a slight but positive association of high ascribed standing of a department with a high rate of dissatisfaction among its doctoral graduates. As already sug-

[1] See Table 60, p. 172.

gested, this may reflect higher levels of aspiration and consequently greater likelihood of disappointment for those who take their degrees from the most prestigious institutions; the alternative hypothesis that the departments enjoying the highest prestige provide the least satisfactory doctoral programs is improbable on its face, yet the very fact that the correlation is not in the opposite direction is arresting, to say the least.

The last comparison presented in Table 53, between earlier and later cohorts of Ph.D.'s, is notable only for the absence of any appreciable difference between the two groups.

TABLE 53. PERCENTAGES OF PH.D.'S NOT SURE THEY WOULD AGAIN CHOOSE TO SEEK THE DOCTORAL DEGREE IN SOCIOLOGY

	Per Cent Negative or Doubtful
All respondents	28
A. Employment:	
In universities and colleges	23
Reporting research as a major activity	29*
Reporting teaching only	18*
Others	22
In all other positions	44
Reporting research as their principal activity	44*
Others	44*
B. Source of Ph.D. Degree:	
Six most prestigious departments	35
Nine other prestigious departments	25
All other departments	23
C. Year of Receipt of Ph.D. Degree:	
1936–1949	29
1950–1960	28

SOURCE: Schedule II. (Total number of respondents, 401; each percentage is based on 100 or more cases, except for starred items which are based on 45 to 68 cases.)

Other Disciplines or Professions Preferred to Sociology

The further question, "If not, why, and what would be your alternative choice?" brought forth some revealing comments from those who said they would not again seek the doctorate in sociology, although the number of replies is too small for detailed

statistical analysis. Psychology is the only specific discipline chosen by as many as one-fourth of those who specified their preferences, as shown in Table 54. All other social science disciplines together accounted for a slightly larger number of choices, the remainder being scattered. Reasons given for preferring a social science field other than sociology fall mainly into two categories: sociology lacks substance or scientific rigor or both, or employment opportunities are better for those with different training or a different degree. One respondent who expressed preference for a degree in psychology for the sake of the higher salary he believed it would have enabled him to command, added that he nevertheless felt his actual training in sociology had prepared him better for his chosen work.

TABLE 54. ALTERNATIVES PREFERRED TO DOCTORATE IN SOCIOLOGY

Field Preferred	*Number of Respondents*
Psychology	12
All other social disciplines	16
Natural sciences, mathematics, statistics	7
Public health and welfare work	4
Law, medicine, architecture	4
Arts and humanities	2
Total number specifying alternatives	45

SOURCE: Schedule II.

Particular Deficiencies in Training

The questionnaire asked Ph.D.'s, "In what important respects do you find that your sociological training has most adequately, and in what respects most inadequately, prepared you for your present work?" The same question was also posed with reference to the respondent's career goal, if different from his current activity. A third related question was, "If you were to begin your *sociological* training over again, what would you want to do differently?" These questions were left open-ended in order not to limit the respondents to confirming or rejecting the author's preconceptions. Specific deficiencies reported in response to any or all of these three questionnaire items are summarized in Table 55.

Some Procrustean coding was occasionally necessary in categorizing the comments, and the rates shown in this and the following tables should be viewed as only roughly indicating the relative prevalence of felt deficiencies in various respects.

TABLE 55. DEFICIENCIES OF TRAINING REPORTED BY PH.D.'s

Field	*Number of Citations per 100 Respondents*
Mathematics	17
Statistics, quantitative methods	33
Other research training	44
Training in related social disciplines	44
Theory, philosophy, logic	30
Vocational training:	
for teaching	13
for work in "applied fields" of sociology	12
for other vocational roles, including administration	8
Foreign languages	5

SOURCE: Schedule II (401 respondents).

The deficiencies subsumed under the first three rubrics in Table 55 refer to formal training in quantitative and other methods, and practical experience in research. Together, they account for a large proportion of the shortcomings mentioned by the respondents.

Needs for more training in cognate fields of social science come next. Roughly equal numbers of respondents mentioned anthropology, economics, history, psychology; and about the same number indicated a desire for broader coverage of the social sciences as a whole. Mentions of need for training in political science were conspicuously infrequent. Desire for a different perspective on the subject matter of sociology was most often given as the chief reason for wanting interdisciplinary training, followed closely by desire for access to other bodies of empirical facts. Psychology, and less frequently anthropology and economics, were cited as sources of useful methods and skills; scarcely any respondents so regarded history or political science. On the basis of general observation, with which the statistical findings just mentioned

are consistent, there appears to be more two-way interchange between sociology and the first three disciplines, whereas those historians and political scientists who are "behaviorally" oriented more often borrow methods from sociologists than vice versa.

A third major area of felt deficiency is that of sociological theory and related studies in philosophy and logic. Very few respondents, however—fewer than 2 per 100—expressed a wish for more course work in the history of social thought, while some took pains to explain that they had been bored by memorizing the names and synopses of the works of past thinkers, that they were interested instead in becoming better able to conceptualize and theorize systematically.

Smaller numbers of respondents expressed wishes for more specific preparation for teaching and for other vocational roles. About as many as wished they had been better prepared for teaching, wished they had had more specific training for work in "applied fields" of sociology or social work. Some respondents regretted that they had been poorly prepared for administrative duties or ill advised as to how to get ahead in an academic community, or even that they had neglected opportunities for sycophancy which might have accelerated their later personal advancement. Their comments are hardly germane to the question of sociological training per se.

Thus the freely offered comments of Ph.D.'s indicate a preponderant concern for better basic disciplinary training rather than for increased emphasis on specific vocational preparation. Very few, incidentally, said they regretted not having devoted more attention to foreign languages.

Older and Younger Ph.D.'s Compared

Comparisons of the responses of groups of Ph.D.'s of earlier and later vintages, of graduates of prestigious and other departments, and of those in several types of employment may permit some cautious inferences about actual trends in the education of sociologists and may cast some light on needs for improvement. At most, these data are to be regarded as suggestive rather than conclusive, for many of the observed differences are too small to

be statistically reliable, and it must be reiterated that they refer to *felt* deficiencies which may or may not correspond to absolute deficiencies. In interpreting the comparisons it should be remembered that dissatisfaction is a necessary condition for progress.

Recipients of the doctoral degree before and since 1950 are compared in Table 56. The later cohort slightly less frequently cite shortcomings in mathematics, statistics, and research training in general, while citing other kinds of deficiencies more frequently than did their predecessors.

TABLE 56. DEFICIENCIES OF TRAINING REPORTED BY EARLIER AND MORE RECENT RECIPIENTS OF PH.D. DEGREES

	Number of Citations per 100 Respondents	
Field	Ph.D.'s of 1936–1949	Ph.D.'s of 1950–1959
Mathematics	21	15
Statistics, quantitative methods	36	32
Other research training	45	43
Training in related social disciplines	37	47
Theory, philosophy, logic	25	33
Vocational training:		
for teaching	8	15
for work in "applied fields" of sociology	10	13
for other vocational roles, including administration	10	8
Foreign languages	8	4
Number of respondents	*130*	*271*

SOURCE: Schedule II.

The slightly lower rate of expressed dissatisfaction on the part of recent Ph.D.'s with their own mathematical and statistical competence cannot be taken as unequivocal evidence of progress in this respect. Even though it was shown in an earlier chapter that the percentage of Ph.D.'s who have taken mathematics courses has risen somewhat, it is evident from conversations with faculty members and graduate students that a great majority of the latter are quite unprepared to make effective use of mathematical analysis. One gets the impression, indeed, that a majority of graduate students of sociology who lack mathematical competence find self-justifying reasons for considering it unnecessary.

Mention of insufficient study of cognate social sciences was one-fourth more frequent on the part of the younger than of the older

cohort of respondents. Does this mean that sociology is coming to be regarded as a discipline less and less sufficient in itself? Or does it conceivably mean that graduate departments now leave their students less time than their predecessors had for excursions into adjacent departments? Impressions gained from visits to several schools lend credence to the second hypothesis. Desire for more attention to systematic theory, including not only specifically sociological theory but also the general philosophy and logic of science, can be taken as a sign of maturation of the discipline. The relative frequency of complaints of inadequate theoretical training is again about one-fourth higher among the younger Ph.D.'s. This may perhaps be indicative of growing awareness of the importance of theory rather than of deterioration of the actual levels of training.

Although only minor fractions of both cohorts cited inadequate training for specific vocational roles, the fact that nearly twice as many per 100 of the younger as of the older Ph.D.'s wished they had had more preparation for teaching cannot be lightly dismissed. Does it signify that preparation for teaching has been increasingly neglected, or does it perchance mean that after a few years' experience one tends to forget the travail he underwent in his first teaching job? Possibly the difference may reflect recent de-emphasis of practical training of this nature in a number of departments.

Graduates of Prestigious and Other Schools Compared

Holders of degrees from the 15 prestigious departments consistently offer more specific criticisms of their own training than do those from other institutions, but the differences in most categories shown in Table 57 are quite small. Two notable contrasts appear, however.

Deficiencies in mathematical training are more than twice as frequently cited by graduates of the prestigious departments. When coupled with the fact that a somewhat larger percentage of them have actually studied some advanced mathematics,[1] this clearly suggests that the growth of interest in formal methods and

[1] See Table 49, p. 137.

TABLE 57. DEFICIENCIES OF TRAINING REPORTED BY PH.D.'s FROM PRESTIGIOUS AND OTHER DEPARTMENTS

Field	*Number of Citations per 100 Respondents*	
	15 Prestigious Departments	Other Departments
Mathematics	21	9
Statistics, quantitative methods	34	30
Other research training	44	42
Training in related social disciplines	49	31
Theory, philosophy, logic	32	26
Vocational training:		
for teaching	14	11
for work in "applied fields" of sociology	12	11
for other vocational roles, including administration	9	7
Number of respondents	*275*	*126*

SOURCE: Schedule II.

the mathematical thinking that goes with them is thus far largely confined to some of the leading institutions. There are, to be sure, certain small departments which have very recently instituted programs strongly emphasizing rigorous methods—notably Stanford and the Johns Hopkins—but graduates of these new programs are not represented in the present data.

The second contrast is in reports of deficiencies of training in adjacent social science fields and cognate disciplines. In the previous comparison of older and younger graduates, it was observed that a greater percentage of the latter reported deficiencies of training in this respect, and the inference was made that they had found their time while in graduate school fully occupied within the sociology department. The same evidently applies to graduates of the prestigious departments, who cited this deficiency much more frequently than those from other schools. This finding is also consistent with the fact that only in some of the smaller and less prominent departments are all Ph.D. candidates required to choose minor fields of concentration outside the field of sociology.[1]

In terms of total numbers of references to specific deficiencies of all kinds, graduates of departments ranking fourth to fifteenth on Keniston's list were more critical of their own education and

[1] See p. 124.

technical training than were those of the three departments enjoying the very highest prestige. On the other hand, graduates of institutions not on the prestigious list were by a considerable margin the least critical of all, presumably reflecting generally lower levels of aspiration.

Training in Relation to Subsequent Employment

Both Ph.D.'s and M.A.'s in sociology have much to say about the relevance and adequacy of their education as preparation for their respective careers in academic and other positions. Before exploring their attitudes and subjective judgments, some actual differences in the training of those in different fields of activity should be noted. It has already been shown in earlier chapters that a great majority of Ph.D.'s occupy academic posts, while M.A.'s are found mainly in nonacademic pursuits. The next question is whether the doctoral training of those Ph.D.'s who are now in nonacademic employment has as a rule been different from that of those who are academic faculty members.

Our survey of Ph.D.'s included the question whether the respondent's doctoral study was in general sociology or in a specialized field. The responses, summarized in Table 58, show that somewhat greater percentages of those currently in nonacademic positions had specialized either in social psychology or in one of several "fields of application" of sociology, while correspondingly larger proportions of those in academic positions report simply that they took their degrees in general sociology. Most of the differences are small, however. Three out of ten of the nonacademic group indicated that, given more foresight, they would have sought more training of immediate practical relevance to their work, but this proportion is only one-and-one-half times as great as the proportion of the academic group who gave the same response. Several who expressed this view also indicated, however, that if they were to do their graduate work over again they would not choose to confine themselves narrowly to practical vocational training.

Irrespective of the substantive fields in which they have been trained, Ph.D.'s employed primarily in research in nonacademic

TABLE 58. AREA OF EMPHASIS IN DOCTORAL STUDY, IN RELATION TO PRESENT PRIMARY EMPLOYMENT

Area of Emphasis	*Percentage Distribution of* All Ph.D.'s	Academically Employed Ph.D.'s	Non-academically Employed Ph.D.'s
Social psychology	15	14	21
Anthropology	6	6	6
Rural sociology	6	6	3
Demography	4	4	6
Crime and delinquency	3	3	6
Health and medical applications of sociology	2	1	2
Industrial sociology, sociology of labor	2	2	2
Social work	1	1	1
Other[a]	19	19	19
No special emphasis reported	42	45	32
	100	100	100
Number of respondents	*401*	*312*[b]	*89*

[a] "Other" includes one or a few individuals in each of the following fields: ecology, foreign area studies, history of social thought, mass communications, public opinion, personality and culture, political sociology, racial or ethnic groups or relations, social organization (formal organization), social problems, pathology, disorganization, social stratification, sociology and economics, sociology of art, sociology of community, sociology of education, sociology of family, sociology of knowledge, sociology of law, sociology of occupations, sociology of religion, urban sociology.

[b] In this column 11 individuals teaching in nondegree granting schools are included along with 301 on university and college staffs.

SOURCE: Schedule II.

positions are somewhat more likely than others to have been trained in formal methods. Taking the amount and level of mathematics courses studied in college or graduate school as an index, we find that 45 per cent of this group, as compared with 28 per cent of all other Ph.D.'s, have had at least one course in the calculus.

When they work outside their own academic departments, sociologists face the competition of persons trained in other disciplines who also offer their services to some of the same clienteles. Psychologists with their esoteric clinical and experimental approaches, and technically facile systems analysts, operations-researchers, and applied mathematicians often find it easier to impress laymen with their scientific prowess than do

sociologists, who sometimes seem to the man on the street and to members of other professions simply to be talking common sense in strange and labored language. Sociologists cannot be expected to excel all their competitors on the latters' own grounds, but they are better able to compete with them if they are fairly sophisticated in mathematics and in the methodology of "hard" empirical sciences. Sociologists who lack this discipline are handicapped in efforts to gain recognition outside their own group as genuine scientists.

At the same time, it is of the utmost importance that sociologists be prepared to bring to bear in the world of practical affairs the insights gained from thorough grounding in sociological theory and thorough study of pertinent bodies of substantive sociological findings. Without this preparation, as some of the comments reported in a later section of this chapter indicate, a holder of a degree in sociology who brings to his nonacademic work only an assortment of skills that are shared by those trained in other disciplines, may lose his identity as a sociologist. Our data do not show whether the relatively high average level of mathematical (and statistical) training of Ph.D.'s in sociology occupying nonacademic research positions tends to be accompanied by a relatively low level of training in general sociology. But one can think of individuals of whom this is true.

The absence of very striking differences between the academically and nonacademically employed groups of Ph.D.'s with respect to the substantive emphases in their doctoral training is not surprising if it is kept in mind that students cannot all foresee where their future careers will lead. About a quarter of the first-year graduate students interviewed avowed that they definitely aimed to pursue nonacademic occupations, but only one out of fifty who were in their third or later years of graduate study expressed this determination. At both levels of advancement there were some who said they hoped to find employment in research but were indifferent as to an academic or nonacademic location.

Some students and some teachers have offered the comment that graduate students are reluctant to disclaim interest in becom-

ing academic scholars because they believe the faculty rewards those who emulate it. Probably a considerable number of students could truthfully paraphrase the remark of one of them: "I feel that I'm expected to tell the faculty I want to spend my life in teaching and research, but, confidentially, I want to do something more immediately practical." Thus the low rate of expressed commitment to nonscholarly careers can be discounted. On the other hand, the almost unanimous choice of academic goals by the graduate students of several years' standing can probably be attributed in large measure to the fact that those who do not share this purpose are unlikely to continue their studies beyond the M.A. degree. Comparison of the occupational distributions and stated vocational aims of M.A.'s and Ph.D.'s lends support to this interpretation.[1]

In short, it appears that relatively few doctoral candidates have deliberately planned their studies, in consultation with faculty advisers, as preparation for particular nonacademic occupations.

Ph.D.s' Views

Earlier in this chapter it was noted that Ph.D.'s in nonacademic careers are about twice as likely as their academic colleagues to feel that some other discipline would have been preferable to the doctorate in sociology.[2] Perhaps their more specific comments on the relevance of their training to their present vocational roles may cast further light on why this is the case.

The respective percentages of respondents in different types of employment who cited training in sociological theory, research methods, and general sensitization as the most relevant features of their preparation for their jobs are shown in Table 59. The statistics must be taken only as suggestive, for apart from the relatively small differences and the fairly small numbers of cases, the categories themselves are somewhat ambiguous. Of the three categories, "sensitization to the social context of problems" encountered in one's work bears the least specific implications as to the kind of education and the content of training that would

[1] See pp. 59, 60.
[2] See pp. 159, 160.

TABLE 59. PRINCIPAL UTILITY OF SOCIOLOGICAL TRAINING REPORTED BY PH.D.'S IN POSITIONS OUTSIDE SOCIOLOGY DEPARTMENTS

Position	*Per Cent of Respondents Citing:*		
	Specifically applicable theory of social behavior or organization	Specific methods of research and analysis of data	Sensitization to the social context of problems
All positions outside sociology departments	43	59	60
In university, but outside department of sociology	48	55	45
Nonacademic research	46	66	63
All other nonacademic positions	33	52	70

SOURCE: Schedule II-B. (Total number of respondents, 97; 29 in universities; 41 in nonacademic research; 27 others.)

be felt desirable. It is notable that the respondents engaged in nonacademic work other than research gave sensitivity to social contexts the highest priority, and that they found the least use for specific sociological theories.

Responses of the Ph.D.'s employed outside sociology departments to the question of the academic credentials or training requisite for tenure of their present positions fall into a much more striking pattern. As will be seen in Table 60 only about one-eighth of the respondents claim that their positions could be held only by Ph.D.'s in sociology, and a negligible number of others reported that some sociological training, below the doctoral level, was required. About three-fifths regarded some social science training as requisite, most of these specifying less than a doctoral degree. Finally, a fifth admitted that their positions could be held by someone with no training in any social science. Even among those occupying university positions outside sociology departments, as well as among those engaged in research in nonacademic positions, less than a fifth stated that a Ph.D. degree in sociology was essential, while 15 per cent admitted that their jobs could be held by someone with no social science training. Of the 28 respondents engaged in nonacademic work other than research, not one said that any training in sociology was an indispensable qualification for his job.

TABLE 60. TRAINING REGARDED BY PH.D.'S AS REQUISITE FOR EMPLOYMENT OUTSIDE SOCIOLOGY DEPARTMENTS

	Per Cent Reporting That Tenure of Their Positions Requires:					
Position	Total (per cent)	Ph.D. in sociology	Sociological training, but less than Ph.D.	Ph.D. in some social science	Some social science training, but less than Ph.D.	No social science training
All positions outside sociology departments	100	13	1	18	46	22
In university but outside department of sociology	100	19	0	8	57	15
Nonacademic research	100	17	2	27	39	15
All other nonacademic positions	100	0	0	14	46	39

SOURCE: Schedule II-B. (Total number of respondents, 95; 26 in universities; 41 in nonacademic research; 28 others.)

TABLE 61. ASCRIBED PROFESSIONAL IDENTITY REPORTED BY PH.D.'S IN NONACADEMIC EMPLOYMENT

	Per Cent Reporting That Their Nonsociologist Colleagues Regard Them as:			
Employment	Total (per cent)	Sociologists	Social scientists, but not specifically sociologists	Neither
All nonacademically employed Ph.D.'s	100	31	56	13
Ph.D.'s employed in research	100	40	48	12
Ph.D.'s employed in other work	100	14	73	14

SOURCE: Schedule II-B (40 respondents in research; 22 others).

Most nonacademically employed sociology Ph.D.'s feel that their colleagues recognize them as social scientists but only a minority report that they are specifically perceived as sociologists. Those who are engaged in research more often feel that they are perceived as sociologists than do those otherwise occupied (Table 61). About two-thirds say that their associates habitually use the title of Doctor when introducing or mentioning them to

others, and about one-third also regularly attach the doctoral title to their own signatures.

Respondents' own images of themselves perhaps coincide as a rule with the images which they believe their colleagues have of them. The comment volunteered by an individual who is employed by an industrial company on "human factors research" is illustrative. Although his doctoral degree is in sociology, his professional work has been mainly in the field of social psychology. "Somehow," he says, "I feel somewhat superior to psychologists generally—I feel I can look at life more broadly . . . and I suspect that I get along better with my fellow men than the average psychologist—and yet I have gotten to the point of identifying myself as a psychologist."

When respondents' citations of what they regard as specific areas of weakness in their doctoral training are tabulated in relation to their present occupations, the differences, as shown in Table 62, are plausible but in most cases small.[1] Those in nonacademic positions are relatively unconcerned about shortcomings of their training in sociological theory and in other social science disciplines; they are more inclined to wish they had had explicitly relevant vocational training; and not surprisingly, they seldom express regret that they were not better prepared to be teachers. Within the nonacademic group, those not primarily engaged in research show low rates of dissatisfaction with their mathematical, statistical, and other research training—lower in fact than the rate for respondents teaching in liberal arts colleges.

The same table also reveals some differences between teachers in separate liberal arts colleges and those in other kinds of institutions. Contrary to what might have been expected, the frequency of citations of inadequate preparation for teaching is the same for both groups. It is also notable that the liberal arts college teachers do not more often indicate a wish for more training in other social science fields; the impression that faculty members in these institutions are often called upon to give courses in more than one discipline would lead one to expect them to want broader training.

[1] For explanation of the basis of these data, see p. 161.

TABLE 62. DEFICIENCIES OF TRAINING REPORTED BY PH.D.'S, IN RELATION TO THEIR EMPLOYMENT

	Number of Citations per 100 Respondents			
	In Academic Positions		In Nonacademic Positions	
Field	In liberal arts colleges[a]	Other	Primarily research	Primarily non-research
Mathematics	15	20	18	7
Statistics, quantitative methods	30	36	33	18
Other research training	36	48	51	24
Training in related social disciplines	38	51	33	30
Theory, philosophy, logic	32	34	20	20
Vocational training:				
for teaching	14	14	11	7
for other vocational roles, including training in "applied fields" of sociology	9	20	27	31
Number of respondents	*66*	*235*	*45*	*55*

[a] Not in universities.

SOURCE: Schedule II.

M.A.s' Views

Holders of terminal M.A. degrees frequently stated or implied that they would have preferred more immediately practical training than they actually received. Their claim to professional status is obviously less strong than that of Ph.D.'s, and their vocational aspirations are on the average lower.

Of the minority of M.A.'s who are currently employed in colleges and universities, about nine-tenths report both that possession of the M.A. degree helped them get their present jobs and that the training it represents is actually useful to them in performance of their work. On the other hand, only about three-fifths of the majority who are in nonacademic work found the M.A. degree helpful to them in the job market, while a slightly greater proportion—about three-fourths—maintained that the training represented by the degree was helpful to them in carrying out their duties.[1] On the latter point favorable replies were more frequently given by those employed by health, welfare, educational, and correctional and religious agencies than by those in business and miscellaneous governmental work.

[1] Schedule V.

Comments volunteered by respondents to the survey reveal various contradictory and ambivalent perceptions of the value of the master's degree in the nonacademic labor market. Several deplored the fact that employers as a rule do not recognize the value of sociological training. A few, on the other hand, felt that the title of M.A. had some market value quite apart from the training it symbolizes, but it might as well have been an M.A. in some other discipline. For example:

> A probation officer said, "I believe that sociology offers the greatest avenue to enlightenment in my work, and hopefully we will become more aggressive in our expression, not apologetic."
>
> A personnel officer: "Sociologists have not been given the necessary public relations to put them in a bargaining position. Industry considers them as social workers."
>
> A worker in industrial relations research: "Most industrial people don't know what sociology is, or have misconceptions concerning it."
>
> Another personnel officer: "My M.A. degree helped me get my job because my superior happens to be a Ph.D., but the reverse is usually true: many employers are afraid and uncomfortable around M.A.'s."
>
> A social worker: "I'm proud of my M.A. in sociology—and am eating on my M.S. in social work."

Only 10 per cent of the M.A.'s reported that the lack of the Ph.D. degree had handicapped them in obtaining their present positions, and only a few more—13 per cent—said that it handicapped them in performance of their present work. These findings are in a sense tautological, for evidently few hold jobs for which the doctoral degree is customarily required. But nearly half viewed the lack of the Ph.D. degree as an obstacle to attaining their chosen career goals. Table 63 presents these responses and also shows the percentage of those presently in each type of employment who avow their intent to seek the higher degree.

Only among those presently employed in universities and four-year colleges do a large majority both feel that the doctoral degree will be needed if they are to reach their career goals, and plan to seek the degree. Approximately half of those now engaged in nonacademic research give similar responses. Of the rest, who

TABLE 63. PERCENTAGES OF M.A.'s FEELING HANDICAPPED BY LACK OF DOCTORAL DEGREE, AND PLANNING TO SEEK IT

Present Occupation	*Per Cent of Each Occupation Group*				*Number of respondents*[a]
	Handicapped in obtaining present job	Handicapped in performing present work	Handicapped in pursuit of career goal	Planning to seek Ph.D. degree	
All occupations	10	13	47	35	*210*
University and college teaching or research	24	31	75	72	*58*
Other teaching and miscellaneous educational services	9	13	49	12	*47*
Nonacademic research	0	6	46	53	*13*
Other[b]	4	4	26	13	*83*

[a] Numbers vary slightly; number shown is smallest for any item on given line.

[b] Excluding full-time students and those not employed.

SOURCE: Schedule V.

include teachers in junior colleges and lower schools as well as those in nonacademic occupations other than research, between a quarter and a half regard the doctoral degree as desirable in pursuit of their careers but only one-eighth expect eventually to become Ph.D.'s.

When intent to seek the doctoral degree is related to the respondent's stated career goal instead of to his present employment, an essentially similar pattern is found: 74 per cent of those choosing academic careers, 25 per cent of those choosing careers in research but not necessarily in a university, and only 6 per cent of those specifying other career goals indicate this intention.

Implications of the foregoing data, supported also by the comments of numerous respondents, are that for most of the nonacademic occupations in which graduates in sociology are found or in which they aspire to engage, the master's degree is widely regarded as sufficient, but that considerable numbers of M.A.'s have set for themselves vocational goals they are unlikely to reach in default of the doctoral degree.

Nearly half of the "terminal" M.A.'s report that they once aimed to become Ph.D.'s, and these are about evenly divided

between those who concluded that the doctoral degree in sociology would be unnecessary or irrelevant to their vocations and those who abandoned the quest for reasons of health, finances, or the like; a negligible number frankly reported that they simply felt they could not meet the academic requirements for the higher degree.

Summary

The statistical findings and individuals' comments just presented offer emphatic testimony that advanced degrees in sociology have not yet gained unequivocal acceptance as credentials of professional status in the nonacademic world. In contrast with a member of a licensed, ordained, or certificated profession, an individual sociologist is in effect "on his own," and must continually justify himself by his own works. His academic degree carries with it no officially sanctioned prerogatives such as are enjoyed by a physician, a lawyer, or a licensed plumber. He cannot face down a critic by pointing to his diploma. Indeed, in some milieu he may even find it imprudent to remind the public that he is entitled to be called "doctor."

This state of affairs is not wholly to be deplored. It is a more wholesome situation than would exist if sociologists were prematurely organized in a guild with power to maintain special privileges by arbitrary means. Most importantly, on the favorable side of the balance, there is no room for complacency and the individual is obliged to be constantly alert to demonstrate that he is capable of doing things which are beyond the competence of the uninitiated. Unlike his academic peer, the sociologist employed as a nonacademic staff member cannot readily put a problem aside just because it does not immediately lend itself to conventional sociological analysis. If the theories, concepts, and techniques in which he has been trained do not fit the case, he must improvise. Thus he is under pressure to innovate, and the very fact that his nonsociologist colleagues perceive situations and problems differently may help him see aspects of his own problems which he would otherwise overlook. Moreover, not being

surrounded by other sociologists, he is relatively free from constraint to conform to prevailing sociological orthodoxy.

But these are not unmixed advantages, and there are challenges to be met, pitfalls to be avoided, and obstacles to be overcome if the science of sociology and the sociological profession are to make their maximum contribution to better understanding and ultimately to better management of the world's practical affairs. An essential requirement is that the staff sociologist maintain a distinctly sociological orientation while working with others whose perceptions of the world are differently conditioned.

The staff sociologist in an organization controlled and directed by laymen or by members of other professions needs to sustain his professional identity not only in the eyes of others but in his own eyes as well. We have already noticed that a large percentage of such individuals feel that their associates do not distinguish them from other kinds of social scientists, and that many holders of doctoral degrees in sociology appear to have come to think of themselves as general social scientists or as specialists in certain substantive fields rather than primarily as sociologists.

It is sometimes suggested that academic disciplinary boundaries are out of place in the nonacademic world, and that therefore the practitioner's or consultant's loss of identity as a sociologist is no cause for concern. Certainly it is true that collaboration of social scientists with different disciplinary backgrounds is necessary in attacking various problems which beset society; and it follows that a sociologist who is to be involved in such collaboration needs to acquire some understanding of his collaborators' ways of thinking. But a sociologist, or a psychologist, or whatever special kind of scientist you may name, is primarily able to help others precisely because he has been trained thoroughly in an internally consistent special science; he works best when he works within the framework of his own discipline. If he is to do so when surrounded by other kinds of scientists or by nonscientifically oriented laymen, he needs a sustaining sense of identification with his own professional group. To put it in other words, he needs a reference-group that speaks his own language.

Quite conceivably sometime, as the application of social science to practical affairs advances, professional schools with rigid curricula analogous to those of schools of medicine and engineering may take over from the more permissive academic graduate schools the function of training for careers in its application. The time is certainly not yet ripe for this, as far as sociology is concerned, and even when and if it happens, the basic science of sociology will still need to be cultivated as a special discipline if further progress is to be made. Witness the high proportion of advances in medicine that have come from the work of Ph.D.'s in biological sciences, and of those in engineering that have resulted from the work of physical scientists. At the present stage of development of sociology, the sociologist who is to contribute effectively to the use of sociology in nonacademic settings needs to be firmly grounded in general sociology and to remain identified as a sociologist.

Gradually there may develop more opportunities for sociological technicians with briefer and more narrowly limited vocational training for work in particular fields. Until the science and the profession of sociology are more firmly established in the eyes of the laity and of other professional groups, persons only "briefed" in aspects of sociology which are obviously pertinent to the functions presently assigned them by others will tend to lose their sociological orientation and to take on the modes of thought of those who dominate the organizations in which they work.

In the absence of a guild-like organization of their own, nonacademically employed individuals with sociological training must look to their academic colleagues as the reference-group to sustain their professional self-esteem. This they do not always appear to do. One obvious reason is the traditional attitude of the philistine man of action toward the stereotyped image of the impractical academician. However, the increasingly frequent involvement of academic sociologists in consultative roles outside the university walls should tend to lessen this prejudice.

12. Postdoctoral Training

As any field of science or scholarship develops, one or more of three changes take place in educational patterns: the content of the normal curriculum may grow so that more work and more time must be devoted to qualifying for the doctoral degree; the curriculum may be subdivided into specialties; or the doctor's diploma may cease to suffice as a passport to full professional status. Already, here and there in the academic world the suggestion is advanced that a super-doctoral degree is needed. In some scientific fields a period of postdoctoral training, analogous to the medical internship though not yet as definitely formalized, has become almost a required prelude to a professional career. For future generations of sociologists the normal period of training may come to include a year or more of apprenticeship after receipt of the Ph.D. degree. Older graduates, on the other hand, must choose between resigning themselves to obsolescence or seeking further training. In the field of sociology, what can be called postdoctoral training in a literal sense is not in all cases more advanced than predoctoral training; frequently it consists of elementary training in subjects not previously studied.

Table 64, showing for three successive cohorts of Ph.D.'s the percentages reporting periods of substantially full-time postdoctoral training or study, indicates a consistent upward trend of the frequency of such study immediately after receiving the degree. The numbers that continued their studies or training without interruption are still relatively very small, however. Postdoctoral training after an interval of one to four years was slightly more frequently reported by Ph.D.'s of 1950 to 1954 than by those of 1936 to 1949, the difference being statistically unre-

TABLE 64. PERCENTAGES OF PH.D.'s REPORTING FULL-TIME POSTDOCTORAL STUDY OR TRAINING AT GIVEN INTERVALS AFTER RECEIPT OF THE DEGREE

Time of Postdoctoral Training	*Years of Receipt of Ph.D. Degree*		
	1936–1949	1950–1954	1955–1959
Immediately after receipt of degree	2	3	5
One to 4 years later	11	12	(5)[a]
Five or more years later	13	(5)[a]	(2)[a]
Subtotal	26	21	11
No postdoctoral training up to time of survey (1960)	74	79	89
Total	100	100	100
Number of respondents	*108*	*121*	*128*

[a] Figure not comparable with those for earlier periods as insufficient time had elapsed before survey.

SOURCE: Schedule II-B.

liable. No valid comparison is yet possible with respect to postdoctoral training at longer intervals after receipt of the degree. In the 1936 to 1949 cohort, all of whom have reached ages beyond which further training is seldom to be expected, 26 per cent reported some full-time postdoctoral training or study. The figures presented in this chapter exclude periods spent by Ph.D.'s on research fellowships or leaves of which further training was not a primary purpose, and likewise do not reflect the amounts of further education which Ph.D.'s derive from part-time formal studies, from informal contacts with colleagues, and from independent reading and study.

Roughly two-fifths of the reported periods of postdoctoral study were of nine months or longer duration, another two-fifths of less than four months, one-fifth of intermediate length. With advancing age, the likelihood that an individual will take a full year for further training declines; only 3 per cent of all Ph.D.'s of five or more years' standing had taken as much as nine months' supplementary training in the fifth and later years after receiving the degree.

The kinds of postdoctoral training reported range from taking regular graduate or undergraduate courses in basic disciplines to

special brief courses or institutes on subjects immediately related to particular vocational activities. Table 65 shows the relative frequencies. Among those studying mathematics and statistics, a disproportionate number had previously taken no college course in mathematics;[1] this fact reinforces the impression, already mentioned, that much of the formal training sought by Ph.D.'s can be better described as remedial than as advanced.

TABLE 65. KINDS OF POSTDOCTORAL TRAINING REPORTED BY PH.D.'S

Kind of Training	*Per Cent Reporting*
Basic disciplines:	
Mathematics and statistics	3
Psychology	2
Other basic disciplines	4
Survey methods	2
Computer techniques	..[a]
Administration	..[a]
Foreign area studies	1
Application of sociology to health and welfare	3
Research apprenticeship, miscellaneous fields	3
Subtotal	19
No postdoctoral training	81
Total	100

[a] Less than 1 per cent.

SOURCE: Schedule II-B (357 respondents).

Granted that the development of the science and profession of sociology continues, increasing needs for formal provision for postdoctoral training can be anticipated, but extraneous circumstances may limit opportunities for it or lead graduates to forgo actual opportunities. Some of the currently relevant circumstances are too familiar to need more than mention: early parenthood and family responsibilities, impatience to outgrow the student status in which the average candidate has spent almost a decade since graduating from college, a labor market in which a minimally qualified Ph.D. can command a comfortable salary, and the reluctance of academic administrators to have their junior teaching staffs decimated by leaves of absence. There is

[1] Schedule II-B.

currently no lack of fellowships available to young sociologists for postdoctoral training; there is a dearth of applicants of superior ability. Ironically, it is the ablest who are most often subject to some of the pressures against taking time out for prolonged postdoctoral study or apprenticeship.

As a rule, a shorter period spent in predoctoral status—which as we have seen tends to be unduly prolonged—should be followed by a period of postdoctoral training, usually not in the department which conferred the degree. If the doctoral program has been well planned, the postdoctoral training should not be in the nature of merely remedial instruction to fill gaps that ought not to have been left, but should represent an opportunity to gain new perspectives, to learn from scientists who are breaking new ground in fields of special interest, or to acquire practical experience in the application of one's basic sociological training in specific vocational fields. Vocational emphasis in predoctoral training tends to distract from the centrally important need to become firmly grounded in the general science of sociology; an individual planning to work in an "applied field" would do well first to qualify himself for the doctorate without delay, and then to serve a postdoctoral internship in his chosen field of work.

Remedial programs to help Ph.D.'s of some years' standing catch up with developments that have taken place since they were graduate students are another matter. It is to be assumed that an alert individual should try to continue by independent study to keep abreast of new developments, but in actuality there seems to be a high correlation between the rate of scientific advance and the deterioration of communication between those who are working on the frontiers and their professional colleagues. Programs of postdoctoral training that would foster mutual understanding on the part of more experienced older sociologists and their technically more proficient juniors would strengthen the position of the profession in both academic and nonacademic spheres of activity.

APPENDICES

Appendix A

VISITS TO UNIVERSITIES

DURING THE YEAR 1961 and early in 1962, the author made visits, usually of several days' duration, to 13 universities whose sociology departments offer doctoral training in sociology. All of these are reputed to have higher than average standards; among them are 9 of the 15 departments enjoying the highest prestige, according to Keniston's recent survey of graduate schools. The other 4 institutions visited were chosen as distinctive in certain respects: a large department in a rapidly growing state university, which has been shifting its major emphasis from rural to general sociology; and 3 small departments, each of which has selected a special methodological or substantive focus. Hour-long interviews were held with a total of about a hundred graduate students, as well as individual conversations with faculty members.

Appendix B

QUESTIONNAIRE SURVEYS

FIVE SCHEDULES WERE USED in gathering information by mail from sociology departments and from individuals holding doctor's and master's degrees. The schedules and accompanying letters are reproduced below, followed by statistical data on coverage, sampling, dates, and rates of response.

Schedule I was addressed to every department reported to offer doctoral degrees in sociology; usable responses were received from all but three of those found to have currently active doctoral programs.

Schedule II was addressed to a 25 per cent random sample of Ph.D.'s whose degrees were conferred by institutions in the United States during the years 1936–1959. The sample was drawn from the 1959 directory of members of the American Sociological Association and, for nonmembers, from the roster of doctoral degrees maintained by the Office of Scientific Personnel, National Research Council. Schedule II-A, a much abbreviated version of Schedule II, was sent to every member of the American Sociological Association who received a doctoral degree from a university in this country before 1936; since the Office of Scientific Personnel's roster includes only degrees conferred in 1936 and later years, it was impossible to include nonmembers of the A.S.A. in the mailing of Schedule II-A.

After preliminary analysis of data from Schedule II, a supplementary schedule, II-B, was sent to each respondent. The first three items on this schedule, relating to professional employment apart from one's primary job, to postdoctoral study or training, and to training in mathematics, statistics, and other formal methods, were addressed to all respondents; three other questions, concerning interdisciplinary training and employment outside sociology departments, were addressed selectively to only those respondents whom they concerned.

Schedule V was addressed to recipients of master's degrees who have not received doctoral degrees. In the absence of any central list of M.A.'s comparable with the Office of Scientific Personnel list of Ph.D.'s, it was not feasible to attempt random sampling. Address lists of their graduates were obtained from 28 institutions which had granted appreciable numbers of master's degrees in the period 1953–1958. The statistical representativeness of the data obtained thus cannot be measured, but the respondents are drawn from a sufficiently diverse list of institutions to warrant some confidence that the results of the survey are not very seriously biased.

Coverage, Sampling, Dates, and Response Rates of Questionnaire Surveys

Schedule I—Departments Offering Ph.D. Degrees

Institutions in U.S. reported by American Sociological Association to offer Ph.D. degrees in sociology, 1959	68
Institutions listed in an A.S.A. report, but not on above list	8
Other institutions announcing new doctoral programs	5
Institutions to which separate questionnaires were sent to general and rural sociology departments	2
Total number of departments to which Schedule I was sent	83
Number of completed schedules returned	68[a]
Number of institutions apparently now offering Ph.D. degree, which failed to return schedules	3[b]
Number of institutions not now offering Ph.D. degree:	
Reporting Ph.D. program discontinued	4
Reporting Ph.D. never offered	8

[a] Two of these returns were not included in the general tabulations because the data did not seem comparable. (Garrett Biblical Institute and New School for Social Research)

[b] One nonrespondent institution conferred a single Ph.D. degree in sociology in 1958–1959; the other two conferred none. (Data from *Earned Degrees Conferred, 1958–1959*, U.S. Office of Education.)

Schedules II, II-A, II-B, and V

Samples:

Schedule II—Holders of Ph.D. Degrees (1936–1959)

(a) Every fourth active and associate member listed in the 1959 Directory of the American Sociological Association as having received a Ph.D. degree in sociology from an institution in the United States in the period 1936–1959	373
(b) Every fourth nonmember of the A.S.A. similarly listed by the Office of Scientific Personnel, National Research Council	227
Total	600

Schedule II-A—Holders of Ph.D. Degrees (prior to 1936)
Every active and associate member listed in the 1959 A.S.A. Directory as having received a Ph.D. degree in sociology from an institution in the United States prior to 1936 — 194

Schedule II-B—Holders of Ph.D. Degrees (1936–1959)
401 eligible respondents to Schedule II; after eliminating 3 duplicates and one deceased, 397 questionnaires were mailed. (Schedule II-B asked certain information from all respondents, and additional information from those who had given certain responses on Schedule II.) — 397

Schedule V—Holders of Master's Degrees (1953–1958)
Forty-four institutions which had conferred appreciable numbers of master's degrees in sociology in the period 1953–1958 were asked if they could furnish names and addresses of recipients of the master's degree who had not yet received the Ph.D. degree. A total of 454 names and addresses were received from the 28 institutions listed below. The figures after the names of institutions are the numbers of completed schedules received. These obviously do not constitute a valid statistical sample of a relevantly definable universe — 454

University of Chicago	40
State University of Iowa	29
University of Southern California	19
University of Colorado	13
Kent State University	12
Loyola University (Chicago)	12
Michigan State University	12
Purdue University	12
Brooklyn College	10
Fisk University	10
University of Minnesota	9
University of Washington	9
Brigham Young University	8
University of California (Berkeley)	8
University of Denver	7
Los Angeles State College	7
University of Pittsburgh	7
Florida State University	6
Mississippi State College	6
Pennsylvania State University	6
Utah State University	6
State University of Washington	6
Bowling Green State University	4
University of Hawaii	4
North Carolina College (Durham)	4
University of Kentucky	3
University of Buffalo	1
Cornell University	1

Dates of Mailing and Response:

	Schedules				
	I	II	II-A	II-B	V
Initial mailing	August 1960	August–September 1960	February 1961	October–November 1961	September 1961
Follow-up mailing	..	November 1960	none	December 1961	October 1961
Closing date for tabulation	March 1961	December 15, 1960	February 26, 1961	December 26, 1961	November 22, 1961

Gross and Net Response Rates:

	Schedules							
	II			II-A	II-B			V
	Total	ASA Mem.	Non-mem.		Total	ASA Mem.	Non-mem.	
(a) Initial sample	600	373	227	194	401	315	86	454
(b) Usable returns	401	315	86	141	357	293	71	271
(c) Gross response rate, % (b/a)	66.8	84.5	37.8	72.7	89.0	93.0	82.6	59.7
(d) Sample, less ineligibles, duplicates, dead, and those who could not be reached by mail	503	353	150	189	394	..	..	365
(e) Crude net response rate, % (b/d)	79.7	89.2	57.3	74.6	90.6	..	..	74.2
(f) Sample further adjusted for estimated number of ineligibles among non-respondents	482	351	131	188	..	..	..	359
(g) Adjusted net response rate, % (b/f)	83.2	89.7	65.6	75.4	..	..	..	75.5

NOTES: "Ineligibles" comprised mostly those whose degrees were not in sociology; they were included in the initial sample because of incorrect or ambiguous listing in the source from which the sample was drawn. "Duplicates" were less numerous, comprising mostly women whose names had been changed by marriage.

ELBRIDGE SIBLEY
ROOM 2301
230 PARK AVENUE
NEW YORK 17, N. Y.

August, 1960

_____, Chairman
Department of Sociology
_____ University
_____, _____

Dear Professor _____:

As you may have heard, I am undertaking to study the present state and prospects of graduate education in sociology. The enclosed flyer will give a general idea of the aims and auspices of the enterprise.

At the outset I need to survey the major dimensions of the universe before proceeding to more intensive inquiries in selected institutions. The enclosed schedule, which is addressed to each department offering the doctorate in sociology in the United States, calls only for information which I have been unable to glean from existing compilations of data.

It is obviously difficult to devise statistical classifications applicable to a wide variety of situations in different institutions. If some of my categories appear Procrustean, I hope that the possibility of comparing your own statistics with those for universities as a whole may justify the expenditure of effort in compiling the requested information.

You will notice that each table on resident students and faculty calls optionally for data for either the spring term 1959–60 or the fall term 1960–61. The seeming looseness derives from the fact that I am essentially interested in a roughly contemporary picture of the several departments that give Ph.D. degrees in sociology, and in order to be guided by this in planning subsequent stages of the study I am anxious to obtain the information with minimal delay; hence you are invited to report for whichever term is more convenient. It is, however, obviously desirable that all data for your department should refer to the same term.

Three copies of the schedule are enclosed, to provide a work-sheet and a copy for your file; the return of one copy at your earliest convenience will be gratefully appreciated, as will any criticism, advice, or question that you may care to add. It will be very helpful if at this time you can let me know approximately when I may look forward to receiving the schedule. Furthermore, our mailing list may possibly include a few institutions which do not now offer the Ph.D. degree in sociology, and I should like to avoid troubling these with repeated requests for irrelevant information. Will you be kind enough to return the enclosed card at once with the pertinent information on these points?

Sincerely yours,

ELBRIDGE SIBLEY

Enclosures:
Flyer
Schedule I

Reply card

Covering letter with Schedule I

A Critical Study of Graduate Education in Sociology

At the request of the American Sociological Association, Russell Sage Foundation has provided funds to enable me to undertake a critical study of graduate education in sociology. The proposal for the investigation set forth its occasion, objectives, and auspices as follows:

> Sociology as an academic discipline and as a professional field has so expanded and changed in recent years that the time is ripe for a critical assessment of the training of sociologists. In terms of sheer quantity, the output of Ph.D.'s in sociology in the late 1950's has been roughly three times as great as in the years around 1940. Qualitatively, recent increases in technical sophistication have virtually revolutionized the disciplinary needs of anyone preparing for a research career. There has been a concomitant rise in the proportion of sociologists employed in nonacademic positions . . . [and although] even today a majority of sociologists are exclusively or primarily engaged in teaching their discipline, the expanded range of activities for which sociological training is sought cannot be ignored by those responsible for programs of advanced training. . . . Sociology is not yet ready to be crystallized; its continued healthy development calls for avoidance both of the sterility of premature standardization and of the handicaps of utter lack of standards of training. It is hoped that the proposed study, if successfully carried out, may contribute to that end.
>
> [The author of the study will] be under no obligation to speak officially for the sponsoring organization, nor to confine his report to matters of general consensus.

I am undertaking the study as an individual, and shall be on part-time leave from my duties as executive associate of the Social Science Research Council. Thus I shall be solely responsible for planning and executing the inquiry and preparing a report, with no committee or organization behind which to hide. The ultimate value of the study will of course depend on the advice, criticism, and help that others are willing to give.

It will be necessary to assemble some global data, but I hope to devote a major part of my effort to intensive inquiries at a limited number of universities which are still to be selected. With the consent of those concerned, I hope to spend sufficient time on each selected campus for extended conversation with both faculty and students. My report will probably not be completed before 1962.

ELBRIDGE SIBLEY

Room 2301
230 Park Avenue
New York 17, N. Y.

June, 1960

Flyer enclosed with all questionnaires

GRADUATE EDUCATION IN SOCIOLOGY - SCHEDULE I - DEPARTMENT OFFERING PH.D. DEGREE
Please return to Elbridge Sibley, 230 Park Ave. (Room 2301), New York 17, N. Y.

Department of _____
(Please correct the name of department if necessary)

NOTE - Please indicate by checking here whether the data given in this schedule on students and faculty members refer to Spring Term 1959-60 ☐, or to Fall Term 1960-61 ☐. (Either is acceptable, but the same period should be used throughout.)

PART I - STUDENTS OF SOCIOLOGY IN RESIDENCE

1. Graduate Students Majoring in Sociology, by Stages of Advancement *

	Total	Men	Women
a. Number in residence who have fulfilled all Ph.D. requirements except dissertation			
b. Number of "candidates" ** for the Ph.D. degree who have not yet passed general examinations (including those now "candidates" for the M.A. but definitely intending to continue to the Ph. D. degree)			
c. Number of "candidates" ** for the M.A. degree who are not "candidates" for Ph.D. degree			
d. Number of graduate students in sociology not now accepted as "candidates" for degrees ***			
e. Visiting students from other institutions			
Totals			

* Categories a - e are intended to be mutually exclusive, and exhaustive of all graduate students majoring in sociology currently in residence.

** It appears that the process of formal admission to candidacy for degrees differs widely among universities. For purposes of this survey, a candidate for the M.A. or Ph.D. is defined as one who is accepted by the Department as a potential recipient of the degree, even though he may not yet have met all requirements nor been formally "advanced to candidacy."

*** Item d is to include both graduate students whose eligibility to become candidates for advanced degrees has not yet been determined, and those who avow no intention of seeking advanced degrees.

2. Students Entering this Department for Graduate Study in Sociology for the First Time This Year *

	Number
a. With no previous graduate study in sociology:	
(1) With A.B. or B.S. in sociology from this institution	
(2) With A.B. or B.S. in another field from this institution	
(3) With A.B. or B.S. in sociology from another institution	
(4) With A.B. or B.S. in another field from another institution	
b. With some previous graduate study in sociology elsewhere:	
(1) With M.A. or M.S. degree in sociology	
(2) Without M.A. or M.S. degree in sociology	
Total	

* If your data refer to students in residence during the Spring Term, include as new students under this item any who entered in the preceding fall.

PART I - STUDENTS OF SOCIOLOGY IN RESIDENCE (continued)

3. Full-Time and Part-Time Graduate Students in Residence, Majoring in Sociology

a. Number of full-time graduate students * _____
b. Number of part-time graduate students _____

* For present purposes, please consider as a full-time student only one who is devoting virtually all of his time to study or other activities directly contributing to his sociological training. Student assistants should be classed as full- or part-time students according to whether or not their duties meet the above criterion. (It is recognized that this distinction is in some cases difficult to make; please give your best estimate of the numbers.)

4. Undergraduates Majoring in Sociology

	Total	Men	Women
a. Seniors			
b. Juniors			

PART II - NON-RESIDENT PH.D. CANDIDATES *

5. Numbers of Ph.D. Candidates Who Have Fulfilled All Requirements for the Degree Except the Dissertation, Who are Not in Residence This Term

a. Number who were last in residence in 1959-60	
b. " " " " " " " 1958-59	
c. " " " " " " " 1957-58	
d. " " " " " " " 1956-57	
e. " " " " " " " earlier years	
f. Total of a - e	
g. Of the above, how many are currently absent on fellowships for research or study?	

* Anyone counted in Part I above should not be counted in Part II.

PART III - FACULTY MEMBERS AND COURSE ENROLLMENTS

6. Faculty Members in Sociology *

Rank	Total Number	In Residence Throughout This Term		Absent for Whole Term	Absent for Part of Term
		Full-time in Sociology	Part-Time in Sociology		
a. Professor					
b. Associate Professor					
c. Assistant Professor					
d. Instructor					
e. Other **					
f. Total, all ranks					

* Please count all faculty members who (when in residence) give one or more courses in sociology.
** Please specify any other ranks equivalent or superior to instructor.

PART III - FACULTY MEMBERS AND COURSE ENROLLMENTS (continued)

7. Courses Offered This Term

a. Number of courses in sociology open to graduate students *	
b. Number of courses in sociology for undergraduates only	
c. Total number of registrations in all courses in sociology **	

* Including courses open to both graduates and undergraduates.

** Please estimate, if return of this schedule would be delayed by awaiting final figures from the Registrar.

PART IV - DEGREES

8. Degrees in Sociology Conferred in the Year 1959-60

	Total	Men	Women
a. Ph. D.			
b. M. A.			
c. M. S.			
d. A. B.			
e. B. S.			
f. Other (specify)			

9. Other Degrees Offered but Not Conferred in 1959-60: Does the catalog offer any other degrees in sociology, of which it happens that none were actually conferred in 1959-60? If so, please specify.

PART V - INTERDISCIPLINARY AND VOCATIONAL PROGRAMS

10. Does this department offer (either by itself or jointly with other departments) (a) master's or doctor's degrees in specialized or interdisciplinary fields such as rural sociology, social psychology, sociology-anthropology, area studies, etc.; (b) formally organized programs of graduate training in such fields, not leading to degrees; (c) formally organized training programs for students preparing to work in "applied" fields such as health, delinquency, family welfare, foreign service, etc.? If so, please specify and give the number of graduate students now enrolled in each program.

PART V - INTERDISCIPLINARY AND VOCATIONAL PROGRAMS (continued)

11. Have you counted under items 1 - 5 in Parts I and II above, any students enrolled in programs listed under item 10?

12. Has any program of the types listed in item 10, above, been discontinued at this university in recent years? If so, please specify.

PART VI - GENERAL INFORMATION

13. In its general doctoral program in sociology, does this department especially emphasize certain substantive or methodological areas?

PART VI - GENERAL INFORMATION (continued)

14. What is the most significant change that has taken place, or has been seriously contemplated, in your graduate program in sociology since World War II?

If you issue a brochure, circular, or other literature giving information about your department and its program which is not contained in the catalog of the university, may we have a copy?

Person submitting this report_____

Date_____1960

ELBRIDGE SIBLEY
ROOM 2301
230 PARK AVENUE
NEW YORK 17, N. Y.

August, 1960

Dr. _____
_____
_____, _____

Dear Dr. _____:

As an early step in a study of the present state and prospects of graduate education in sociology which I have been commissioned to undertake, I am addressing this inquiry to a random sample of recipients of the Ph.D. degree in that discipline from American universities. The enclosed flyer will give a general idea of the aims and auspices of the study.

A principal purpose of the present questionnaire is to try to make certain that some matters which are of concern to significant numbers of sociologists will not be overlooked in making plans for more intensive studies of the doctoral training programs in selected institutions. You will notice that several of the questions on the enclosed schedule are quite open-ended; they are intended to elicit what you feel to be significant. With this in view, I shall be most grateful for your candid response.

As this letter is going both to recent recipients of the doctorate and to persons long established in their careers, let me crave the latter's indulgence for those questions which imply a distinction between one's present employment and his ultimate vocational goal.

An identifying number has been put on your questionnaire, to permit control of responses and some assessment of bias from nonresponse. I promise scrupulously confidential treatment of your response, which I hope to receive very soon.

Sincerely yours,

ELBRIDGE SIBLEY

Enclosures:
Flyer
Schedule II

Covering letter with Schedule II

GRADUATE EDUCATION IN SOCIOLOGY—SCHEDULE II—HOLDER OF PH.D. DEGREE

Please return to Elbridge Sibley, 230 Park Ave. (Room 2301), New York 17, N.Y.

1. Sex____ 2. Year of Birth_____ 3. Institution granting Ph.D. degree_____ 4. Year of Ph.D. _____

5. Present Employment: Employer _____

Title of position _____

Nature of duties (if not evident from title) _____

Approximate annual earnings (NOTE: If you prefer to omit this item, please do not be deterred from responding to remaining questions) $_____

6. Previous Work: If you have previously been employed for a year or more, since completing residence in graduate school, in a kind of work different from your present work, please explain. (This does not call for a listing of previous positions in similar work.)

7. Career Goal: In what kind of work do you hope ultimately to engage, and what position and level of earnings do you expect to attain? (This question especially for recent Ph.D.'s.)

8. Was your doctoral study in general sociology, or in a specialized or interdisciplinary field (e.g., criminology, rural sociology, social psychology, sociology & anthropology, etc.)?

9. In what important respects do you find that your sociological training has most adequately, and in what respects most inadequately, prepared you for your present work?

10. Same question as No. 9, but with reference to career goal indicated in item 7 above:

SCHEDULE II (continued) page 2

11. If you have indicated in items 9 and 10 that you feel certain inadequacies in your training, have you plans for remedying them in your own case, or suggestions for preventing them in the case of others?

12. If you were to begin your sociological training over again, what would you want to do differently?

13. If you were to begin your graduate education over again, would you seek a Ph.D. degree in sociology?_____If not, why, and what would be your alternative choice?

ELBRIDGE SIBLEY
ROOM 2301
230 PARK AVENUE
NEW YORK 17, N. Y.

February, 1961

Dr. _____
_____
_____, _____

Dear Dr. _____:

One phase of the study of graduate education in sociology described in the enclosed memorandum has been a questionnaire survey of a sample of recipients of the Ph.D. A schedule dealing both with their present employment and their experience in graduate school was sent to one-fourth of those who received the doctorate in the years 1936-59. For most purposes of the study it has seemed reasonable to limit the survey to this period; however, the data which have thus far been analyzed reveal some seemingly very significant relationships of age, employment and earnings, whose interpretation remains ambiguous without information about those who received the doctoral degree in earlier years.

Therefore I am now sending the enclosed very brief questionnaire to members of the American Sociological Association who received the Ph.D. degree before 1936. Need I say that individual responses will be treated strictly confidentially, and that I shall be most grateful for your help in filling a serious gap in present information?

Sincerely yours,

ELBRIDGE SIBLEY

Enclosures:
Flyer
Schedule II-A

Covering letter with Schedule II-A

GRADUATE EDUCATION IN SOCIOLOGY - SCHEDULE II-A - RECIPIENT OF PH.D. BEFORE 1936

Please return to Elbridge Sibley, 230 Park Ave. (Room 2301), New York 17, N. Y.

A. Is your Ph.D. degree in sociology? Yes ☐ No ☐

(If not, ignore the following questions, but please return this form.)

B. 1. Sex____ 2. Year of birth_____ 3. Institution granting Ph.D. degree_____ 4. Year of Ph.D. _____

5. PRESENT EMPLOYMENT: Employer_____

Title of position_____

Nature of duties (if not evident from title)_____

Approximate annual earnings $_____

ELBRIDGE SIBLEY
ROOM 2301
230 PARK AVENUE
NEW YORK 17, N. Y.

October, 1961

Dr. _____
_____
_____, _____

Dear Dr. _____:

Some months ago you and 400 other Ph.D.'s in sociology kindly returned a questionnaire in connection with my current investigation of graduate education in this field. Analysis of the returns has revealed some needs for additional information which I hope you will be willing to provide.

On three subjects it is necessary to ask everyone for further information which can be collated with the data already at hand:

1. Professional activities outside one's primary employment
2. Postdoctoral study or training
3. Undergraduate and graduate training in mathematics, statistics, and certain special techniques.

Items 4, 5, and 6 are being sent selectively to those respondents who indicated that they found themselves inadequately prepared in certain fields or that their principal employment was not in a sociology department.

With regret that I lacked the foresight to include the present items on the original schedule, and with anticipatory thanks for your further patient collaboration, I am

Sincerely yours,

ELBRIDGE SIBLEY

Enclosure: Schedule II-B

Covering letter with Schedule II-B

GRADUATE EDUCATION IN SOCIOLOGY - SCHEDULE II-B - HOLDER OF PH.D. DEGREE
Please return to Elbridge Sibley, 230 Park Avenue (Room 2301), New York 17, N.Y.

1. Please list in the table below professional work in which you have engaged during the last 12 months, apart from your regular position which you described previously on Schedule II. This item refers only to professional services rendered to other persons or organizations. All work of a given type may be indicated on a single line.

a) Nature of Work: e.g., research, administration of research, consultation, counselling	b) Type of Employer or Client(s): e.g., Defense Department, industry, private welfare agency, self-employed	c) Financial Relation to Employer or Client(s): e.g., salaried employee, received fee, received expenses only, unpaid	d) Approximate per cent of year's time devoted to this work	e) Approximate per cent of year's earnings derived from this work

2. Please list below any periods you have devoted to substantially full-time postdoctoral study or training since receiving the Ph.D. degree. (This item does not refer to research fellowships or leaves of which further training was not a primary purpose.)

a) Nature of study or training	b) Duration (months)	c) Period began (check below) after receipt of Ph.D. degree					d) Were you on	
		immediately	within 2 yrs.	2-4 yrs.	5-9 yrs.	10 or more years	fellowship?	leave with pay?

Schedule II-B (continued)

3. What courses did you take in Mathematics, Statistics, etc., in college and in graduate school? Please indicate in the appropriate column whether you took at least one whole course on a given topic, or studied the topic among others in a more general course — e.g., a little bit of statistical methods in a general course in "research methods," or several mathematical topics in a single course. Courses attended without credit may be counted if you actually did the work.

	Courses taken while an undergraduate		Courses taken while in graduate school	
	Wholly on given subject	Including given subject among others	Wholly on given subject	Including given subject among others
MATHEMATICS				
Algebra				
Trigonometry				
Analytic geometry				
Probability				
Differential calculus				
Integral calculus				
Other mathematical topics (please specify):				
Special courses in mathematics for social scientists: (*see footnote)				
- with calculus prerequisite				
- without calculus prerequisite				
STATISTICS				
Non-mathematical courses in statistical methods:				
- given by sociology department				
- given by other department				
Mathematical statistics				
Non-parametric statistics				
Factor analysis				
Design of experiments				
Other statistical topics (please specify):				
SPECIAL METHODS				
Scaling				
Computer programming				

*Note: Please indicate any such special courses, even though the topics covered are also checked above.

Please list here any significant extracurricular study of mathematics or statistics, indicating whether it was done before or after entering graduate school; also any postdoctoral study in these fields.

Schedule II-B (continued)

4. On Schedule II you indicated a felt lack of adequate predoctoral training in some other discipline or disciplines (specifically). Do you feel that the chief value of such training would be —

- ☐ introduction to a body of empirical facts?
- ☐ a different perspective on the subject matter of sociology?
- ☐ certain methodological or technical skills?
- ☐ something else?

Comment:

5. As a Ph.D. in sociology who is primarily employed outside a sociology department,

a) do you find your sociological training useful —

- ☐ mainly in providing specifically applicable theory of social behavior or organization?
- ☐ mainly in providing specific methods of research and analysis of data?
- ☐ mainly in sensitizing you to the social context of problems with which you deal?
- ☐ in other ways? (specify below)
- ☐ not at all?

Comment:

b) is your principal position which you described in Schedule II —

- ☐ tenable only by a Ph.D. in sociology?
- ☐ tenable only by a person trained in sociology but not necessarily a Ph.D.?
- ☐ tenable only by a person trained either in sociology or in some other social science?
- ☐ tenable by a person without formal training in any social science?

Comment:

Schedule II-B (continued)

6. As a Ph.D. in sociology employed in a non-academic position,

a) do you usually attach the title Dr. or Ph.D. to your signature or letterhead? ☐ Yes ☐ No

do other members of the organization usually refer to you as Doctor _____? ☐ Yes ☐ No

b) would you say that your colleagues in the organization with which you are connected think of you —

☐ as a sociologist?

☐ as a social (or behavioral) scientist but not specifically as a sociologist?

☐ as neither of the above?

Comment:

ELBRIDGE SIBLEY
ROOM 2301
230 PARK AVENUE
NEW YORK 17, N. Y.

September, 1961

Mr. _____
_____
_____, _____

Dear Mr. _____:

The enclosed questionnaire, "Schedule V," is addressed to persons who presently hold master's degrees but not doctor's degrees in sociology. It is sent to you in connection with the study of graduate education in sociology which is briefly described in the enclosed blue flyer. As will be apparent from the questionnaire itself, I hope to receive responses both from those who are and from those who are not planning to take the doctoral degree.

If you have already received the Ph.D. degree in sociology, do not trouble to fill out the questionnaire, but please return it with notation of that fact. (A sample of Ph.D.'s has already been canvassed.) If, however, you have taken or are seeking an advanced degree in some other field, your response to the pertinent parts of the questionnaire will be much appreciated, as I am particularly interested to learn why some individuals have shifted to other fields after pursuing a substantial amount of graduate work in sociology.

As this letter is going both to recent recipients of the M.A. degree and to persons long established in their careers, let me crave the latter's indulgence for those questions which imply a distinction between one's present employment and his ultimate vocational goal. Further comments on the back of the questionnaire will be welcomed if you are disposed to offer them.

An identifying number has been placed on your questionnaire, to permit control of response and some assessment of bias from non-response. I promise scrupulously confidential treatment of your response, which I hope to receive very soon.

Sincerely yours,

ELBRIDGE SIBLEY

ES:rg
Enclosures:
Flyer
Schedule V

Covering letter with Schedule V

GRADUATE EDUCATION IN SOCIOLOGY - SCHEDULE V - HOLDER OF MASTER'S DEGREE
Please return to Eldridge Sibley, 230 Park Avenue (Room 2301), New York 17, N.Y.

1. Sex (4) ☐ 1 M ☐ 2 F 2. Year of Birth (5-6) _____ 3. Year of M.A. or M.S.) (7-8) _____

4. Institution granting master's degree (9-12) _____

5. Year of B.A. or B.S. (13-14) _____ 6. Undergraduate major field (15-16) _____

7. Institution granting B.A. or B.S. (17-20) _____

8. Present Employment or Activity:

a) Employer (21-22) _____

b) Title of Position (23-24) _____ Full time ☐ 1 (25) Part time ☐ 2

c) Nature of Duties _____

d) Approximate Annual Earnings $_____ (NOTE: If you prefer to omit this item, please do not be deterred from responding to the remaining questions) (26-27)

9. Career Goal: In what kind of work do you hope ultimately to engage, and what position and level of earning do you expect to attain? (28-29) (30-31)

10. Do you expect to take the Ph.D. degree in sociology? (32)

☐ 1 Yes, definitely ☐ 2 Probably ☐ 3 Probably not ☐ 4 No

NOTE: If you plan definitely or probably to take the Ph.D. degree in sociology, please answer questions 11-15. If you do not plan definitely or probably to take the Ph.D. degree in sociology, please answer questions 16-21.

---

11. From which university do you plan to take the Ph.D. degree in sociology? (33-36)

☐ (37.0) Same as M.A. ☐ Other (give name of institution and reason for choice): (37)

12. When do you estimate that you will receive the Ph.D. degree? (38) _____

13. a) During the past year have you done a substantial amount of study or research for credit toward the doctoral degree in sociology? ☐ 0 No (39)

☐ 1 Yes, as a resident graduate student ☐ 2 Yes, but not in residence

b) During the coming 12 months, how much time do you plan to devote to working for the Ph.D. degree? (40)

☐ 0 None ☐ 1 Full time ☐ 2 Part time ☐ 3 Summer only ☐ 4 "Spare" time

14. What requirements for the doctor's degree remain to be fulfilled? (41)

☐ 1 Additional courses ☐ 2 Language examination(s)

☐ 3 General examinations ☐ 4 Dissertation ☐ 5 Other (specify)

15. If you discontinued your studies after receiving the master's degree, but are now either actually working for the Ph.D. degree or planning to do so in the future, what led you eventually to seek the Ph.D. degree? (Please check here if this question is inapplicable (42) ☐ 0.)

---

16. (NOTE: Item 16 refers only to employment other than student assistantships, etc. If you have neither held nor sought a regular position since receiving the master's degree, check here (43.0) ☐ and skip to item 17c.)

a) Was possession of the master's degree in sociology advantageous to you in obtaining your present (or most recent) position? ☐ Yes ☐ No
Comment: (44)

b) Has the training represented by the degree been directly useful in performing the duties of your present (or most recent) job? (45) ☐ Yes ☐ No
Comment:

17. Do you believe that you have been handicapped by not having a Ph.D. degree:

a) In obtaining your present (or most recent) position? (46) ☐ Yes ☐ No

b) In your work on this job? (47) ☐ Yes ☐ No

c) In pursuit of the career goal indicated in item 9 above? (48) ☐ Yes ☐ No

18. If you answered yes to one or more parts of item 17, please state with specific reference to each part, (a), (b), (c), whether the handicap consisted essentially in lack of formal status, or lack of sufficient training, or both. (Further comment will be welcomed.) (49)

---

19. Did you ever plan to take the Ph.D. degree in sociology? (50) ☐ 1 Yes ☐ 2 No
If yes, which if any of the following requirements had you fulfilled? (51)

☐ 0 None ☐ 1 Courses ☐ 2 General examinations ☐ 3 Approval of thesis plan

20. What were the major factors influencing your decision not to take the Ph.D. degree in sociology? (52)

21. Do you plan to take an advanced degree in some other field? (53) ☐ 1 Yes ☐ 2 No
If yes, what field, and why have you chosen it in preference to sociology? (54-55) (56)

42 43 44 45 46 47 48 49 50 51 52 53 54 55 56

INDEX

Index