

REPORT OF THE COMMISSION ON THE DOCTORATE IN PLANNING
TO THE ASSOCIATION OF COLLEGIATE SCHOOLS OF PLANNING

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COMMISSION ON THE DOCTORATE IN PLANNING

Chair, Judith Innes, Professor, Department of City and Regional Planning, University of California, Berkeley

Leland Burns, Professor, Urban Planning Program,

University of California, Los Angeles.

Gary Hack, Professor, Department of Urban Studies and Planning, Massachusetts Institute of Technology

Susan Handy, Doctoral Student, Department of City and Regional Planning, University of California, Berkeley

Michael Hibbard, Professor, Department of Planning, Public Policy and Management, University of Oregon

Jonathan Levine, Assistant Professor, College of Architecture and Urban Planning, University of Michigan;

Seymour Mandelbaum, Professor, Department of City and Regional Planning, University of Pennsylvania

Bish Sanyal, Associate Professor, Department of Urban Studies and Planning, Massachusetts Institute of Technology

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EXECUTIVE SUMMARY

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INTRODUCTION

This report is the first systematic effort to assess the doctorate in planning. It addresses the content of the educational programs, the students, the job market, the quality of the education, and the suitability of graduates to be educators in professional planning programs. This Commission was appointed in spring of 1990 by the President of the Association of Collegiate Schools of Planning (ACSP), with the charge to do examine current Ph.D. programs, enrollments and employment prospects of graduates, to identify problems and opportunities, and to make recommendations to ACSP and its member schools. This report is based on research conducted by members of the commission between July 1990 and August 1992. Research included a survey of programs to gather data on individuals who entered since 1975, and indepth interviews with representative samples of Ph.D. program faculty, chairs of professional planning programs, Ph.D. students, and graduates.

OVERALL CONCLUSIONS

The Ph.D. in planning is a healthy enterprise. Graduates appear to be fully employed in planning or related fields, pursuing careers which take advantage of their skills and knowledge. They are versatile and capable, filling needed roles in government, private foundations, and international organizations, and many become faculty, not only in professional planning programs, but in a wide range of other fields. The programs themselves are largely satisfying to graduates, and the degree is valuable as a credential. The record of completion rates and times-to-degree is respectable by comparison to other fields. Programs are producing enough graduates, in the aggregate if not in specific fields, to meet the needs of planning education in the foreseeable future, and job opportunities for graduates appear ample.

There are however, problems that need to be addressed and ways in which the programs can be improved. Many of the problems affect Ph.D. education in all fields. There are mismatches between the fields of graduates and the demand for them in planning education. There is less gender and ethnic diversity among students than in the population. Women are significantly less likely to enter academic life than men, and few women or minorities apply for positions. Declining financial support and increasing costs for students have subtle distorting effects on admissions and programs.

All respondents agree that learning to do independent research is the most important aspect of the Ph.D. programs and the most difficult educational challenge. The greatest strengths of the planning doctorate are its interdisciplinary breadth and orientation to action. These qualities prepare doctoral graduates for a wide range of research, teaching and other roles in society. At best planners and planning educators and researchers are synthesizers and integrators,

flexible in their ability to address many issues and creative in their ability to see connections and new formulations. This breadth is however at odds with the tasks of doing a Ph.D., which require focus, depth and discipline. The problem is aggravated for students, as there are few powerful exemplars of research to follow.

The dilemma is inherent in any effort to incorporate professional education into a university setting where the norms of traditional disciplinary research prevail. The challenge is how to help students answer the question "what are you really about?" and to internalize the discipline of a scholarly community, while at the same time identifying themselves with the field of planning in all its diversity and action orientation. This is further complicated by the fact that many doctoral students wish to forge careers that combine research and practice, and thus they do not make a sharp distinction between the two roles.

This conflicting set of mandates contributes to most of the problems that our respondents identified. Graduates, as they start out, are not always broad enough or practice oriented enough to teach effectively in professional schools. Students and graduates complain of unreliable mentoring and insufficient guidance through their broad education. They are not well enough prepared in the research methods they need to convincingly answer the research questions they ask. They do not feel well enough prepared for the variety of responsibilities they have in academic careers. This report provides recommendations on these points.

SELECTED FINDINGS

Characteristics of Programs and Students

*There are 30 programs in North America offering the planning doctorate. Of the at least 2081 students admitted since 1975, 881 have graduated. In the last five years programs have graduated an average of 78 Ph.D.'s annually. Sharp declines in admissions since 1988 may result in lower numbers of graduates by 1994 or 1995.

* Among students admitted, during the period 1975-1991, the median age is 29 years, men outnumber women by 2 to 1, and international students have been a growing proportion of now making up 40% of the total, with the largest group from Asia. Of international students only 20% are women, compared to 42% of the North American students. Twenty percent are U.S. ethnic minorities.

* Fifty percent of all students admitted complete in just over 7 years, and approximately 60% finally complete the degree. Median completion time among those who do graduate is just under 5 years. These completion rates place planning in about the middle of the range of Ph.D. fields.

* International students complete faster than U.S. and Canadian, with 50% completing in less than 6 years and a total completion of at least 70%. Among U.S. and Canadian students it takes about 8 years for 50% to complete and only about 55% finally complete the degree.

*Women complete at a slower rate than men, reaching 50% completion only by about 7.5 years, as compared to under 7 years, but catch up later.

*Completion rates are lower among students entering with the planning masters degree than among those with masters in other fields, though the discrepancy decreases with student time in the program.

*Completion rates are significantly higher in the eight Ph.D. programs which send over 40% of their graduates to academic careers than in those which send less. In these programs the graduation gap between men and women is closed, with just over 60% completion for both sexes.

*Students typically enter without having decided between academic or professional careers. Only a minority hope from the outset to become academics, though many others become interested in academic careers as they progress through the program.

*The serious decline of financial support has led to reductions of the number of applicants being admitted, students extending their studies longer by studying part time, and programs shading their offerings to serve those likely to find external support for their studies. These changes could have long term consequences for the number and quality of graduates and the mix of subfields in which they specialize.

Areas of Specialization

* Specializations have shifted between 1975 and 1991, with declining interest in social policy and public policy and growing interest in energy and environment, land use, and urban and regional theory. Housing and community development shows a slight decline, and third world topics remain the largest category with at least 20% of the total.

The Market for Graduates

* Graduates are employed across a wide range of public and private settings, with 31% of the total cohort currently in academic positions and 35% of the 1990 graduates.

* Nearly 45% of those in academic positions are in fields outside of planning, in a wide range of professional programs, social sciences, and even humanities.

*Women graduates are significantly less likely than men graduates to be employed in academic positions--25% as compared to 37%.

*Eight schools at least send 40% to 55% of their graduates to academic positions, and others send 30% or less.

* Most graduates consider both academic and nonacademic careers. Some regard the latter as suboptimal but prefer the higher pay and wider locational choices. Graduates perceive the market for academic positions to be thin, though most who are prepared to move seem to find academic positions.

* We estimate there will be about 150 retirements among planning educators in the next five years, of which 75 will be of those now full time in planning. Others are part time faculty or shared appointments with other departments. The number of openings for new planning faculty

could be as many as 100 to 110, depending on resignations, the disposition of other positions, and other unmeasured factors. This estimate does not include positions in urban studies programs or related fields to planning.

* Current trends mean there will be ample numbers of planning Ph.D.s as candidates for planning faculty positions, even if programs want to fill as many as 50% of positions with planning Ph.D.s. (They now fill about 40% of positions with planning Ph.D.'s)

* There will probably not be enough academic openings in planning programs to satisfy graduate demand for these jobs if these programs continue to hire at least half of their faculty from outside planning, but it appears that sufficient other academic opportunities will be available in other fields for those interested teaching careers.

* Significant mismatches do exist however between the characteristics, preferences and specialties of the graduates and the needs of the planning programs seeking faculty.

* A large shortfall will occur in the short run between the demand for physical planning faculty and the supply of graduates. Thirty-three retirements of the 150 will be in land use and 20 more in urban design, but only a handful of graduates thus far has physical planning as a specialization and even fewer with knowledge and skills in urban design. Student interest is growing but it is recent, and graduates will only be emerging in 3 to 4 years.

* There appears to be some oversupply of graduates relative to anticipated retirements of planning faculty in housing, regional development, social policy and international topics.

* We anticipate growing demand for specialties in transportation, energy and environment, methodology and information systems, and possibly community development and urban poverty.

*The applicant pools contain typically few women and domestic minority candidates, not enough to satisfy program demands for gender and ethnic diversity. This discrepancy is due in part to the relatively small numbers of women and minority graduates. Many of those who do graduate choose not to apply for academic positions.

*Between 1985 and 1991 the 21 planning programs whose chairs we interviewed mounted 87 searches. Twenty of these hired faculty with Ph.D.'s or on the road to them, rather than those with only masters degrees. Planning Ph.D.'s figured prominently among the finalists in most searches.

*Criticisms of faculty candidates with the planning Ph.D. were of two types. One group complained they were not broad enough or well enough aware of the centrality of physical planning. Another group felt candidates lacked an intellectual identity and did not do convincing research. Many faculty felt candidates did poorly on presentations.

*Graduates criticized the programs for not having a clear sense of what they were looking for. Women and minorities cited cases of insensitive comments by faculty related to their gender or ethnicity.

Characteristics of Planning Faculty

* There are about 700 full and part time faculty in the approximately 60 accredited planning programs, and about 200 more in the 40 or so nonaccredited planning programs. Of these about 1/3 have Ph.D.'s in planning, 17% are female and approximately 14% are minority.

Graduates' Assessment of the Programs

* Graduates value the degree, and many found their Ph.D. programs wonderful experiences. Most graduates, even the least satisfied, would choose their programs again if they had them to do over.

*They almost all consider learning to do independent research the most important part of their education. It gave them self confidence. It taught them the most valuable skills--especially writing and doing complex tasks, and it gave others confidence in them. This was true for graduates in both academic and nonacademic positions.

*Mentoring was the most important factor determining a graduate's satisfaction or dissatisfaction with a program. The most satisfied often credited mentors with postdoctoral successes, while the least satisfied were typically bitter about the lack of mentoring.

*Graduates often mentioned that they particularly valued analytic skills, peer interaction, if they had positive group experiences, and the interdisciplinary breadth.

* They were often disappointed in planning theory, and in what they felt was inadequate skill training and preparation for careers, especially teaching. Some women complained of sexism in their programs.

SELECTED RECOMMENDATIONS TO PROGRAMS

--Diversity in the structure, content and approach of Ph.D. programs should be maintained.

--The current overall size of the annual Ph.D. cohort nationwide is appropriate, and we recommend maintaining the supply of graduates at approximately the level it has been in recent years.

-- Programs must give high priority to maintaining and improving the scholarly quality, rigor, and contribution of doctoral research. Students must have preparation in both quantitative/analytic and qualitative/field research methods as well as training in identifying research questions and designing research.

-- In selecting students programs should take account of the large unfilled demand for faculty with specializations in physical planning and design, and the growing demand for those with specializations in transportation, information systems and methodology, and energy and environment. Educating doctoral students in these fields may require alliances with faculty in architecture, landscape architecture, engineering and computer sciences.

--Programs should have policies and practices to assure that students and new faculty receive the broad support, advice, and assistance they need, not only for their research but for their careers in the longer term.

--Programs should provide opportunities, if not requirements, for students to develop teaching skills and materials.

--For those students who are considering careers of teaching in professional planning programs, Ph.D. programs should create opportunities for exposure to the range of practice settings, and suggested courses of study to assure they have necessary broad knowledge of planning subfields as well as an understanding of planning theory and techniques so that they can teach basic planning courses as well as more substantive courses in their areas of specialty.

-- Programs should encourage and support student attendance and active participation at professional conferences.

--Programs should develop methods to encourage interaction among doctoral students, like admitting students in overlapping areas or encouraging student study groups and research colloquia.

--To improve time-to-degree and increase overall completion rates, financial support, mentoring, training in developing research questions and strategy, and a sense of community among faculty and students are the most important factors.

- To increase the numbers of minority faculty, planning programs should begin by identifying and recruiting minority students for the Ph.D. from undergraduate and masters programs. They should hire minority faculty from outside planning. Finally, many programs will have to do thoughtful inquiry and self examination to become aware of the climate they offer for women and minorities.

-- Similarly, programs must support women undergraduate and master's students, first to pursue the Ph.D. and then to apply for academic positions. They should consider providing financial support to students with child care responsibilities, along with convenient care facilities for both doctoral students and junior faculty.

--To assure that programs get the full benefit of the Commission's research and the opportunity to develop strategies appropriate to their own needs, programs should consider holding meetings to discuss the implications of the findings among faculty and students.

RECOMMENDATIONS TO ACSP

--Establish a Standing Committee on the Ph.D. in Planning (SCDP) to follow through on the recommendations, monitor doctoral programs, and develop future advice to the programs. The Committee should be made up of three faculty members with substantial experience with doctoral education, one doctoral student, and one faculty member with special understanding of the needs of professional programs.

--ACSP, with guidance of the SCDP, should launch a major initiative, along with other planning organizations such as APA or AICP, to seek funding from foundations and governmental sources to establish fellowships, to be awarded nationwide on a competitive basis,

for doctoral study in planning.

--ACSP should request that the editors of the Journal of Planning Education and Research (JPER) and the Journal of Planning Literature commission articles designed, not only to review the state of the art in research on selected topics, but also to identify fruitful directions and interesting questions for future study.

-- Annual conference organizers should make serious efforts to assure that formal papers are prepared ahead of time, by, for example, offering awards for best papers in various categories, or requiring a written paper for presenters to be on the final program.

--Panel discussions at ACSP conferences should regularly be devoted to the problem of research design in a multidisciplinary, action-oriented field. SCDP should work with conference organizers to establish such panels.

-- Other panel sessions should address issues in professional development of planning educators, including the tenure process, strategies for publication, mentoring, time management, and the climate for women and for students and faculty of color.

--Teaching workshops for faculty and doctoral students should be incorporated into the conferences.

--JPER editors should expand the subscriptions to the journal to include current Ph.D. students and more of the graduates not attached to planning schools, using the list of names the Commission has compiled. They should also encourage publication among faculty in related fields to make the journal a more attractive and more competitive publication opportunity and to encourage the expansion research and writing directed toward planning as a scholarly enterprise.

-- To help reduce the mismatches between the demand for planning academics and the specializations of doctoral graduates, the SCDP should establish a system for monitoring and publication of trends in hiring by specialization and trends in dissertation fields of graduates.

--The SCDP should prepare a handbook for junior faculty on what it means to be a planning educator and on how to get tenure. This could be based on the humorous version prepared anonymously and distributed to women faculty, as well as on ACSP's booklet on promotion criteria for planning academics.

--The SCDP should prepare an editorial or brief essay for JPER providing advice to faculty on how to be effective mentors.

--The Standing Committee on Recruitment and Retention of Women and Persons of Color should sponsor an investigation of key questions that emerged from the research reported here. It then should develop specific recommendations for strategies to increase the numbers of women and students of color enrolled in Ph.D. programs and in the applicant pools for faculty positions.

--The SCDP should assure that important findings of this commission are disseminated to planning faculty, in ways that go beyond the formal publication of principal findings and conclusions that the Commission members will seek in JPER. The report should be publicized

and made available to faculty, students, libraries, career placement offices, and university administrators. It should be referred to in the Graduate Guide to Planning Education and possibly publicized in similar ways.

--SCDP should generate continued discussion in the planning academy about the future. What are the opportunities? What roles can and should planning play? What are the implications for planning education and research?

INTRODUCTION

The number of Ph.D. programs in planning has been growing slowly, but continuously, since the 1950s and there are now 30 programs in Canada and the U.S. The first was established in 1942 at Harvard and the most recent in New Orleans in 1990. Graduates go into a wide range of positions in universities, government, and private and nonprofit organizations. As the number of planning Ph.D.'s grows, professional planning schools, once staffed largely by social scientists, architects, and professional planners, seek out these graduates to fill teaching positions. Ph.D.'s in planning are researchers and educators who influence both the knowledge and the practice of planning and other fields.

This report represents the first major effort to assess the planning Ph.D. in a systematic way. In fall of 1989, the Association of Collegiate Schools of Planning (ACSP) Executive Committee voted to establish a Commission on the Doctorate, with a set of broad charges. The first was to project the demand for and supply of doctoral graduates in the next decade; the second was to evaluate the content and approach of the doctoral programs; and third to evaluate the match between program content and demand for graduates. ACSP also wanted information on the satisfaction of both graduates and employers. It asked the Commission particularly to focus on how well suited Ph.D. graduates are to be educators of planning professionals in University settings. The charge included a mandate to do research, identify problems and opportunities, and to make recommendations to ACSP and its member schools. Now that the report is complete, we recognize that the audience for our findings is broader. Those considering pursuing the planning doctorate, along with current students and graduates of the programs will find aspects of this study valuable, as will faculty who advise doctoral students or counsel those considering the doctorate. Finally university administrators who make decisions about academic programs should also review our findings.

APPROACH

The Commission, appointed by the ACSP President in March of 1990, began its work in May with a 3-day meeting to design the research and explore the issues. The Commission held meetings with planning educators and with doctoral students and conducted a panel discussion at the ACSP conference. Each member then took responsibility for one of the major research tasks. These included: 1) gathering and analysis of basic data on students and graduates and descriptive information on programs from the schools; 2) indepth interviews with knowledgeable faculty from a group of 10 Ph.D. programs designed to represent a range of types, including most larger programs; 3) indepth interviews with a representative sample of 23 graduates; 4) group

interviews with Ph.D. students at 8 schools; 5) a review of 300 dissertation titles and abstracts between 1980 and 1989; and 6) indepth interviews with a sample of chairs of 21 professional planning programs which have conducted searches for faculty in the last 6 years and which represent different types of planning programs. We also have relied on related research, particularly ACSP's 1990 study "The Recruitment and Retention of Faculty Women and Faculty of Color" which involved surveys of graduates and programs (referred to here as the Ritzdorf report), and the surveys by Conn (1987) and by Browder (1991), covering Ph.D. program characteristics.

OVERALL PERSPECTIVE

The Commission finds that the Ph.D. in planning is a healthy enterprise. Graduates appear to be fully employed in planning or related fields, pursuing careers which take advantage of skills and knowledge they acquired in their Ph.D. programs. They are versatile in the range of work they can do, as they fill needed roles in government, private foundations, and international organizations. They are increasingly sought as educators in university planning programs, and we anticipate sufficient graduates to meet these needs, if current trends continue. The programs themselves are largely satisfying to graduates, and the degree is valuable as a credential for many purposes. The record of completion rates and times to degree is respectable by comparison to many other fields, though it is slower than sciences and engineering.

Planning doctoral programs are affected by many of the difficulties that affect all fields in the 1990's, such as declining financial support, structural mismatches between future needs of university education and the specialties of current graduates, and less gender and ethnic diversity than in the population (Bowen and Rudenstine, 1991). Graduates and faculty have criticisms of the programs, and the commission sees a number of areas with opportunities for improvement as well as many areas where the planning Ph.D. has been highly successful.

Special Challenges for the Planning Academy.

Planning, because of its characteristics as a professional enterprise, poses special challenges to the planning academy and to doctoral students. Planning has thrived by building on its diversity and training its practitioners in a broad array of skills and knowledge. Planning education deals not only with a wide range of substantive issues, but also aims to teach how to practice well. It is a kind of umbrella presenting many perspectives on cities and places, infrastructure, environments, economies and human development. It includes research and analytic methods, theories of practice, strategies of institution building and experiential learning of professional activities. Being a planner requires knowledge, not only of principles, but also of specific contexts. The field has long been inhabited by academics and practitioners with differing world views, methods, and visions of the purpose and nature of planning. At best planners and planning educators and researchers are synthesizers and integrators, flexible in their ability to address many issues.

This breadth is at odds with the tasks of doing a Ph.D., which require focus, depth and discipline. The Ph.D. is oriented to a scholarly community of inquiry more than to a world of action. The university and the traditional conceptions of research in the U.S. are structured

around disciplines and oriented to the advancement of knowledge through sharply focused inquiry. Planning however, is problem-driven and guided by no single paradigm or discipline. Academics and doctoral candidates in professions are torn by conflicting mandates to be practical and action-oriented, yet theoretical and contributing to knowledge, to be focused yet interdisciplinary, and to teach people to do jobs very different from their own. One graduate we interviewed stated the problem:

The trend in academia...is toward specialization and hyper-focus. A group of new masters students who are bursting with enthusiasm and questions about every aspect of the planning field fully expects you to be able to answer their inquiries. Too many Ph.D. students become narrow as they progress through their programs, rather than becoming able to gain the wide perspective that so many years of higher education should bring. The problem is related to the internal oppositions of research and teaching: research forces one toward greater focus; teaching forces you to step back and gain perspective. One is centripetal, the other centrifugal.

As the number of Ph.D.'s in planning grows, the search intensifies to find ways to resolve these contradictions in new models of research, teaching and practice. This report is part of that search.

CHARACTERISTICS OF PROGRAMS AND STUDENTS

Between 1975 and 1992, at least 2081 students entered planning Ph.D. programs, of whom 881 have been awarded doctorates. The number of programs and graduates have been slowly but steadily growing over the period with 71 students admitted in 1975 compared to 113 in 1990. In 1991 the largest number of students thus far--91--was awarded the Ph.D., but in that year admissions overall dipped sharply, suggesting there may be a levelling off or even declining of graduates by the mid 1990's. Average annual numbers of students admitted during the period was 14 per school, but there are wide divergences in program size, with the majority of programs admitting much smaller cohorts. Portland State is the largest supplier of doctorates, with 306 of the graduates. Eight other schools graduated over 100 students, while most others graduated substantially fewer.

Among students admitted to programs since 1975, the median age is 29 years at time of entry, men outnumber women by 2 to 1, and international students make up 40% of the total. The gender disparity is significantly greater among the international students, of whom only 20% are women, compared to 42% of the North American students. The largest group of international students comes from Asia. (Fig. 1) If we take Latin America, the Middle East, Africa and South Asia as a rough approximation of the Third World, students from these areas account for, at most, 20% of the total. East Asian students, are typically not Third World, coming largely from Hong Kong, Japan, Korea and Taiwan, and they account for 16% of the total. For the 1/4 of the U.S. and Canadian admittees for which data were available, nearly 80% were white, 11% were African-American, 6% Latino and 3% Asian- American. While these are not a large proportions, they are higher than in Ph.D. programs in professional fields as a group.

Completion Rates and Times.

The completion rate of students admitted to programs is a widely used indicator of program success, and it provides a powerful way to make comparisons which can assist in identifying problems. The failure of any substantial proportion of students to complete the degree is an issue. These students use a program's resources and their own time, and take the place of others who would get the degree. Though they may gain from the experience and improve their capabilities, low completion rates and long times-to-degree are of nationwide concern because of a looming shortfall of faculty in the 1990's. They are of concern in universities, as administrators look sharply at the figures in these lean budget years, to see which programs are making the most efficient use of resources.

The planning completion rate is in the middle of the range of Ph.D. fields. Fifty percent of all planning Ph.D. students entering since 1975 complete the dissertation within 7 to 8 years. By 12 years the completions level off with over 57% graduated. By the end of our 17-year time period, the figure is 60%. (Fig. 2) Median completion time, which includes only those who do complete, is just under 5 years. This completion rate is higher than rates found by Bowen and Rudenstine, (1992, p 120) in their study of 6 fields (not including any professional schools) across 10 major universities for the 1972-78 cohort. In general humanities and social science Ph.D.'s take longer than professional degrees including planning, while sciences and engineering take less time. Time-to-degree appears to have been increasing in all fields in the last 20 years by at least 20%.

We find significant differences in completion rates and median completion times by subsets of the student population. First, international students complete substantially faster than U.S. and Canadian, with 50% of the total admitted completing in less than 6 years and a total completion of at least 70%. Among U.S. and Canadian students it takes about 8 years for 50% to complete and only about 55% finally graduate.(Fig. 3) Median completion times for international graduate is just over 4 years, as compared to about 5 years for U.S. and Canada. We attribute this difference, as discussed below, to financial constraints on international students and higher incentives to acquire the degree.

Women complete at a slower rate than men, 50% completing the degree in by about 7.5 years, as compared to less than 7 years for men. Median completion times for women are just over 5 years, as compared to between 4 and 5 years for men. Women however, close the gap later, with close to the same proportions among both groups finally getting the degree (Fig. 4). Differences in completion rates and times by gender are to a considerable degree attributable to the high proportion of international students who finish so much faster, but include few women.

We are unable to provide comparative completion rates on U.S. minority students because schools provided so little information on race and ethnicity of graduates.

Younger students, entering at or below age 30, complete at a higher rate than older ones, with the discrepancy growing steadily larger as time passes.(Fig. 5). This pattern may be related to the greater family responsibilities of older students, their higher opportunity costs, and their greater access to professional opportunities, as many enter directly from practice.

Completion rates are lower among students entering with the planning masters than they are among those with masters in other fields, though the discrepancy decreases over time. (Fig. 6) This surprising finding may reflect that disciplinary masters degrees provide students with clearer methods and research questions, helping them to complete faster. It may alternatively reflect a greater proclivity among students with professional degrees to do outside practice during their education.

One of the most notable findings is that completion rates are higher in the eight planning Ph.D. programs which send over 40% of their graduates to academic careers than in those which send less than 40% (Fig. 7). Moreover in these more academically oriented programs, the graduation gap between men and women is closed, with just over 60% completion for both sexes. This may be due to selection bias, to the greater incentives to get the degree, to stronger structure and support systems for students, or to some combination.

Admissions Policies.

No single pattern prevails in admissions policies, though some commonalities exist. Many programs require applicants to have a masters degree prior to admission, and in any case, most students enter with the masters. Schools are divided on whether this degree should be in planning. Three of the ten programs we studied require planning backgrounds, but others admit students with neither experience nor education in planning. Browder found that, of programs using standard quantitative criteria, the lowest acceptable GPA was 2.75 and the highest required was 3.5. All but four required minimum GRE scores, with the preponderance around requiring a score of 1200. Many programs require a minimum TOEFL between 550 and 600.

Some schools choose among applicants by admitting the strongest candidates overall, whereas others try to match admittees closely to individual faculty or to research groupings in a department. Most programs do take into consideration student match to faculty interests. One program actively seeks international students, while some are hesitant to admit them. Some make admissions contingent on financial support.

Program Location and Administration.

The programs differ in how they are administered and where they are located within the university. No one arrangement stands out as most effective because the choice is necessarily related to university practices and to program goals. Some programs are entirely housed in departments which offer accredited professional planning degrees, while others are interdisciplinary, involving faculty from a variety of departments and run by interdepartmental committees. These programs may be umbrellas for Ph.D.s in related topics such as landscape architecture or public policy, along with planning. Some programs emphasize a limited set of planning subfields, while others permit students to pursue a wide range of topics. Some have special strength in the international topics.

While each arrangement has advantages, each also presents management problems. The Ph.D. program typically competes for resources with the professional masters program or with

other departmental programs. Most faculty have primary teaching and administrative responsibilities outside the planning Ph.D program. In the interdisciplinary programs there may be ambiguities in program goals and in how admissions, curriculum, and hiring should be controlled, as well as questions about the market for graduates. Programs sometimes fail to get systematic attention or priority, either because they are residual to a Masters program or because they fall between the cracks of two or more formal departments.

Program Size.

Most Ph.D. programs have small numbers of students. The figure of 14 students per year per program is highly skewed by a few large programs, and it is currently declining. Of the ten we studied, one admits less than 5 students per year, 8 admit 5-10 per year and one admits more. An admissions rate of 8 to 10 a year, translates into approximately 30 to 35 students in residence. Some programs in our sample are reducing admissions, partly because of their decreasing ability to support students financially. Only one school of the ten is contemplating an increase in admissions.

Requirements.

Overall. Formal requirements for degrees vary considerably across programs. Many must conform to rigid university requirements for the doctorate, while others are quite free to design Ph.D. programs as they wish. Faculty were in agreement that to receive the doctorate, students should be able to demonstrate three things: command of a field of specialization, mastery of research methods appropriate to that field, and ability to conduct independent research which makes a contribution.

Programs vary in the amount of flexibility they offer and in the forms of examination. Conn (1987) found that 16 of the 21 programs surveyed specified particular courses or clusters of courses from which selections should be made, while 5 tailored programs individually. All but one required a comprehensive or qualifying examination. Browder's more recent study (1991) of 16 programs, shows that 12 require both oral and written preliminary examinations, while all but one require written examinations. All but one allow flexibility in examination content, either as questions tailored to student needs or as choice among questions students must answer.

Planning Theory. Nine of ten programs in our study require an advanced planning theory course, and several offer a seminar on planning practice. Typically there is a theory examination, occasionally with waivers for those with high grades on the course. In Conn's 1987 study, nine of 21 required a core course in planning theory, suggesting there may have been an increase in requirements for planning theory in recent years.

Methodology. Most programs have methods and/or research design requirements, but these differ. Some require as many as three specific courses, while several others allow students to follow different methodological tracks, according to their specialization and with agreement of their advisors. Browder found 7 of 16 programs required examinations on research methods, while Conn found 13 of 21 requiring at least one course in methods. Several programs report considerable internal disagreement on what constitutes a legitimate set of required areas of methodological competence. Some require a research paper in the first year, perhaps coupled with a research colloquium.

Breadth of Knowledge. All programs we studied encourage and test breadth of knowledge. Typically students are expected to take 2 or 2 1/2 years of courses across several fields and then they are given a general examination. Several programs require students to be examined in a minor field or require faculty from other departments to be on examining committees.

Specialized Field. In all ten programs students are expected to master a specialized field within the department. Typically this is done by a combination of course work and individual study with faculty members. A specialized examination is usually offered by a committee of faculty with whom the student has worked most closely.

Dissertation. To shorten the time-to-degree and assure students have a well thought out proposal, many programs include an examination on the prospectus in the qualifying examination although most, according to Conn, require some type of review of the prospectus. Programs in other fields which include the prospectus in the qualifying exam tend to have shorter times to degree (Nerad and Cerny, 1991). Conn found all but two programs required a formal defense of the dissertation. We found this defense to range from a discussion with the dissertation committee to an open general examination. In a few programs the final decision is left to the dissertation committee without formal defense.

Gaps in Programs. In our interviews we identified no organized program for research training other than seminars on research methods. Similarly we identified no systematic efforts to teach students how to teach. Programs assigned individual students to advisors, but did not assure that students had mentoring in the broader sense we discuss below.

Students

Quality. Ph.D. students in planning appear to be of high quality. Applications to admissions ratios range from 4:1 to 8:1, according to faculty estimates. Entering students often have experience; they typically have masters degrees; and their median age is 29. Their undergraduate degrees range widely across all fields of study, with Architecture the highest proportion at 13% and the next largest, economics and political science, each at only 6%. Of the 2081 admittees, at least 530 have masters in planning and 441 have other masters, some in addition to the masters in planning. The others either have no degree or we have no information.

Program faculty regard the strengths of the students to be their maturity, social awareness, and sophistication in understanding of the world and how it works. They tend to have wide-ranging interests and the capacity to integrate understandings from several disciplinary perspectives. From the faculty viewpoint, common weaknesses of the students lie in their difficulties in framing researchable questions, in their preparation in formal methodologies, and in their writing skills.

How Students Select Programs. The most important way that students get information about Ph.D programs is through the faculty in their masters programs. They also rely on personal networks and some supplement the word-of-mouth assessment by visits to 3 or 4 schools, where they meet with potential advisors and talk to the students.

Motivations. According to our interviews with current students and with graduates, most enter Ph.D. programs without having decided whether to pursue an academic or nonacademic

career. Those with planning degrees tend to regard the Ph.D. as a chance to acquire greater depth than was possible in their professional education. Those with degrees in nonprofessional fields tend to see the Ph.D. as providing the chance to work on real life problems in an interdisciplinary way and to improve their job prospects. They are interested in the program's action orientation rather than as preparation for an academic career. Students with a clear orientation to academic life on admission are in the minority. During the course of the Ph.D., many students decide to pursue an academic track, in part because faculty seem to expect it. To quote one graduate respondent "Unless you were looking for a an academic job, you weren't a real person." Interviews with faculty suggest that they are not aware of how common this uncertainty about career paths is. They tend to assume that most students have come to get the skills and credentials for teaching and research.

International Students. The proportion of international students admitted has grown from 23% in 1975 to 46% in 1990, and in some years international students have accounted for more than half of admissions (Fig. 8). Given greater graduation rates of these students, they are growing even faster as a proportion of graduates. As noted above they are predominantly male; the largest group is from Asia, and probably less than half are from Third World nations. Forty percent of international graduates have returned abroad.

The planning Ph.D. is particularly attractive to international students because it is offered in few universities outside the U.S. The Ph.D. moreover has a high status in many developing nations--probably more so than in the U.S.-- and this translates into important job qualifications. International agencies and donor foundations, like the World Bank and Ford Foundation, which are destinations for many of these students, de facto require the Ph.D.

Considerable anecdotal evidence suggests that international students do not necessarily select the programs that have the strongest internationally oriented faculty or curriculum. Their information about programs often comes through personal networks, and their choice may be determined by where they will have friends and support systems, rather than by which program best fits their needs. This pattern can result in pressures on programs to provide more international curriculum and can overload international faculty with advising. We note that admissions committees often have difficulty assessing international students who have not attended U.S. universities because of differences in grading and in faculty reference letters, as well as because of language and writing difficulties.

Faculty and Student Concerns

Faculty Concerns. Faculty's most commonly voiced worry is about the quality and contribution of doctoral research. Students have trouble, they say, defining interesting research questions and designing appropriate research. They wonder if graduates are making important intellectual contributions or writing books and articles that influence the field. They are concerned about how to teach qualitative methods and worried because many students take on research requiring such methods without preparation. A second area of faculty worry is that course work and advising are not well suited to the needs of international students. A third question they have is whether students' programs are well matched to the job market. Finally faculty worry that students' need to work so many hours to finance their studies is interfering with the educational

experience.

Student Concerns. Students, on the other hand, express above all, anxiety over which bodies of knowledge they should master. This may be partly because their own programs are self-designed in a field that is broad and interdisciplinary. But even the common topic, planning theory, tends not to have a well-defined content (Klosterman, 1990). Students' second, and related, major complaint is that they have insufficient and unreliable mentoring. They want to be interdisciplinary and holistic in their approaches to problems, and they choose planning in part because of its flexibility. Yet they often end by seeking well-defined tracks within a program, and they may rely on one primary discipline (often economics) to reduce the anxiety over what they need to know. If they do not, they may get enmeshed in difficulties in trying to develop research questions. If they do focus on one discipline, they miss the point of why they came. In addition to these worries about the content of their studies they also worry about how to combine in their careers their interests in research, teaching, and practice.

Divergence of Faculty and Student Concerns. Faculty and students are worried about quite different questions. Neither group mentions the main issues that concern the other. Students did not express anxiety about their dissertation research designs, nor did faculty seem troubled about their mentoring efforts. At the very least, this finding suggests there is poor communication among faculty and students.

The Lack of Ph.D. Level Courses. All groups do share a concern about a lack of courses specifically tailored or sufficiently advanced for Ph.D. students. No program we studied offered a Ph.D. course other than a seminar in research strategies and perhaps a planning theory course. Other courses are shared with masters and other students. Because of the small size of Ph.D. cohorts, this situation seems unavoidable, but interviewees often commented on the superficiality of much of what they were taught in masters courses they regarded as too introductory. One commented "Programs are too willing to let students know *about* things rather than how to do them." Alternatively doctoral students enroll in individual study programs with faculty members. Many faculty consider such study to be an inefficient and unreliable way of teaching. It can be a considerable burden on some faculty in addition to their normal teaching loads.

FINANCIAL SUPPORT

While we were unable to obtain data to quantify trends in financial support, no one questions that this support relative to costs of education is declining. Financial aid and fellowships provide a lower proportion of support than in the past, as these sources decline and tuition increases. Students rely increasingly on jobs as teaching and research assistants, but these typically provide insufficient support. Students work more and more hours each week, and some take long leaves of absence to make money. The problem is particularly serious for the more mature students, who often have family obligations and for international students whose opportunities for work are largely limited to the university. One consequence is that Ph.D. education is taking longer and some students are dropping out altogether. While students seem to

be able to work outside while completing course work, it is particularly difficult during the writing stage of the dissertation.

In response to the financial problems, programs have adopted a number of strategies, most of which have programmatic consequences. Many have reduced admissions to assure that financial support is concentrated on fewer students. For example MIT now admits 5-8 students per year, down from 15-20 in 1980. Some programs have shifted funds from faculty salaries to teaching or research assistantships. Still others work harder to maintain funded research and perhaps tie admissions decisions to students' abilities to work on these projects. One program has made a conscious effort to recruit students from abroad who have corporate or other scholarship support. This has skewed enrollments in the direction of urban and development economics. At least two programs indicate they now avoid admitting students, particularly from abroad, who have little possibility of covering part of their educational costs through personal resources. Finally some programs are encouraging doctoral students to find outside work in nonprofit research institutions or consulting firms.

Several faculty point to the likely effects of the problem. Admissions are likely to be increasingly skewed toward people studying currently funded topics, such as transportation. While some students move faster through the system, they may be less inclined to speculate, try new avenues of work or explore new fields. International students particularly, who cannot take leaves of absence to work in the U.S. and who fear leaving the country without evidence of financial security needed to reenter, may do secondary data analyses for their dissertation topics. This means they do not do the more original and meaningful research involved in field study in their home country. Overall the financial problem is affecting the types and subjects of dissertation research, resulting in faster completion rates for some students and much longer ones for others.

DISSERTATIONS AND TOPICS OF SPECIALIZATION

The dissertation is typically the first major piece of independent research in a student's career. It can play a significant role in setting his or her intellectual directions. It may be published in whole or part. It may never be followed up at all. Graduates we interviewed indicated that learning to do independent research was their most important educational experience. It gave them confidence as well as important skills for their later work.

An analysis of dissertation topics provides a good indicator of the subject matter interests of students over time. We therefore did an analysis of student specializations using dissertation titles for all students who had completed and, for students who had not completed, using information provided by programs on students' interests. Though our classification placed many Third World topics under subject matter areas, even so it was the largest area of interest, 18%, followed by social policy, public policy, urban and regional theory, energy and environment and economic development and housing and community development.

A parallel analysis of 311 dissertations in the 1980's based on the list of names obtained for the Ritzdorf study, categorized dissertations by the populations on which they focused. In this analysis we found 4% were on women, minorities or aging, while only one dealt with people with disabilities and none with lesbian/gay issues. Most significantly 23% (71) dealt with developing countries.

Trends in topics show significant changes in the period. Social policy and public policy as areas of interest declined precipitously, while housing and community development declined moderately. A noticeable jump in the interest in land use occurred in just the last two years (Fig. 9). Third World interest remains high, but energy and environment and urban and regional theory have caught up in the last 5 years as areas of specialization (Fig. 10).

We note curious differences in graduation rates by area of specialization. Over 90% of those with methodology topics completed, along with over 80% of those with third world topics, as opposed to, at the other end of the scale, about 50% of those in public policy or urban and regional theory (Fig. 11). These differences seem likely to be driven by the job market opportunities, which provide differing incentives for completion. (See below.)

When we tried to classify the dissertation abstracts we obtained by whether they were theoretical or practice-related, academic or policy-oriented, we discovered we could agree neither on the categories nor on how to classify individual abstracts within categories. Our problem mirrors the dilemma of the field and is an indicator of how we as faculty have difficulty advising students about appropriate research topics. It also suggests that concerns of faculty about the "relevance" of dissertations (see below) may mean different things to departments or individuals.

To explore whether dissertation research among planning Ph.D.s leads to publication of books and articles and to assess research productivity of graduates, we searched indexes such as Social Science Citation Index and the Library of Congress National Union Catalogue for a small sample of graduates of the 1980's. A brief comparison of publications listed on curriculum vitae of graduates revealed however that these reference materials provide inadequate documentation of graduates' research productivity.

It is not clear how students choose topics. Graduates repeatedly mention funded research as a key ingredient in the recipe for successful doctoral work, though they do not necessarily do their dissertations on the projects in which they are research assistants. The series of events that lead to the discovery of a dissertation topic may be almost random, though it often emerges from a student's personal experience. One graduate whose dissertation deals with occupational health policy, gave us a typical example. "When I was a masters student, I heard a talk that addressed an occupational health problem that had affected my brother. From then on, I have been interested in and working on occupational environmental issues." Problematic or creative work experiences lead other students to their topics.

Anecdotal evidence suggests that doctoral students from planning are at a disadvantage in the competition for funding of doctoral study by federal agencies, such as NSF or private foundations because of the ambiguity of planning's research paradigm. Dissertation proposals in planning seldom have the analytic rigor or the theoretical clarity of proposals from economics or certain other social sciences or engineering, and these criteria often weigh heavily. The interesting and important problems in planning typically require interdisciplinary inquiry and do not lend themselves to standard methodological approaches with well established exemplars of research.

THE MARKET FOR PH.D. GRADUATES

Pattern of Employment.

At least 31% of total graduates in our cohort are now employed in academic positions. The remainder are employed widely across all levels of government, international organizations, private consulting and university administration or research (Fig. 12). Of the 429 nonacademic graduates for whom we have information, only 3% are employed in private, nonplanning activities. The total number of planning Ph.D.'s graduating in 1990 who are employed in academic positions is nearly double the numbers of 1979 graduates, though the proportion of total graduates in academia has remained relatively constant for each cohort (Fig. 13). There have been fluctuations, however, with nearly 40% in academic positions from the cohorts of 1979 and 1980, a substantial dip in the percentage in the early eighties, and a higher proportion of academic placement among the most recent graduates.

Our data suggest that at least 45% of academically employed graduates are teaching, not in planning, but in related fields, with about 55% in planning education. This figure for nonplanning academics, which is substantially higher than the commission anticipated, includes professors in almost all fields, with geography most common (14), but with 5 to 8 teaching in each of several fields including public policy, economics, public administration, sociology, architecture, and civil engineering, and 2 to 4 in natural resources, business, public health and even humanities. We cannot tell if these nonplanning academics are disproportionately from the interdisciplinary doctoral programs, but we find the range quite remarkable, including as it does most professional fields and several social science disciplines. These data also indicate that a relatively small percentage of total graduates is actually teaching planning.

When we look at subsets of the population, sharp differences emerge. Most notably, men graduates are significantly more likely to hold academic jobs than women, with only 25% of women currently in academic jobs, compared to 37% of the men. Of the international graduates, those who return abroad are more likely to be employed as academics than those who did not. Our statistics do not provide us information on the degree to which minority graduates go into academic positions.

Finally there are significant differences in the proportions who go into academic positions from different programs. Berkeley (55%), Florida State (50%), Princeton (50%), Michigan (49%), Cornell (46%), Washington (40%), Harvard (40%), and North Carolina (40%) have the highest percentages of graduates in academe, with the next highest percentages at 30% or less. Because of the size of their programs, Cornell (41), Michigan (35), and Berkeley (32) have contributed the largest numbers to the academic pool.

Career Paths.

Most graduates, according to our interviews, weigh both academic and nonacademic job opportunities. Some begin academic careers and later move to foundations or administrative work in the University, or are attracted away to higher paying careers in consulting. Others, unable to find a satisfactory academic job right away, take a nonacademic position for a time. Some move from one planning program to another, trying to improve their situation. Others decide early on to follow a nonacademic, practice-related track or to work in a research

foundation.

We get a glimpse at the logic of career paths through the words of graduates. The "powerful socialization process" in graduate school switched one woman from her original ambition of postdoctoral consulting to academia. "Applying for a (non-academic) job was NOT acceptable; I came to understand that research is done in academia" Another, who works in regional government and is one of the least happy respondents, sees as a major problem of planning programs, their "disdain for what practitioners do. But it's mutual." A third graduate chose practice because: "I don't want to kill myself for tenure, and that is part of the reason for not going into academia." A fourth pattern is represented by the graduate who was denied tenure in her first academic appointment and currently divides her time between consulting and a part-time appointment at a state university.

Though graduates expressed dissatisfaction with the academic opportunities, their range and location, and with the low pay and long hours, we sensed greater satisfaction overall from those with academic jobs than from others. Those who chose nonacademic jobs often did so because of locational preferences or constraints based on partners' job needs and because of the higher pay in the nonacademic jobs, rather than because they preferred the work. A number of academics indicated seriously contemplating leaving academic life for less demanding, more lucrative work elsewhere. The Ritzdorf survey of 120 graduates found only 25% of those with nonacademic jobs who said nonacademic career options were the most attractive. Twelve percent had applied for academic positions, but were not hired, while 10% said no teaching job was available. Twenty-seven percent were employed in the past in teaching but left because of dissatisfaction with the job such as the location or relations with colleagues.

These findings suggest that academic jobs can offer a more rewarding work environment than many government or private sector jobs, despite the lower pay and long hours. But there are relatively few planning schools across the country. Many are small and located in isolated college towns where spouses often cannot find work. Teaching demands may be heavy in some schools, and opportunities for research and funding limited. Thus any individual may not see him/herself as having much choice. Yet it appears from both faculty and graduate interviews that most graduates who want academic jobs and are prepared to move do find these jobs after perhaps one to three years of search. Those who find jobs that fit their locational needs seem to find them satisfying.

The Market for Planning Educators.

We estimate that the supply of planning Ph.D.'s for academic positions in planning is sufficient to meet the demand in the near future. There may however, not be enough of these positions to satisfy the graduates' demand. This shortfall seems likely to be made up by academic positions in other fields. There are some structural problems for planning education--mismatches in the characteristics of the supply and demand for Ph.D.'s. in planning schools by subject matter areas, locations, and gender/ethnic mix.

Projections. Our projections of academic jobs in planning suggests there will be at least 75 faculty positions to be filled in the next 5 years, or 15 per year. This does not count openings

in related academic fields, which are too varied for us to assess. We anticipate about 150 retirements in planning education in the period (people now on faculty who will be 65 or more in 5 years), of which half are at least 50% time in planning and of ladder rank, and the other half are affiliated faculty, who either have primary positions in other departments or who are practicing planners with regular teaching obligations in planning. We have conservatively assumed that of the part-time positions, none will be filled by planning departments with ladder rank faculty. We have no way to quantify other factors which will affect the total, such as resignations or other losses of faculty, program growth or decline, or the effects of accreditation guidelines on hiring practices. PAB data for the 25 or so schools submitting accreditation applications in 1990 and 1991, shows that 25%, or 97, of 384 faculty currently hold the planning Ph.D., while 20% hold a Masters in planning, and the remainder Ph.D.'s in other fields. The Ritzdorf survey suggests the proportion of faculty hired with the planning doctorate is growing because 41% of those hired between 1980 and 1988 had the planning degree. There is indication also from the chairs' interviews that this proportion could increase if the graduates are appropriately qualified in the needed subject areas. Most of the unmeasured factors would tend to increase the projected number of teaching jobs in planning beyond 15 to perhaps 20 or 25 annually for the next 5 years.

Even if half of the future planning academic jobs go to planning Ph.D.'s, as opposed to those with other degrees, only about 12 planning Ph.D.'s will be hired in planning programs annually. The average number of graduates on the other hand, has averaged 78 per year in the last 5 years. This number will increase in the short run because annual admissions were significantly increasing from 1987 to 1990. If trends continue at least a third or 25 will seek academic positions (Fig. 13). Thus from the graduates' perspective, the supply of planning academic jobs will be limited in comparison to the demand. If 45% of graduates continue to find nonplanning academic positions, then graduate demand for academic jobs will be largely met, with perhaps some difficulty in the short run with the larger cohorts of graduates. This does suggest that Ph.D.'s who wish to teach will be well advised to prepare themselves for related fields as well as planning. It also suggests that overall numbers of doctoral students in the pipeline may be about right, all else being equal in future.

Mismatch By Subject. Using the Graduate Guide to classify the subject matter of soon-to-retire faculty and to count retirements by field along with data on the numbers and trends in subject interest of students and graduates (Fig. 14), we find a number of mismatches between the projected demand for graduates and the supply. Our estimates suggest demand relative to supply will be low for graduates in social policy and possibly housing and regional development. The latter fields are now taught by a large cohort of faculty in their 40's and early 50's, unlikely to retire soon. The supply of graduates in these areas has been ample. We do not anticipate positions will be filled in social policy because of declines of social planning activities at the state and federal level. Although some programs may alter direction to accommodate growing international interests in planning, with large numbers of graduates focusing on third world and other international topics, there is also ample supply of graduates for these positions. We cannot estimate the demand for graduates with international specializations in academic positions abroad.

The most notable subject mismatch is that we estimate 33 of the 150 anticipated retirements will be in land use and another 20 in urban design. On the other hand only 4%, or 85, of those admitted to programs during the period have a physical planning specialization of any

type, and many of these have not yet completed their degrees. Hibbard found only 6 dissertations of 300 in the 1980's in land use and another 11 on the built environment, while the programs report only 36 graduates thus far in land use, with few in urban design. Physical planning represents a growth area for practice across the country, and land use is a topic where Ph.D.'s from other fields do not have expertise and cannot substitute. Faculty engaged in searches for job candidates have complained of this shortfall, and our data indicate that those with specializations in land use have been hired as academics at a greater rate than any other (47%). In urban design demand also outstrips the supply of graduates, and programs typically seek graduates with design skills who can teach skill-based studios as well as conduct research. While they may prefer a Ph.D. degree, they are unlikely to find many doctoral graduates who have the requisite skills.

The mismatch in physical planning is structural and will take some time to rectify. Land use has typically been taught by practitioners, rather than those with Ph.D.'s, and the literature has been highly practice-oriented. As a result few doctoral students have pursued this subject, but have instead been attracted to the departmental theoreticians in regional development or social policy. Only recently have a few planning programs acquired Ph.D. faculty with major focus on land use and prepared to supervise dissertations. Part of the reason for the shortage of urban design Ph.D.'s is the difficulty in persuading those educated as architects or landscape architects, who have typically already spent 7 or more years studying, to embark on a doctoral program. As physical planning and design positions come open and masters programs are faced with only a small selection of candidates, they will not have ideal choices. Most programs regard physical planning as central and are unlikely to deemphasize this topic. Thus the scenarios are several. Programs may continue to rely on practitioners and adjunct faculty for these courses. They may try to get existing faculty or faculty candidates to retool. They may redefine the positions to fit the market, replacing for example a land use planner with an economic development specialist, or an environmental planner.

Areas of probable growth in academic demand for graduates include transportation, because of increased planning resources in this field, particularly since passage of the Intermodal Surface Transportation Efficiency Act; in methodology and information systems; and in energy and environment. Recent events in Los Angeles and elsewhere may make community development and inner city issues in greater demand. Few planning Ph.D.s as yet have specialized in environmental planning, and so people from other fields are often hired for environmental positions. The other specializations have not often been advertised categories in recent years so we cannot estimate the numbers that will be sought. Graduates in most of these areas are likely to find well-paying nonacademic options if academic ones do not open.

Mismatch in Breadth Needs. The second mismatch is due to the difference between the scholarly enterprise and the professional education task. Doctoral education encourages students to develop narrowly focused deep knowledge on one or two subjects, whereas the typical professional masters program wants its faculty to be generalists. Most professional planning programs have from 5 to 8 faculty, each of whom must necessarily teach several basic courses. The requirement for breadth in Ph.D programs is largely insufficient to meet this concern. It is not clear from our interviews whether Ph.D.'s who also have the planning masters are broadly enough prepared to be educators of professionals as these degrees typically involve specializations. Chairs indicate that in hiring to find breadth they pay attention to both masters and bachelor's degrees of candidates.

Mismatch in Locational Requirements. A third mismatch is between the preferences of graduates and the locations and characteristics of programs. The smaller and more isolated programs may get only 20 to 30 applications for a faculty position, whereas the larger and better known programs in metropolitan areas may get 80 to 150 applicants for faculty positions. The causes for this discrepancy are several. One is the "trailing partner" and the difficulty of relocating in an area with few employment opportunities. A second is that graduates themselves often prefer an urban environment and the practice and research opportunities it offers. Another is that, during the course of the Ph.D., graduates may become attached to a region by personal and professional ties. Finally some programs have large teaching loads and meager university support. Even a small and little known program can, however, attract excellent faculty if they can provide a supportive and collegial working environment, as some graduates testified.

Mismatch in Supply and Demand for Faculty Women and Faculty of Color. Both women and minorities seem to disappear before even applying for faculty positions. While we have insufficient data on race and ethnicity of graduates to provide numbers, the gender-based discrepancies are startling. Only 33% of doctoral students are women to begin with, and this group completes the degree more slowly and in somewhat smaller proportions than men. Then a significantly smaller percentage of women graduates ends up in academic positions, 25% for women vs. 37% for men. Thus the gender gap is closing at a snail's pace in academic positions, where women represent only 17% of all planning faculty. This is in a context where approximately 42% of masters students are women.

Though approximately 20% of students admitted to doctoral programs are domestic minorities, the proportion of minority graduates thus far appears to be considerably lower, partially because many entered recently. Grigsby, relying on the American Planning Association's survey, Annual Planning Education Trends Report of 1985, estimated ethnic minorities to constitute only about 9% of faculty. The Ritzdorf report found approximately 14% faculty of color.

Program chairs complain of their difficulty in finding enough women or minority candidates for faculty positions. We obtained affirmative action search records for a few programs which provide full data on gender and ethnicity of applicants, and found a range of results. At one major program a search for a faculty member in developing countries yielded 18 women out of a pool of 78 (all women of U.S. origin) and 7 U.S. minorities. At another program a search for two positions yielded 30 applications, including only one woman and one U.S. minority. At least two programs, however, found closer to 50% women and 30% minorities in their search. One of these however had opened the search to those without the Ph.D. This discrepancy also may be explained by findings in the Ritzdorf study that indicate some women and minorities apply only to places where they think the climate is hospitable. Such programs may also do more active outreach.

Various explanations may be offered for why women are entering doctoral programs at lower rates and being hired as academics at lower rates than men and for why the number of minority graduates remains low. While direct discrimination against members of these groups as students or faculty candidates may play a role, we believe the factors are more complex and subtle. The Ritzdorf report findings and our own graduate interviews indicate that some women and minorities find the climate unsupportive or even hostile in some departments. It seems likely that women are more burdened by family and household responsibilities than men and may therefore opt for careers with less onerous demands than the academic tenure process.

Universities have only recently begun to accommodate junior faculty's family responsibilities. Though we found both men and women who claimed they had good mentoring, mentoring overall may not be evenly distributed among students by gender or ethnicity. Mentoring is not evenly distributed if students follow their normal predilection to choose mentors with similar backgrounds to their own, since there are so few women and faculty of color relative to students. Finally it is certainly possible that not all students are equally counseled to enter academic life.

HOW PLANNING PH.D.'S DO AS FACULTY CANDIDATES

Between the 1985 and the 1990-91 recruiting year the 21 programs whose chairs we interviewed mounted approximately 87 searches. Some seemed generally pleased with the pool, while others felt it was "thin." Some programs had to face their competitive disadvantages of low salaries or heavy teaching loads. Programs of quite different characters have confronted the possibility of hiring practitioners without doctorates for posts in urban design and physical planning. With few exceptions, however, they backed off and chose a candidate with a Ph.D., or on the road to one. Anything else was "unfair" to the new faculty member (presumably because of the disadvantages he or she would face in the tenure process) or would "diminish" the program in the eyes of university colleagues.

Some program chairs, the "loyalists," described themselves as eager to hire faculty with doctorates in planning, though open to candidates from other fields. The "cosmopolites," on the other hand, spoke of themselves as neither biased for nor against planning Ph.D.'s, but interested in the best candidate. None of either group, however, described a search where planning Ph.D.'s did not appear prominently among finalists. Loyalists and cosmopolites alike described themselves as searching for recruits who wanted "to make things better" or to "guide events" or simply to "plan."

This shared orientation highlights a significant difference in the views of the two groups. Loyalists critique planning Ph.D.s as planning professionals; the cosmopolites tend to critique them as planning scholars. The loyalists complained that many of the new graduates were "too narrow." They were not prepared to teach across a broad range of the core curriculum. Loyalists were disturbed that many of the candidates appeared to have little sense of the world of planning practitioners, that they did not appreciate the centrality of the regulation of land use and physical development within the profession, and did not know how to construct complex plans. Several wondered ruefully whether anything could be done about these failings because the teachers of these Ph.D.'s suffered from the same limitations.

While the cosmopolites might share pieces of the first critique if pressed, they did not volunteer such views. Instead, while they were characteristically pleased with their own recruits, they criticized others in the pool for lacking a personal intellectual identity. These candidates' dissertations seemed ad hoc rather than opening statements in what would probably be a long voyage of discovery. At the interviews they could not answer the question, "What are you really about?" Simultaneously, they had not internalized the discipline of a scholarly community. They were not very adept at the methods of either field research or analysis and had little sense of how scholarly communities shape the form and content of interesting problems and cogent arguments.

The complaint was common, if not universal, that many candidates made a poor showing in the interviews. Presentations were particularly noted as poor. "Can't the programs rehearse the

candidates?" plaintively asked one chair. This problem too, seems related to the inability of many graduates to project their identities.

Looking at the search and interview process from the candidates' perspective, we get another picture. First, while some candidates searched actively, a smaller set simply fell into a job, perhaps in their own program. Some credited faculty mentors with networking help that got them jobs, whereas others were on their own and were quite resentful. Some, particularly those who ended in nonacademic positions, were dissatisfied with the search process. They thought the academic market was thin. One respondent noted that the interviewing process "exposed planning programs for "their weaknesses." Programs he said, were not well defined and were not sure what they were looking for. They were not giving a good sense of themselves and gave off confused messages.

The Ritzdorf report also surveyed Ph.D.s about academic job interviews and found a mixed response. While some reported positive experiences, where faculty were welcoming and interested, critiques included poor salary, uncomfortable salary negotiations, vagueness about job responsibilities, poor junior faculty facilities, and unreasonable demands on junior faculty. Some women and minorities reported negative experiences which they associated with their ethnicity or gender. Fifty-three percent thought they were interviewed at some point because of their race or gender, and 19 percent thought they were turned down because of race, ethnicity or gender, though 59 percent did not think race or ethnicity made a difference. Quite a few reported insensitive comments made to them by program faculty relating to gender or ethnicity. Both groups noted their preference for departments with a positive climate for diverse faculty and sought information from friends on this before even applying for a position.

On the other hand, eight of 68 white male respondents believed they had experienced reverse discrimination. One said "In general most places seem falling over themselves to hire qualified women and minorities...As a white male I was a beggar." In an incident reported to us a white male faculty member told a candidate he had no chance because he was a white male. This same faculty member however had already told others this candidate was actually unqualified, and another white male was ultimately hired. This incident suggests how difficult it may be for a candidate to know the degree to which race or gender actually plays a part in a hiring process.

Comment. There is a mismatch among the perceptions of the players in the hiring process and considerable blaming going on. Programs find the candidates lacking, and candidates find the programs lacking. Faculty think the applicant pools are thin, and Ph.D.'s say the same of their choices. Programs have trouble finding enough minorities and women, but faculty seem unaware that applicants avoid programs because of the climate they are reputed to offer. Moreover it is unclear that programs are making the necessary efforts. The Ritzdorf report showed that many program chairs were not knowledgeable about affirmative action procedures, and respondents in both that study and our own said faculty make sexist comments or comments indicating that positions will be available only for minorities or women. Such comments convince white males that there is reverse discrimination, but fail to convince women and minorities that they are getting a fair review. Instead they feel put down and offended.

PLANNING PH.D.'S AS PLANNING FACULTY

Characteristics of Faculty.

The figures tabulated by the Planning Accreditation Board for the reporting period of 1987-1992 for the approximately 60 schools applying for accreditation indicate there are 419 full time faculty and 283 part time in this group of programs. Of the total, 233 or 31% had the Ph.D in planning, 331 or 47% had the Ph.D. in disciplines other than planning and 146 (20%) had a Masters degree in planning. The Ritzdorf survey of planning programs with 77 schools responding out of 115 in the Graduate Guide, including many which are not accredited, found 33% of faculty had Ph.D.'s in planning, while 36% had Ph.D.'s in social sciences, engineering or architecture, and 14% were without the Ph.D. A review of the Graduate Guide suggests that many of the faculty with Ph.D.'s in other fields are joint appointments with other departments, and that those with planning Ph.D.s are normally full time.

Of the 395 faculty who were full time in planning programs in the PAB data, 17% were female, 14% were nonwhite, and 3% were nonwhite female. Among part-time or adjunct faculty, the proportion of women is higher, at 27%, and proportion of nonwhite is the same as for full-time, at 14%. The Ritzdorf report in 1988 found comparable data, though that study included nonaccredited programs, with 17% women and 14% minority faculty in planning programs, with African- and Asian-Americans each representing a little more than 5%. Grigsby, using 1985 data, noted that if predominantly black schools were excluded from the count, the average number of ethnic minority faculty per school was .44. While several schools in 1985 had 4 or 5 minorities on their faculties, 22 had none.

The Junior Faculty Perspective.

The job of a teaching/research professor is quite different when seen from the inside than it is from the outside. Our graduate respondents who were in academic life were amazed at how professors really spent their time and how much of it they gave to their jobs. The hard realities, well-known to the insiders, oftentimes came as a blow to the uninitiated. Our respondents claimed to work hard--50 to 80 hours a week. They cited difficulties managing their personal time budget as perhaps their most intractable problem. The problem begins in the Ph.D. program, and many respondents vainly hope that it will subside when they get tenure. Few are prepared for the rigors of the profession, and Ph.D. programs praised for their quality were damned for failing to prepare graduates for the practical side of academic life. Graduates complained of not knowing much about publishing, about what would be judged as meritorious work, nor what would be expected to gain tenure.

Many cite the difficulties of the first year of teaching a set of courses, daunting chores of getting lecture notes together almost from scratch, the initial sacrifices that must be made to do research, and the challenges of advising about a curriculum as new to them as to their advisees. Graduate school gave them little preparation. One respondent who found teaching his favorite activity, noted it requires enormous amounts of psychic energy and "advising is an exhausting experience."

Responding to a question about teaching future teachers how to teach, one graduate said, "Most faculty at _____ would sneer at such a thing." Another graduate complained about her program, "Students are never trained to teach, nor are they adequately trained on how to write and publish articles." Her complaint was common. Teaching assistantships sometimes provided valuable training, although all too often they involve simply grading papers. Helping a faculty member design a course and giving some lectures is more to the point. At least however, one

graduate noted, a TA experience allows you to "walk through a course and gives you a first draft" [of a course outline].

Judging from our interviews with chairs, many try to fill this mentoring gap once a new faculty member is hired, though our interviews with graduates suggest these techniques are insufficient. These are not so much organized mentoring programs as individual approaches followed by some chairs. These include 1) coteaching with new faculty for a year or two; 2) faculty development grants to junior faculty; 3) lightened teaching loads for the first year; 4) assignment of mentors to new faculty to help with research funding, publication planning, and teaching; and 5) extra funding for conference attendance. One graduate respondent pointed to editorial support as a plus at the school where he presently teaches -- "a good thing considering the poorly developed writing skills of most junior faculty."

Most planning Ph.D.'s in academic life express a desire to practice. Some note its value to teaching and others to research. Those we interviewed, however, seemed to do relatively little practice. This is unsurprising given the rigors of teaching, advising, administration and research in academic life.

The Hiring Program Perspective.

Program chairs may assign new faculty to core courses to integrate them quickly into the program. In one case, to introduce new faculty to local planning they were involved in an extension program and, in another, they were bused around the state to meet practitioners. Chairs made a variety of proposals to us on how the field could better assure that doctoral graduates can teach practitioners. These include: 1) requiring students to have an initial planning degree or close substitute before entering Ph.D. programs; 2) involving doctoral students in studios or other courses that develop plans; 3) revitalizing the "neglected core," land use and physical planning and getting doctoral students to participate; 4) requiring doctoral students to have planning experience before or during their programs; 5) encouraging doctoral students to cultivate two or three areas, rather than just one, in which they could teach; 6) introducing students to teaching while in graduate school; and 7) assisting doctoral students in relating their scholarly concerns to those of planning practitioners.

Both program chairs and graduates acknowledged that advising and administrative loads fall more heavily on women, minorities, and international faculty. With the proportion of faculty in these groups so much smaller than in the student body, the problem seems inevitable. Students tend to seek out faculty with whom they feel an affinity. This problem of differential loads, in combination with women's typically greater household and child care responsibilities, places an exceptional burden on some women. This factor seems likely to account in part for difficulties in recruiting or retaining faculty women.

GRADUATES' ASSESSMENT OF THE PROGRAMS

Overview.

Evaluations of Ph.D. programs differed between those who took academic jobs and those who entered professional practice. Though we detect more satisfaction with current positions by

academics, this group also had more criticisms to offer. This is understandable as they have spent more time thinking about curriculum and teaching. While the respondents have much to say that is positive about their education, there is a remarkable amount of resentment, even anger, at the way they were treated.

When graduates were asked what they valued most in their Ph.D. education, the dissertation, in particular learning how to do independent research, emerged as the centrally important experience and most valuable skill for both academic and nonacademic groups. It gave graduates confidence, taught them how to organize and complete a complex task, and helped develop their writing abilities.

Other aspects of the education that many graduates cited as valuable included analytic methods training and development of intellectual rigor. Analytic methods were especially important to those in consulting or research agencies. Graduates valued special mentoring relationships with faculty, when they had them, as they did positive peer interactions. When they did not have either of these, they were greatly disappointed. While they valued the breadth of their programs, they frequently criticized course work as superficial. Planning theory was a disappointment to many because of the uncertainties about what it covered and its typical failure to serve as the socializing experience many craved.

Graduates complained at length about the lack of skill-training for the practical features of post-doctoral life and work. A typical reaction to the question "Does the Ph.D. help you do your job well as opposed to just getting the job?" came from the graduate who said "in terms of credibility in the field, yes. In terms of skill, no." Similarly, the courses graduates cited as most important were those that developed skills.

Research and Writing.

Repeatedly, the skills that surfaced as most important for one's career were writing and other presentation skills, plus the ability to think and do research. Dissertation and other writing helped students focus, get researchable questions, organize and synthesize complex material. When a student had a good experience in learning how to do research by, for example, being involved in good projects, he/she valued it highly. In other cases graduates complained they did not have research opportunities and the program taught little about how to do it.

For example, reflecting on the merits of his doctoral program, one graduate told us that the most important advantage was that the dissertation got his research career started (prior to entering, he had taught and practiced planning). "My boss wanted a self-starter and the Ph.D. was evidence of that." Another said, "The degree taught me how to write and produce things quickly; it gave me the kind of research and thinking skills that planners with masters degrees just don't have." A third graduate noted he had the good fortune of being involved in projects that taught him research skills that stood him in good stead for the dissertation. Another graduate cited a research assistantship as providing him with the opportunity to develop his research skills. "Prof. _____ taught me how to become careful, precise, disciplined."

Not all graduates, however, felt they got the education in research they needed. One graduate, reflecting on her experiences at a strongly research-oriented university said she learned very little about research for, ironically, "research opportunities (for students) did not exist and

there was no apparatus for teaching research." The faculty were too busy doing consulting. The broader critique of another graduate that her Ph.D. program should "have prepared me better for the publishing world" captures the feelings of a large number of respondents. Several respondents mentioned grantsmanship on the list of desired skills which few believed they learned. A graduate who works as a staff researcher with a prestigious public policy institute, contended this lack was a major flaw in his education.

Analytic Skills.

Of great importance to post-doctoral success, according to graduates, particularly those in nonacademic settings, were specific skills such as those gained from economics, political analysis, project and program evaluation, field work methods, and quantitative/ analytical methods. Of all the formal disciplinary skills, however, economics and quantitative methods (especially statistics) headed the list. The four among our respondents who either supplemented their planning educations with a large component of economics courses, or took an outside field in economics, all praised the utility of the knowledge. Their explanations range considerably among our respondents (given arbitrary initials to protect identities):

AA thinks the analytical skills are crucial because otherwise, "Planners are unprepared for interfacing with technologically oriented people." GG believes that, were it not for the "freedom to take classes in other fields -- especially economics -- I would not be prepared to engage in the responsibilities I now have. Planning allowed breadth; economics provided the rigor. Straddling the two was the ideal arrangement for my interests." As for statistics, BB's retrospective look may have typified others: that the only way her Ph.D. program could have better prepared her for what she does (as a program officer for a major foundation) was to require a year-long course in statistics. Many respondents echoed II's wish that she had "learned more about multivariate analysis and statistics."

Focus vs Breadth.

While graduates valued the interdisciplinary characteristics of the planning Ph.D., this very quality presented difficulties for them. The balance between breadth and focus is a delicate one. For example HH, who was the product of a program in the '70s which encouraged students to take courses outside, would have been happier with greater focus. "I could have done things a little more efficiently in a program which did not rely so much on an interdisciplinary perspective." While GG has "reasonably fond memories" of his days as a doctoral student in the 1970s, he is critical of his program for lack of synthesis. "I don't think the different disciplines in planning really work together. Physical planners, social planners, economic planners don't seem to be able to communicate their respective visions of the world in such a way as to get a richer texture of experience." Superficiality is also linked to the interdisciplinary quality of programs by both graduates and students.

Nonetheless graduates supported the interdisciplinary quality. Although if AA had it to do again, she would take more math, engineering, and economics, she argues that planning programs should keep their political perspective and "shouldn't turn into economics departments." She adds, "planning programs serve an important function. They ask good questions. Keeping an interdisciplinary focus (which attracted her to planning) is very difficult, but planning programs must figure out how to do it."

Planning Theory.

Complaints about planning theory courses further illustrate the difficulty of finding common ground in our diverse field. The most frequently-voiced criticisms of classes were against planning theory, as it was taught, though not necessarily in principle. The ambiguity of definition of the subject and of the literatures led to frustrations in students preparing for theory exams. One graduate reports that "the faculty didn't accept our anxiety and made fun of us." The theory exams could have provided the needed common core to "give you confidence in being educated as a planner," but failed to do that. Another, from the same program, seconds the point:

Planning theory was one of the least satisfactory parts of the experience. The faculty gave it little attention and most of the real learning came from discussions with peers, whereas a seminar with the faculty would have really helped.

On the other hand, EF, from a different program, noted "the high point was the two years of core curriculum -- two years of luscious theory reading was stimulating, exciting, wonderful." He attributes much of the value of the experience to discussing the readings with his very smart peers.

And, as for theory versus practice, no respondents criticized curricula for lack of the former, only for lack of the latter. Understandably, the criticisms were more common among respondents who work in nonacademic jobs. But they were not alone. YZ got his degree from a prestigious program and took a teaching job at a less prestigious one that does not offer a Ph.D. YZ who awarded a "great" to his Ph.D. program (where they train "thinkers and pure researchers"), still believes strongly in the importance of practice.

At _____ we need to attract students and must justify our program to a constantly-questioning legislature....The theory base I got at ____ would have been all for naught without years of state and local planning practice.

Women and Minorities.

Women graduates reported a few incidents of perceived discrimination, though many others had no complaints. There were no complaints by minorities, but we had only 3 in our sample of 23 graduates. One of the women, who completed her degree in 1978, reports that females got less support than males. Among the undercurrents was the "innuendo that women make good teachers, not researchers." Another respondent, who was the only woman in her class during the early '70s, tells this story, prefacing the account by observing that there was no "blatant stuff, but all of the non-blatant stuff."

Sexism didn't really hit until the workplace, since men like bright, pretty graduate students. I was seen as a star and treated very well. The faculty were all nice and extremely supportive. As a female graduate student, I was a novelty and spotlighted. Once after I had given a presentation for which I had prepared very carefully and took myself very seriously, I discovered that the men had primarily noticed my body and how I was dressed.

Women's troubles continue after the Ph.D. according to another respondent:

Women get tenure under clouded circumstances and it affects them for their entire life. I am guardedly optimistic about my own situation. With some luck, I'm going to get tenure (although) there is a belief that quality doesn't equal women. The committee system is used to keep the club closed. Women don't have access to these committees....Women teach more and get shit jobs (although) there is no access to statistics to show these abuses. There is often no maternity leave and no flexibility for women -- much less flexibility than outside universities, when it seems like universities should be able to do more.

The comments evoke strong parallels with the findings of the Ritzdorf report, in that at least some women feel they are discriminated against. Women are often concerned about issues of childbearing and childcare and feel there is lack of support for these. None of the women or minorities we interviewed believed they got any special financial or other support, but some men suspected they were getting special treatment. One woman contended that programs do make some effort with minorities, but certainly not with women.

MENTORING: WHAT IT MEANS AND HOW IT HAPPENS.

Graduates virtually all regarded mentoring as crucial, both to their education and to their later careers. Those who had mentoring credited it with much of their success. Those who did not, associated this lack with a variety of problems. We have identified at least three types of mentoring, each of which has an important role in education: 1) mentoring by faculty in a student's doctoral program; 2) mentoring by peers during the program; and 3) mentoring by colleagues in graduates' early career experience. Graduates' comments lend substance to the issues and illustrate the range of ways in which mentoring can be of value.

Mentoring by Advisors.

Probably the most significant generalization from the graduate interviews is that satisfaction with the overall Ph.D. experience is closely related to the student's relationship with his/her advisor(s). It also appears that the graduates who were clear on what they wanted to study, with whom they wanted to study, and what they expected from their advisors, had the most positive experiences.

Valued mentoring goes far beyond merely guiding students toward useful courses -- the chief role of the undergraduate advisor. "Having a mentor is what makes a graduate student a graduate student," says AA. The mentoring of Ph.D. students includes giving general encouragement and support, identifying dissertation topics, helping the student prepare for academic and professional life, teaching pedagogical technique and the art of grantsmanship, advising on strategies for getting published and for gaining tenure, and even dealing with the student's personal problems that impede progress, including personal time management.

The stories cover a broad range, some positive and enthusiastic and others bitter and disappointed. AA owed her mentors "everything," including the financial support they arranged. They believed in her, got her going, and opened up opportunities for her. She continues,

Without them, I could not have survived. It was my mentor who encouraged me to go on to graduate school and gave me lots of support. I wouldn't be where I am without him. He opened doors for me, encouraged me to try things I otherwise wouldn't have, got

me into meetings....People are placed through phone calls. These networks are not available to women to the same degree as men.

AB credits the "very satisfactory" outcome of his doctoral studies to the relationship with his mentor, an energetic and well-regarded academic known for the care she takes of her students. "I was and still am very close to my advisor, and she was an important reason for my choice of school." AB recommends that the interview for admission to Ph.D. programs be reciprocal: interviewing potential advisors before enrolling in any Ph.D. program is as important to the advanced student as the faculty interview of candidates for admission.

This "vertical" mentoring can also involve assistance in getting grants that support students through their dissertation, and give them topics in the bargain. AC says, "I was able to do funded research on my interests because my advisor helped me write a proposal that set everything up for me, and gave me national exposure and several publications. Things just worked out perfectly."

The difference between "excellence and marginal performance," [on the dissertation] says EE, depends on "the quality of student-faculty linkage on research." For UV, collaboration on funded projects taught him what he knows about research, and led to the discovery of a dissertation topic.

Other graduates, like CD, were critical of the mentoring they had. To her, the most disappointing aspect of a program, evaluated coolly as "satisfactory" (yet a program whose faculty prides itself on the attention it gives students), was lack of solid mentoring. "My feelings about mentoring support are strongly mixed. I got strong moral sustenance and, secondarily, intellectual guidance. Students were not taught and pushed to publish, go to conferences, etc.," she laments. She elaborates:

I was presented with no research opportunities. I received very little guidance in this area, and had absolutely no collaborative opportunities. All of the research I did was 100% of my own doing....I got no strategic or career guidance. None, none, none. The faculty just did not have time to provide career training in how to be successful in academia.

Some students have a good experience without much mentoring, though they still feel resentful. Take the cases of QR and YZ, both former students of the same program. QR has decidedly mixed feelings about her doctoral experience and condemns a faculty indifferent to students, yet praises her university as "an incredibly rich cafeteria," with a "free market" style. By the latter she means that, "if you are creative, you can make the best of it," but the department "doesn't care what happens to you (and) was neglectful." The laissez-faire style meant that she could avoid her advisor, who "told me what to do." The "astonishingly irresponsible" faculty's neglect apparently came from the fact that they were too busy developing international reputations and "jet setting" away from their responsibilities on campus. That said, she concludes that she "had the time of her life in a department that was my psychic home."

YZ was self-directed, ambitious, and finished in three years. He knew what he wanted to do, acculturated himself quickly to life at a school he praises as "great," and set up his program to finish in three years, although he notes resistance from other faculty members that he hadn't

"suffered enough". And he got what he wanted! He attributes switching to a quantitative topic (as did IJ, "That's how you get it done in three years"), the foregone income, and a wife's career as the chief motivations for wrapping it up quickly. He knew before he arrived that the faculty would be busy with "other things" -- "big name professors are not on campus much" -- and prepared himself to work independently. Thus he arrived with reduced expectations and made the conscious trade-off between the big name credential and the level of help from faculty. No matter. He learned a lot from a research job on campus, became the resident computer whiz, and was a teaching assistant. Still, his committee never met to discuss his work and this caused him stress. "My dissertation would have been a better product if the faculty had helped more."

Peer Mentoring.

A student's peers also provide abundant opportunities for mutual learning as well as advising on "the ropes" and getting through the program. All gain when a cohort of bright graduate students organizes itself to study together for particularly challenging courses, to prepare for exams, or to discuss dissertation progress and to support each other. When the cohort is bright, shared learning can be at least as powerful as top-down learning from faculty. The lack of such peer interaction was cited as a problem most often in small programs, programs where the students were diverse in interests and where there were no courses that provided the opportunity to form as learning groups.

We heard much testimony about the importance of peer groups from many graduates. One told us,

All the Ph.D. students with me were also social scientists, and we had a very strong network. We had monthly work/study groups which were helpful, a strong *esprit de corps* in those days (the mid-'70s), a real faith in our ability to change things for the better.

Another, EF, who also reflects on his doctoral experience with great enthusiasm, highlights close peer relationships, "There were formal events like a weekly cookie seminar when students, faculty, and visitors got together to present their work. Informally, there was a series of courses that most Ph.D. students took during their first two years (theory, methods, etc.); the students grew very close in these courses and many remain in regular contact today." EF, who gives an overall rating of "fantastic" to his Ph.D. experience and notes that "it exceeded all of my expectations," considers that discussing the reading in theory courses with his very smart fellow students was a rare opportunity.

Good peer mentoring may partially substitute for poor faculty mentoring. It apparently did for KL, who felt "ignored by her professors." Her peer support, with a group of tightly knit Ph.D. students who have remained in touch, was excellent. She in fact credits the "mafia" (her peers) and the connections that go along with it for much of her success, and perhaps modified her otherwise negative assessment of the program. The bottom line: her Ph.D. experience was "good."

On the other hand, those who lacked good peer relationships were often disappointed in their programs as a result, like UV who said not enough peers shared his interests and his program lacked "the synergistic ideal." MN, who was generally dissatisfied with his educational

experience, complains that there were only two in his group, and no one with his interests. "I worked basically by myself for four years and...the lack of a peer group and being on my own made the experience less rich than it could have been."

Postdoctoral Mentoring.

A number of our respondents cited mentoring in their first jobs as important. CC underscores how such mentoring compensated for the lack of guidance he had received as a student. He tells how he was "taken 'under the wing' of a faculty member in another department" (at the university where he now teaches). It was through "this junior-senior relationship that I learned about academia and its politics. I gained insight about production, in addition to intellectual inquiry. I learned rather quickly that publishing was necessary." After four years, he got tenure in a department described as "heavenly." II too learned the realities of academic life after, not during, her doctoral experience. Fourteen years after completing her degree, tenured, and "moving along quite rapidly," she reports that "I'm still in the process of modeling and emulating my colleagues. My strongest role models are my colleagues, not my Ph.D. instructors."

VALUE OF THE PH.D.

Most graduates regard the Ph.D. as a useful qualification for their work, both in terms of skills and certification. Quite a number said they valued the degree for the breadth of perspective it gives them and for the self confidence they acquire. Most rated the educational experience as positive, though they also contended it had considerable room for improvement. Some spoke with great enthusiasm of the Ph.D. program as "a real high" and something they loved doing. Most would do the Ph.D. in planning if they had it do over, though perhaps at a different school, or with a different emphasis. The Ritzdorf survey of graduates found that 29% would not do the Ph.D. in planning again, though most of those would do the Ph.D. in another field.

A Ph.D. is the key that unlocks the academic door, but for nonacademics, it may be useful, or it may be the reverse. QR gives both sides:

Having a Ph.D. is great; no one can show you up. It clears up self-doubt and means that choices are not based on whether you think you're good enough. But in terms of my ability to find work that matches my skills, I have been very hurt by having a Ph.D. You can't move out of your field because it intimidates people: 'why would someone with a Ph.D. want to do this?' they ask.

"Discipline" repeatedly crops up in UV's interview, and like many others, he cites it as the principal benefit of completing the doctorate. He explains, "You see yourself as an independent professional, rather than a cog in the bureaucracy. You learn how to figure things out for yourself." Nonetheless, about half of UV's potential professional employers disqualified him because of the degree, preferring candidates with a master's and experience. He now works in regional government, but suspects he would be further along professionally had he gone straight from the M.C.P. into practice.

The title helps graduates in various ways. Says WX, "The Ph.D. gives people more confidence in me." Even embittered MN, who passionately hated doing his dissertation, admits that his Ph.D. gave him credibility. "I am taken more seriously. I like publishing and speaking,

and having a Ph.D. really helps."

For some, the Ph.D. was important because the education for a master's degree simply wasn't enough. A professional researcher who maintains that a principal merit of getting a Ph.D. is "learning to deal with frustration," believes that there is a qualitative difference between her work and work done by people with only a master's.

In the master's program, my thinking was all over the place. Now, my thinking has become more refined, more careful, and independent. I probably didn't need the Ph.D. for my current position (with a federal agency), but it helps a lot. Because of it, I have been given more responsibility, more chance to do research independently. It also helps with the job, in terms of thinking and analytical skills, and especially writing. Writing a 400-page report is no longer intimidating, because I've done it.

CONCLUSIONS AND REFLECTIONS

The Commission believes that the greatest strength of the planning doctorate is its interdisciplinary breadth and its orientation to a world of action. Because of these qualities, doctoral graduates are well qualified for a wide range of research, teaching and other roles in society. They derive satisfaction from their efforts to combine intellectual rigor with real world questions. It is essential that as a field we maintain the breadth and integrative perspective in our doctoral programs and keep them in touch with the real issues of policy and practice, because it is this special combination that our field offers. It is this combination that we need to build on so that both the intellectual and practice bases of this field can grow and develop.

The task is not an easy one however, and there are no simple formulas. The interdisciplinary, problem-driven approach can be creative and rigorous, but it can also be superficial and unfocused. We have few truly powerful exemplars of research and, at most, an emerging paradigm for students to follow. Moreover the university settings, where many will go, push them to narrowly defined topics and well tested methods, rather than to explorations and the risk taking that can produce these new exemplars. The dilemma is how to help students to develop a good answer to the question "what are you really about?" and to internalize the discipline of a scholarly community, while at the same time identifying themselves with the field of planning in all its diversity and action orientation. It is a dilemma that all of us as academics in planning confront on a daily basis. It is our principal challenge as a field.

The most important task that planning educators can do to strengthen the Ph.D. for all future students, regardless of their career paths, is to improve the quality and rigor of the research these students do. Not only is this research the investment in the future of the field, it is the most important career skill and source of competence for the graduates. We need to put far more of our creative energy into research training, mentoring, and raising funds for research than we have done. We need to take more time ourselves to identify the important planning questions and research directions and to help students to work in ways that will allow them to make valued contributions. We cannot do this by mimicking the disciplines, but need to work on creating our own models and exemplars of research that will advance planning as a field.

We need also to be more aware of our students' needs and of how the climate and sense of community (or lack of it) within each of our programs are important in the educational

experience. We need to play more explicit roles in preparing students for their careers, particularly careers in planning education--which we should be well qualified to do.

We offer a series of recommendations to planning programs and to the ACSP that address these and other issues identified in this report. We propose these as ideas to generate discussion and, hopefully, in the long term to strengthen the doctorate in planning.

RECOMMENDATIONS TO PROGRAMS

Program Diversity

--Diversity in the structure, content and approach of Ph.D. programs should be maintained. No one model stands out as best. The field is broad; universities have different strategies and resources for interdisciplinary studies; and graduates enter varied careers. Thus we do not propose any single administrative model, nor suggest what subject matter or curriculum a program should provide. We do not believe accreditation of the Ph.D. is appropriate or needed. Nonetheless there are common issues across the programs which are related to their common task. Our recommendations are designed to be implemented in individual ways appropriate to each program.

Program Growth

--The current overall size of the annual Ph.D. cohort nationwide is appropriate, and we recommend maintaining the flow of graduates at approximately the level it has been in recent years. Although the market for doctoral graduates has been healthy, the numbers of graduates have been growing steadily and the long term consequences of such growth remain unclear. Despite anticipated retirements in planning programs, there is no need to increase the number of graduates to fill that demand. We do not have enough information about the nonacademic market or the market for planners in other academic fields to justify significant expansion.

Program Size.

-- While our research does not suggest any threshold number of students, we caution against the creation or maintenance of very small Ph.D. programs. The smaller the program the more difficulty it has in providing the indepth courses and peer interaction that play a significant role in Ph.D. education. The smaller programs can, to some degree, compensate by specializing in one or more areas or joining with other departments in interdisciplinary Ph.D. programs. Both strategies permit the development of advanced courses and the cultivation of peer interactions.

Admissions.

--Informational materials on Ph.D.programs provided to applicants should make clear that they provide training first and foremost in how to do independent research and develop theory in planning and that the Ph.D. is not a degree in advanced practice. Programs are well advised to favor admitting students with clear interests in research and education, or at least with clear incentives to complete the degree. Nonetheless no simple criterion should be used to screen candidates, such as interest in practice or statistically probability of completion. Those entering

with an interest in practice are often directed into research during their programs. Those from groups with fastest completion rates may not do the best work. Older students may be slower to complete for example, but maturity and sophistication is an important quality in a planning Ph.D. Practitioners with the Ph.D. Programs may wish to create alternative degree or certificate options for those wanting further study beyond the M.C.P., but who do not need the Ph.D.

While each program should admit students that match faculty expertise and interests, we would like to highlight the shortage of recent graduates in the land use and urban design areas. These fields occupy the center of many professional planning education programs, and it makes sense to educate Ph.D. students who can make a creative research contribution, rather than to allow the field to continue to rely on practitioners, adjunct faculty or joint appointments to serve student needs in these key areas.

In addition, programs should take account of the growing demand for those with specializations in transportation, information systems, and energy and environment. Educating doctoral students in these fields may require alliances with faculty in architecture, landscape architecture, engineering and computer sciences.

Research Training.

--The Commission and the educators with whom we spoke are in agreement that we must as a field maintain and improve the scholarly quality, rigor, and contribution of research. This research is essential to building the intellectual base for practice and important to protecting the status of professional educational programs within the university. It is crucial for the careers and effectiveness of Ph.D. graduates in all types of work. The framework must continue to be interdisciplinary, synthesizing, and oriented ultimately to the design of public actions to achieve desired ends. In short the field must seek rigor while maintaining its identity as a profession and not a social science.

--Programs should give high priority to student research skills, particularly identifying interesting and researchable questions and designing convincing research. Students must have preparation in both quantitative/analytic and qualitative/field research methods. Such methods training is insufficient, however, as it deals normally only with techniques. To develop facility in research design and the packaging of methods to answer questions, seminars are valuable in which students explore the philosophy of method, rather than regard it solely as a practical problem, where they critique important research articles which employ differing research strategies, and where they develop their own prospectuses. Advanced seminars in specialization areas can be used to help students define their intellectual directions and situate their inquiry within a community of scholars.

--Several other strategies are also important. Faculty should be encouraged to develop research projects that will provide training opportunities for doctoral students. Programs should encourage and support student attendance at professional conferences where they can hear presentations on research and present their own research. Student-operated journals give students the opportunity to learn about publishing and give them skills in assessing research.

Mentoring.

--Programs should have policies and practices to assure students and new faculty receive

the broad support, advice, and assistance they need. Mentoring is not just about intellectual development. It also means helping students and junior faculty get started in their professional lives. It includes providing role models and insights into the practice of research and teaching. It means helping students get tied into networks and funding sources. Some of these things can be accomplished in professional development seminars, but most require one-on-one interactions of students and faculty. Program chairs should make faculty more aware of the needs of students and junior faculty; time spent in mentoring should be recognized in faculty workloads; and good mentors should be rewarded for their efforts.

Teaching to Teach.

--Programs should provide opportunities, if not requirements, for students to develop teaching skills and materials. Most graduates consider teaching careers; many will teach at least part-time; and all will need oral presentation skills. Faculty can have teaching assistants give lectures in courses and work with them to develop syllabi and assignments. Programs can conduct teaching workshops. Advanced students can teach undergraduate courses. Where a department has no undergraduate courses, it can establish mutually beneficial relationships with undergraduate programs in neighboring institutions.

Teaching Practice

--Programs and advisors should recognize that most doctoral students will consider a practice some will choose it, and most will need to have an understanding of practice, even if they become primarily educators and researchers. Students in any case, crave skills. They want to know how to do things and not just how to think about them. Graduates criticize programs for too much theory, but never for too much practice. Programs should therefore encourage doctoral students to participate in relevant master's courses and studios and encourage those without practice experience to work in professional planning during their education as well as in research and teaching assistantships.

Preparing Students for Academic Positions in Planning.

--For those students who are considering academic careers in planning, Ph.D. programs should create suggested courses of study to assure they have necessary broad knowledge of planning subfields as well as basic understanding of planning theory and techniques. Program faculty should keep in touch with the academic marketplace and advise students about the opportunities that are likely to be open when they graduate. All programs should develop policies to assist junior faculty in early years of teaching. Programs can broaden the teaching range of new faculty by assigning them to work with senior faculty in core courses for a year or two or by giving them release time to prepare courses outside their specialization.

Peer Interaction.

--Programs should develop methods to encourage interaction among doctoral students. One way is to admit students in subject areas that are closely related like land use and environmental planning. Another is to encourage student study groups in topics such as planning theory or research design, which cut across specializations. A third way is to encourage informal

social interactions. Research colloquia provide another option.

Improving Time-to-Degree

--To improve time-to-degree and increase overall completion rates, the single most important factor is to improve student financing and fellowship support. A systematic approach to faculty advising and mentoring, along with research training and assistance in developing research questions and strategy are next in importance. The building of a sense of community among faculty and students can also be significant. We recommend that students be required to complete their prospectus before advancement to candidacy to help assure they will complete the dissertation in a timely way.

International Students.

-- Ph.D. programs should confront the reality that a substantial proportion of their doctoral students are, and will continue to be, of international origin. We see no reason to reduce the proportion of these students in doctoral programs, as they are typically highly motivated, contribute breadth to programs, and complete in timely ways. Faculty with international expertise are essential however, as is course work on international topics. Programs may choose to integrate material in international issues into largely U.S.-oriented, substantive courses or to introduce separate international curricula.

Representation of Racial and Ethnic Minorities.

--The first step is to increase the enrollment of minority Ph.D. students; the next is to encourage them to enter academic careers in planning. We recommend three strategies. Planning programs should begin with the undergraduate and masters programs on their own campus and elsewhere to identify and recruit candidates. Ph.D. programs in particular, should increase efforts to hire minority faculty, even if they come from outside planning. The presence of minority faculty plays an important role in many students' choice of institution. Finally, both to successfully hire minority faculty as well as to recruit students, programs must provide a hospitable and welcoming environment. Many will have to do self examination, holding meetings and discussions, to become aware of the climate they offer.

Representation of Women.

--To increase the representation of women, programs must also support and encourage women undergraduate and master's students to pursue the Ph.D. and continue into academic positions. Some of this can be done through individual mentoring. Some can be done through networks of university colleagues. We also recommend providing financial support to students with child care responsibilities, along with convenient facilities for both doctoral students and junior faculty. Programs should make systematic efforts to become aware of the climate they offer for women, as for minorities.

Meetings to Consider the Commission's Findings

To assure that programs get the full benefit of the Commission's research and the

opportunity to make program improvements appropriate to their own needs, programs should consider circulating the report among students and faculty and holding meetings to discuss any implications for their own programs.

RECOMMENDATIONS TO ACSP

Establish a Standing Committee on the Ph.D. in Planning.

--To follow through on the recommendations, to continue to monitor doctoral programs, and to develop future advice to the programs, the President of ACSP should appoint a Standing Committee on the Doctorate in Planning, (SCDP) made up of three faculty members with substantial experience with doctoral education, one doctoral student, and one faculty member with special understanding of the needs of professional programs. Some of the items may be more appropriately pursued by the Standing Committee on Recruitment and Retention of Women and Persons of Color in Planning Education or other standing or special committees of ACSP.

Dissertation Support

--ACSP should launch a major initiative, perhaps along with other organizations such as APA or AICP, to seek funding from foundations and governmental sources for doctoral fellowships in planning, to be awarded nationwide on a competitive basis.

Defining Research Directions for the Field

--ACSP should request that the editors of the Journal of Planning Education and Research and perhaps the Journal of Planning Literature commission articles designed, not only to review the state of the art in research on selected topics, but also to identify cutting-edge questions and fruitful directions for future study. Models of such articles exist in fields such as sociology.

The Annual Conference

-- Annual conference organizers should make serious efforts to assure that formal papers are prepared ahead of time. Awards for best papers in various categories could be one incentive. Another is to require a paper ahead of time for presenters to be on the final program.

--Panel discussions at ACSP conferences should regularly be devoted to the problem of research design in a multidisciplinary, action-oriented field. SCDP should work with conference organizers to ask faculty who have developed successful and important research to discuss how they chose their questions, how they developed their research designs, and how they established long term research agendas.

--Panel sessions should also address the professional development of planning educators, including the tenure process, strategies for publication, mentoring, time management, and the climate for women and for students and faculty of color.

--Teaching workshops for faculty and doctoral students should be incorporated into the conferences.

JPER as a Forum for Publication

--JPER editors should expand the subscriptions to current Ph.D. students and more of the graduates not attached to planning schools. For this purpose they can rely on the list of graduates the Commission has compiled. In addition editors should be encouraged to seek more manuscripts and subscriptions from faculty in related fields to make the Journal a more competitive and attractive publication opportunity overall and to encourage research and writing directed toward planning as a scholarly enterprise.

Information Provision and Exchange

-- To help reduce the mismatches between the demand for planning academics and the specializations of doctoral graduates, SCDP should set up a simple system for monitoring the academic market. First the names, dissertation topics and first jobs of doctoral graduates, by ethnicity should be collected annually from the programs with the aid of a simple form mailed to the schools. These should be used to update the data base this Commission has prepared and keep track of the supply of graduates. Secondly the annual reports by planning programs to PAB on faculty hired, by degree and field, should be tabulated to map the trends in demand. Third Update should publish this information annually in tabular form, and if space permits, with complete graduate listings. This information can be used by programs in search processes, by faculty advising students about the market, and by JPER as a resource for expanding their subscription base.

--Update should provide a bulletin board for faculty to exchange information on requirements and courses used to teach research design and methods and to permit exchange of bibliographies and course descriptions.

Professional Development of Planning Educators

--The SCDP should prepare a handbook for junior faculty on what it means to be a planning educator and on how to get tenure. This could be based on the humorous version prepared and distributed anonymously to women faculty. It could rely also on the booklet prepared by ACSP on promotion criteria for planning faculty.

--The SCDP should prepare an editorial or brief essay for JPER providing advice to faculty on how to be effective mentors.

Increasing the Diversity of Planning Faculty

--The Standing Committee on Recruitment and Retention of Women and Persons of Color should sponsor an investigation of a number of questions that emerged from the Commission's research. Answers to these are crucial to developing an effective strategy for diversity. How can we get accurate information on the race and ethnicity of graduates? How best can additional students of color be encouraged to enter doctoral programs? Why do women enter doctoral programs in smaller proportions than men? Why does a smaller percentage of women graduates enter academic positions than men? What types of financial and psychological support are likely to change these patterns? How is it that a handful of planning programs have found a diverse pool of applicants and hired a number of women and people of color, while others seem unable to find such applicants? What are the conditions that lead women or minorities to regard

the "climate" of a department as positive or negative? Carefully focused interviews with a representative group of doctoral students, junior faculty and other recent graduates could shed considerable light on these questions.

--This Committee should develop policy recommendations to the schools and to ACSP on specific strategies to increase the women and students of color enrolled in the Ph.D. programs and to increase the women and people of color in the applicant pools for teaching positions.

Dissemination of the Commission's Findings

--The SCDP should assure that important findings of this commission are disseminated to planning faculty. Commission members will seek formal publication of major findings and conclusions in JPER but the report should be publicized and also made available to students, faculty in related fields, libraries, career placement offices, and university administrators. It should be referred to in the Guide to Graduate Education in Planning and possibly publicized and made available in similar ways.

Strategic Planning for the Profession.

--SCDP should generate continuing discussion within the field of planning about the future. What topics and skills will be important? What are the opportunities? What roles can and should planning play? What are the implications for planning education and research?

NOTES

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