

Building Connections

A Report from the President to the University Community

Last year, in "Choosing Penn's Future," I reported to you my understanding of the key issues and opportunities the University faces in the 1980's. At that time, I stressed that three special challenges would shape or educational planning for 1983 and beyond: undergraduate education, research excellence, and student financial assistance. This is a report on where those plans have taken us thus far, and where they are likely to lead in the years ahead.

Sheldon Hackney

Building Connections

The Quest for Connections

Our current agenda grows out of an intensive, campus-wide process of review and analysis that began two years ago with the formation of six Working Groups. Each group investigated a single broad topic of central concern to the University. The reports submitted by the Working Groups were thoughtful and thorough, including detailed suggestions for policies and programs, many of which are now being implemented. In this way, the Working Groups provided the framework for "Choosing Penn's Future," which led in turn to "Building Penn's Future"—a Development Plan that draws its fundraising objectives from our larger academic and strategic goals.

At each stage of the planning process over the last two years, we have stressed the importance of coordinating and integrating the diverse yet complementary strengths of Penn's twelve Schools. This quest for connections is as old as the University itself. From Benjamin Franklin's vision of an academy where the liberal arts and sciences could flourish alongside the professions, to the coalescing of a single Faculty of Arts and Sciences, to the linkages achieved in the name of One University, this institution has proven its inexhaustible potential for intellectual growth. Now we are once again striving to express more fully Penn's unique character through creative connections within and across Schools, programs, disciplines, and departments.

Last year I summarized this overarching goal as a need to shrink the psychological size of the University. This year I am convinced that our community is in fact reaching a new threshold of awareness about its own capabilities, as formerly disparate groups share a growing perception of common interests and objectives. In large part, the very process of collectively developing a strategic plan for the 1980s has strengthened our appreciation of Penn's interactive potential. As our plans are further implemented and refined, that original collaboration will be replicated on a number of levels, bringing an even sharper focus to our understanding of what it means to be a part of Penn.

This concept of shared educational experience is most clearly embodied in two exciting initiatives: the development of common academic experiences for undergraduates, and the implementation of a University-wide computing plan. Last year I announced our intention to develop a limited set of programmatic innovations that would provide common academic experiences for all undergraduates without imposing undue curricular constraints. The newly formed Faculty Council on Undergraduate Education, which includes representatives from all twelve Schools, will be meeting throughout this academic year to help design the shape of these common experiences. The Council will place a high priority on plans that involve senior faculty from different disciplines and Schools, including the eight Schools without full undergraduate programs.

The University's comprehensive computing plan extends this principle of commonality to embrace virtually every member of the Penn community. Broadly conceived, our goal is to enhance computer literacy among faculty and staff as well as students, fully integrating computers into the instructional, research, and administrative life of this institution. Over the coming decade, we will invest substantial resources in the creation of a campus-wide computer network that will enable us to achieve these objectives. The plan promises enormous benefits, not the least of which is an altogether new dimension in communication among the University's separate fields of inquiry.

These two broad initiatives—common academic experiences for undergraduates and the University's comprehensive computing project—lie at the heart of our plans for building academic connections at Penn, but they are by no means the sole vehicles for shared educational experience. Many of the other items in our current agenda contribute to that larger goal. This year and next, we will see people at Penn coming together in new and interesting ways, creating the kind of intellectual chemistry that will allow us to focus and magnify the diversified strengths of the twelve Schools. In this way, the programs and policies currently being implemented should foster three types of educational interaction.

- *Among students.* Our development of a set of common academic experiences for all undergraduates is designed to multiply the opportunities for students to learn from one another. Given common ground for discussion, undergraduates from different disciplines and Schools should enjoy greater ease and freedom in exchanging ideas.
- *Between students and faculty.* No student should complete a course of study at Penn without knowing several faculty members well. This imperative is one of the key recommendations that emerged from the Working Group on Undergraduate Education. With the implementation of our new programs and policies, undergraduate education becomes the responsibility of the entire University faculty. Our comprehensive computer plan also offers a whole new spectrum of possibilities for mutual instruction—from student to teacher as well as vice versa.
- *Among faculty.* Without the critical insight and experience of our faculty, the goals I have been describing would be impossible to achieve. Through the Working Groups, the Faculty Council, and other important bodies, the faculty has given concrete shape to our plans for the 1980s. In many ways, the same programs that members of the faculty are helping to design for the benefit of students will benefit themselves. As instructional programs and computing concerns bridge the boundaries of separate disciplines and Schools, individual faculty members will be able to draw more readily on one another's research interests and expertise.

These connections are explained in some detail in the following outline of our planning agenda for 1984 and beyond. The agenda is structured around the three broad challenges I identified in "Choosing Penn's Future": undergraduate education, research excellence, and student financial assistance. To convey a sense of the schedule for implementing our various programs and policies, I have divided the agenda items within each subject into "Current Initiatives" and "Next Steps."

University Planning Agenda

	Current Initiatives	Next Steps
Undergraduate Education	Faculty Council on Undergraduate Education: development of common academic experiences for all undergraduates	Undergraduate Curriculum Fund to support common academic experiences Implementation of comprehensive computing plan Strategies for enhancing student quality while preserving scale: undergraduate admissions policies Teaching norms, expectations, and guidelines
Research Excellence	Selected investment in outstanding faculty Remedial investment in research facilities and equipment Expanded investment in the Research Foundation Increased funding for graduate research assistants and graduate fellowships Strengthening of University ties with industry	Creation of Social Science Research and Teaching Program Evaluation of relationship between research effort and salary recovery Consolidation of graduate groups
Student Financial Assistance	Penn Plan for Family-Based Financial Assistance	Development by each professional School of its approach under the Penn Plan Establishment of the Penn Plan Agency Initiation of the search for a director of the Penn Plan Agency

A. Current Initiatives

Last spring I set two mandates for the newly created Faculty Council on Undergraduate Education: to design common academic experiences for all undergraduates, and to identify ways of ensuring that faculty members from all twelve schools are engaged in undergraduate education. In its development of curricular options, the Faculty Council will benefit from the groundwork laid by the Working Group on Undergraduate Education, which gave first voice to our current objectives for enriching undergraduate education: shared academic experiences, increased involvement of senior faculty, greater interaction between the liberal arts and professions, early exposure to the intellectual breadth of the principal disciplines. Included under "Next Steps" is a discussion of specific curricular mechanisms currently under consideration by the Faculty Council.

B. Next Steps

As the Faculty Council meets during 1983-84 academic year to evaluate programmatic alternatives, we will also address four related tasks:

- Establishing an Undergraduate Curriculum Fund to support development of common academic experiences;
- Implementing the University's comprehensive computer plan;
- Developing strategies to enhance student quality and preserve undergraduate scale; and
- Presenting each School's report on teaching norms, expectations, and guidelines.

1. Establishing an Undergraduate Curriculum Fund to support development of common academic experiences.

As we have seen, the Faculty Council on Undergraduate Education is engaged in a discussion of specific design considerations for the creation of common academic experiences for all undergraduates. To maintain the momentum of this process, an Undergraduate Curriculum Fund is being formed. We are currently in the process of seeking the necessary resources for this Fund, which could be used to implement the Faculty Council's proposals.

The University already offers a number of shared academic experiences for undergraduates, including Freshman Seminars, the Honors program, and Writing-Across-the-University. One might also cite a "*de facto* core curriculum"—the small number of courses that, though not required, command wide enrollment; most undergraduates take at least one of those courses, and many students take two or more. None of these arrangements, however, is common to the academic experience of *all* undergraduates at Penn.

The Faculty Council is probing both the rationale for common academic experiences and the mechanisms for making such experiences available. The formulation of goals includes consideration of at least four fundamental objectives:

- *Increasing the coherence of undergraduate studies.* Penn is a complex institution, offering great curricular diversity and freedom of choice in course selection. We could never create an academic atmosphere similar to that of a small liberal arts college, nor should we try. Still, a limited set of common academic experiences could provide increased coherence for undergraduates, particularly if offered in the freshman year. In one sense, Freshman Seminars provide that experience, for they are taken by over 80 percent of all undergraduates. The subjects and teaching styles within the program are so diverse, however, that there is little commonality except the academic intimacy of a small-group experience that involves a substantial amount of writing. It is worth considering whether greater substantive and methodological commonality could be built into the Freshman Seminar program.
- *Introducing students to the basic methodologies, concepts, and values of the major academic disciplines.* All entering freshmen could benefit from an introduction to modes of analysis in the humanities, social sciences, and natural sciences. Such introductions might allow students to identify more precisely their true interests, enlightening their choices of future majors, concentrations, and specializations.
- *Strengthening certain fundamental abilities.* The Working Group on Undergraduate Education stressed the importance of two fundamental abilities: writing and computer literacy. Currently, all Freshman Seminars emphasize writing, and in that sense provide a degree of commonality. The program does not, however, require uniformity in subjects or types of

writing. Computer literacy refers not to familiarity with one or more programming languages—that skill will have become part of the training of all incoming students within a few years. Rather, computer literacy encompasses both the ability to utilize a computer in manipulating masses of data, and an understanding of the role of computing in our society.

- *Addressing substantive issues with broad implications for society.* "Ethical dilemmas" is a prime example. Key faculty members from each School might each prepare a case study that sets out a significant problem and its ethical dimensions. The common theme would be the clash of ethical values—environmental concerns vs. jobs, privacy vs. free press, and so forth. The case study materials would be the common teaching bases for the proposed course.

Each of these four objectives suggests a somewhat different mechanism for providing common academic experiences. Possible approaches include the following:

- *Establish a single course for all undergraduates.* Such a course obviously would meet the goal of providing a common academic experience for all students. It would, as Columbia describes its "contemporary civilization" course, offer an experience for students to share not only with their own classmates, but in some measure with every student who has taken the course since it was developed. This approach involves significant design and implementation hurdles. Apart from questions of content and focus, there are problems of coordination, staffing, instructor preparation, and format. Should the course involve a few large lecture sections or a hundred seminar sections? Being in the same large room may be no more a common academic experience than being on the same campus. Being in one seminar section, however, may be quite different than being in another, even though the subject matter is common.
- *Introduce common elements into existing courses.* Rather than create a new course (or series of courses), we might develop common components for existing courses: Freshman Seminars appear the most likely candidates. These common elements—case studies, texts, readings, lectures, colloquia, films, writing exercises, issues, problems—could take many different expressions. This approach could preserve maximum diversity in terms of course selection for students and a significant measure of individual faculty control in terms of content and conduct of courses. Faculty could still teach essentially what they want to teach, and students could still learn essentially what they want to learn. The degree of commonality would probably be less than in a single course for all undergraduates.
- *Provide a common academic experience at the outset of the freshman year.* One suggestion is to prepare a dozen or so videotaped lectures or small discussions, in which leading members of the faculty would explain briefly but explicitly how they do what they do, and why they do it. These tapes would be viewed regularly by all students enrolled in the Freshman Seminar program to expand their perceptions of various disciplines. The tapes might become the bases for group discussions and student essays in the Freshman Seminars. Other arrangements to serve similar objectives might also be considered by the Faculty Council. For example, a series of colloquia could be devised in which students would listen to senior investigators discuss and debate issues in their fields. These could expose students early in their undergraduate careers to some of the most penetrating intellects in the University.

2. Implementation of the University's comprehensive computing plan.

The report last year from the Working Group on Undergraduate Education stressed the need for students "to understand the pervasive impact of the computer in our lives." Over the past year, two campus-wide committees, the Academic Computing Committee and the Administrative Computing Committee, have been working to develop a comprehensive plan for the future of computing at Penn. Designed to reinforce and expand adaptation of the computer as an essential tool in all disciplines, the plan will allow us to achieve three principal objectives:

- To enhance faculty, student, and staff literacy with computers.
- To promote and integrate the computer into the teaching, research, and administration of the University.
- To create a distributed computer network throughout the campus, and between the various Schools and other University units, through broadband communications technology.

While details of the comprehensive plan are not yet in place, its key features are clear. We will establish a University-wide focus for computing activities by recruiting a senior officer as chief of campus computing. This individual will provide the intellectual leadership for the University's comprehensive plan, and ensure a coordinated approach to aca-

demographic and administrative computing objectives. She or he will also coordinate joint programs with other educational institutions, research centers, private corporations, and foundations interested in expanding the knowledge base for applications of the computer as a tool within higher education and in a larger societal setting.

The University is committed to a major capital investment to provide such needed resources as personnel, hardware, software, communications links, and the complementary research that will bring Penn to the first rank in computing. In the next five years, we must invest an additional several million dollars a year to expand our computing capacity. A major fund-raising program is planned to mobilize substantial corporate, foundation, and individual support for this effort.

As part of our search for corporate sponsorship, we are asking certain computer manufacturers to consider significant contributions of equipment. A key component of our requests is the provision of personal computers to be assigned to members of the standing faculty. This proposal grows out of our belief that the faculty must take the lead in integrating new computer technologies into teaching as well as research. The availability of a large number of personal computers, either through donations or discounts, also would provide an opportunity to reinforce our commitment to undergraduate education. In the selective distribution of personal computers to individual faculty, priority would be given to those faculty who regularly teach undergraduates.

An enormous array of other issues is involved in the comprehensive computing plan, due shortly from the Academic Computing Committee. We expect an intense period of campus-wide review, with particular attention by the Administrative Computing Committee to the need for integrating administrative and academic computing.

3. Strategies to enhance student quality while preserving undergraduate scale.

Last year, in "Choosing Penn's Future," I outlined some of the demographic, economic, and political challenges facing the University in the years ahead. At that time, I emphasized that the scale of each component of the University must ensure the highest academic quality. For undergraduate programs, this means garnering a larger share of the declining supply of the nation's high-ability students.

The interaction of these three concerns—student ability, undergraduate scale, and educational quality—carries critical implications for individual Schools as well as for the University as a whole. For this reason, I am creating a Deans Task Force that will develop strategies for enhancing student quality while preserving undergraduate scale. This Task Force will draw widely on the expertise of each School's faculty as well as those staffs most responsible for undergraduate education. Chaired by Joseph Bordogna, Dean of Engineering, the Task Force will include the four Deans of Schools with undergraduate programs, the Deans of the School of Medicine and the Annenberg School of Communications, the Vice Provost for University Life, and the Dean of Admissions. Next spring, the Task Force will report its findings to the following groups: the faculty of the undergraduate Schools, the Council of Deans, the Academic Planning and Budget Committee, and the Faculty Council on Undergraduate Education.

The Task Force will address three key issues:

- The overall scale of the University's undergraduate enrollment;
- The distribution of students among our undergraduate Schools; and
- The quality and coordination of undergraduate programs that draw on the joint resources of two or more Schools.

In the first instance, the Task Force must measure the dimensions of the challenge we have set for ourselves in seeking to preserve the University's undergraduate enrollment. This challenge can be captured in a few stark statistics. As recently as 1981, 85 percent of our applicants came from just twelve states. Collectively these states will have 35 percent fewer high school graduates in 1993 than in 1981. If we do not increase our current share of this pool, we can expect about 6,300 fewer applicants in 1993. To fill a freshman class of 2000, given this applicant pool, we would have to increase our admit rate from today's 44 percent to 60 percent. If there

were a decline in our share of the high-ability undergraduate market to 1978 levels, we would need to admit more than 80 percent of all students applying. We would, in short, no longer be a selective institution.

The second major issue facing the Task Force is the internal balance of the University. How will enrollment patterns over the next decade affect the style and character of the student body in each undergraduate School? In this connection, the University's admissions policies and procedures are of special concern. As the available pool of high-ability students continues to shrink, we must think carefully about our enrollment distribution. At the same time, I sense no support for radical measures such as the formation of a single undergraduate college.

Between the extremes of doing nothing and establishing a single undergraduate college lie at least two mechanisms for maximizing the quality of our undergraduate student body. First, we could establish a single-entry admissions system, in which all prospective freshmen would apply and be admitted to the University of Pennsylvania. Upon admission, each freshman would be free to matriculate in any of the four undergraduate Schools. Enrollment balance among the Schools would be facilitated through a flexible policy of course selection, including the opportunity to minor in a different School. Second, we could continue the policy through which students are admitted to one of the four undergraduate Schools. In this case, however, the same standards of student quality would apply in all the Schools. The size of each School's freshman class, therefore, would not be determined by a predefined target but would be allowed to fluctuate in response to the actual depth of that School's applicant pool. The Task Force will assess these and other strategies for enhancing student quality while preserving undergraduate scale.

Finally, the Task Force will identify opportunities to develop joint undergraduate courses or degree programs that maximize the strengths of two or more Schools. In the final analysis, our continuing ability to attract the very best students will depend on the caliber of the education we offer. In its evaluation of interdisciplinary undergraduate programs, the Task Force clearly will draw on the work of the Faculty Council on Undergraduate Education, and vice versa. Our goal in this collective effort is to develop a set of undergraduate options that takes full advantage of Penn's rich intellectual resources in both the liberal arts and professions, thereby strengthening the University's national reputation as an institution of first choice.

4. Teaching norms, expectations, and guidelines.

Penn should be the sort of university in which every member of the standing faculty takes pride in regularly teaching undergraduates. This is the practical corollary of our philosophical commitment to undergraduate education. Our success in meeting that challenge clearly depends on a sense of community—an awareness of our responsibilities to students as well as to colleagues, and a personal investment in the intellectual process of undergraduate education.

The first step is to determine current practices and expectations regarding undergraduate instruction. Now, as in the past, Penn faculty are expected to balance their efforts between the equally important tasks of teaching and research. A preliminary review of faculty teaching activity suggested wide variations both within and among Schools. At my request, the Dean of every School will report by the end of the fall term on that School's policies regarding teaching activity. These reports will address three basic questions:

- *How would you characterize your School's current policies on teaching activity?* Each report will include a statement of the expected teaching activity of standing faculty who are fully supported on the instructional budget. The level of activity may be quantified, as appropriate, in terms of courses, contact hours, independent study, and dissertation supervision.
- *How are those policies implemented?* The report will describe the role of the Dean and the central School office in working with department chairmen and individual faculty members to implement policies on teaching activity.
- *What incentives have you employed?* The Dean will describe those incentives and rewards that have proved successful in involving senior faculty in undergraduate instruction.

Building Connections

II. Research Excellence

A. Current Initiatives

Research excellence grows out of the application of first-class minds to significant problems. To strengthen our research capacity means foremost to maintain and enhance the strength of our faculty. In considering every faculty appointment and promotion, we must insist on outstanding academic credentials.

When distinguished scholars join Penn's faculty, their level of research productivity depends primarily on two factors, apart from their own talents and energies: the vitality of graduate education, and the availability of adequate facilities and equipment. At major research universities such as our own, research and teaching are inseparable values—twin dimensions of the educational process. Graduate education clearly plays a special role in the continuum of faculty research and student learning. As novice scholars, graduate students challenge faculty intellectually; as advanced students, they mediate between faculty and undergraduates; as the professoriate of tomorrow, they are essential participants in the life of the research enterprise at Penn. Graduate students also contribute directly to the research projects of their faculty mentors. In the natural sciences, graduate students work in close research partnerships with faculty; in the humanities and social sciences, the collaboration most often occurs through tutorials. In either case, the quality and productivity of graduate students are essential to the University.

The availability of appropriate facilities and equipment also is essential to maintain research excellence. Penn's physical campus is itself an asset to research, as the proximity of our twelve Schools continues to foster joint research projects. This advantage, however, does not obviate the necessity for improving equipment and facilities, without which effective research cannot proceed.

These fundamental commitments underlie several recent administrative initiatives:

- Selected investment in outstanding faculty;
- Remedial investment in research facilities and equipment;
- Expanded investment in the Research Foundation;
- Increased funding for graduate research assistants and graduate fellowships; and
- Strengthening of University ties with industry.

These are the first of many steps yet to come, as we strive to preserve and enhance research excellence at Penn.

1. Selected investment in outstanding faculty.

The University's faculty constitutes our most important resource. In the past two years, we have invested significant resources in recruiting outstanding senior scholars from other institutions. These outstanding scholars, already renowned in their fields, are among those who chose to enter Pennsylvania's uniquely interactive intellectual environment during the past year.

Professor Ann Burgess is the first holder of the Van Ameringen chair in Psychiatric and Mental Health Nursing. She is nationally known for groundbreaking research in treatment of victims of rape and other violent crimes. One of the country's most prominent economists, Professor Marc Nerlove, came to Penn from Northwestern University. Professor Nerlove, a fellow of four learned societies, is widely hailed for work in micro-economics, agricultural economics, and human resources. The new Reginald Jones Professor of Corporate Management, Edward Bowman, is particularly noted for his contributions in methodology. As a member of the faculty of the Sloan School at MIT, he has done seminal research in strategic management. Professor David Chandler, formerly of the University of Illinois, is one of the foremost theoretical chemists,

specializing in the statistical mechanical theory of liquids. Paul Fussell, Donald T. Regan Professor of English, has achieved eminence in several fields of literary studies. Coming to Penn from Rutgers University, Professor Fussell is author of several books, including works on eighteenth century literature and modern British studies; they are considered classics in their fields.

Scholars of this caliber enhance the research strengths and reputations not only of their home Schools but of the University as a whole.

2. Remedial investment in research facilities and equipment.

Last year we allocated resources to purchase newly designed research equipment and to secure the alterations necessary for its introduction. In all, \$640,000 was made available, including allocations to the Department of Chemistry in Arts and Sciences, to the Engineering School for laboratory renovation, and to the School of Medicine for the Institute of Neurological Science.

3. Expanded investment in the Research Foundation.

In our efforts to promote research excellence, we also can take pride in last year's \$860,000 addition to the endowment of the University's Research Foundation. Established as an internal means to provide seed money for promising new research ventures and to bridge gaps in external awards, the Foundation already has an impressive record of support for faculty research across a broad range of disciplines. During the fall of 1982 and the spring of 1983, awards were made to forty faculty members from eight Schools. In the next cycle of awards, special consideration will be given to younger faculty and to proposals within those disciplines that have little access to external funding sources.

4. Increased funding for graduate research assistants and graduate fellowships.

Following a review of funding for graduate research assistants in the light of current federal policy, we plan to start in fiscal year 1985 a 50 percent subsidy for the tuition charged to graduate students funded on sponsored research projects. In 1985 this policy will require an additional \$1 million, which the University will subvene. We view this measure as a significant step in reaffirming the vital role that graduate students play in research as well as the importance of research experience for students engaged in graduate education.

Graduate fellowships, too, will increase in 1984 from \$1.45 million to \$1.7 million. For 1985, we expect that \$2.5 million will be allocated. In subsequent years, as we implement new programs of student financial assistance for undergraduate and professional students, we must continue to augment graduate fellowships. The precise form of those increases will depend in part, however, on the restructuring of graduate groups. We cannot continue to fund as many groups as currently exist, and it is essential that additional support be based on criteria of academic excellence.

5. Strengthening University ties with industry.

Over the past year, a number of steps have been taken toward this important goal. The support provided by General Electric Company for nuclear magnetic research is one example. Others include Agrigenetics in plant biology, Anheuser Busch in marketing research, Johnson and Johnson in health fields, Westinghouse in engineering, and Zimmer U.S.A. in orthopaedic surgery.

Most of these steps involve specific projects linking a School or program with a company. On a University-wide basis, however, we sponsored a successful conference last December on the broad issues

involved, and the proceedings have just been published. In addition, the new guidelines prepared by the Vice Provost for Research, Barry Cooperman, clarify many of the troublesome questions regarding industry-sponsored research.

B. Next Steps

As we move forward in our efforts to preserve and enhance the University's research enterprise, a full agenda of issues awaits our consideration. Three concerns, in particular, require immediate attention:

- Instituting a new Social Science Research and Teaching Program;
- Evaluating the relationship between research efforts and salary recovery; and
- Consolidating graduate groups.

Many of the issues implicit in these concerns speak indirectly to the size of the faculty. In "Choosing Penn's Future," we set the goal of providing real increases in faculty incomes. Strengthening the University's research enterprise requires a similar commitment to support truly innovative research. To achieve both these goals may well require a reduction in the size of the faculty. Through this means we could continue to improve faculty salaries and still ensure faculty access to a wide range of scholarly services, including modern equipment, comprehensive library holdings in specific fields, and well-trained research assistants.

1. Creation of a Social Science Research and Teaching Program.

I am pleased to describe our progress in developing a new program of research and teaching in the social sciences. Last spring the Andrew W. Mellon Foundation announced the creation of a series of institutional grants designed to strengthen and revitalize selected areas of the arts and sciences, particularly at the graduate level. The Foundation stressed that the funds should be used to effect imaginative linkages within individual disciplines or across disciplines, departments, and programs. Penn is one of a limited number of universities asked to submit a proposal.

Our response to the Foundation's invitation grows out of a ten-year effort to evaluate and reintegrate the social sciences at Penn. Sustained discussion began in 1974, when a broad-based faculty committee was formed to work on plans for creating a social science institute. Continuing faculty interest in the subject culminated two years ago with the creation of an *ad hoc* faculty seminar to assess the social sciences. Our evolving proposal to establish a Social Science Teaching and Research Program at Penn builds on this foundation. I am happy to report that Dell Hymes, Dean of the Graduate School of Education, and Ira Harkavy, Vice Dean in Arts and Sciences, have agreed to serve as co-directors.

Broadly conceived, the goals of the program include: the development of new intellectual linkages to overcome the problem of fragmentation in the social sciences, a fundamental improvement in the character of social science graduate education, and the enriching of undergraduate education. A series of problem-oriented faculty seminars is planned to form the core of the program. In addition to providing an intellectual forum, these seminars will serve a curriculum development function, involving graduate student participants who would, in turn, aid the faculty in instructing undergraduates. An Advisory Committee composed of eminent senior faculty from across the University will evaluate the course proposals that emerge from the seminars and, with the program's co-directors, work to integrate promising courses into the body of the curriculum.

2. Evaluating the relationship between research effort and salary recovery.

As part of the University's commitment to undergraduate education, we are evaluating instructional norms, expectations, and guidelines. Similar logic applies to the subject of graduate education, where any discussion of teaching loads is also a discussion of research effort and salary recovery.

To begin, we should reassert the fundamental importance of faculty research at Penn. For example, a teaching load of four courses per year in the Humanities assumes that a faculty member devotes half of his or her effort to research and scholarly activities. Our objective in clarifying the source and extent of financial support for each activity—teaching and research—is to confirm the integrity of each, as well as to maintain equity among faculty and efficiency in departmental scale.

Our evaluation of the relationship between research effort and salary recovery will begin with an analysis of two bodies of information. First, I am asking each Dean to submit a report describing the circumstances under which the term-time salaries of standing faculty are placed on research grants. Second, I am asking the Vice Provost for Research, Barry Cooperman, to survey the salary recovery policies of that handful of leading research universities with which we most often compete for faculty, graduate students, and grants.

3. Consolidation of graduate groups.

In recent years, the pool of outstanding students from which Penn draws its enrollment has declined more rapidly than expected, causing enrollments in some of our sixty-seven graduate groups to dwindle to a handful of students. Our difficulty in retaining a critical mass of students within individual programs lends new urgency to the task of achieving greater coherence and concentration in graduate education at Penn.

Increased fellowships alone cannot reestablish that vital core of students we need to sustain excellence in graduate education. In the end, our ability to sharpen Penn's competitive advantage in the graduate enrollment market will depend on the quality and coherence of the educational experience we provide. Those standards, in turn, depend on the structure of our academic programs as well as the abilities of our faculty and students.

The first task, then, is structural rather than financial. As the Working Group on Graduate Education has observed,

To develop outstanding and unique programs, it may be necessary to foster consolidation among graduate groups. Consolidation has two aspects: reduction of duplicated courses and programs, allowing resources to be used more effectively, and integration of areas of knowledge, encouraging the broadening of areas of inquiry. . . .

The Academic Planning and Budget Committee has expressed a similar view of the necessity to rationalize the organization of graduate education prior to investing in particular graduate groups.

Arts and Sciences, with its broad responsibility for graduate education, must take the lead. Only after a creative process of reorganization and consolidation can we determine ways to utilize available resources more efficiently. Once we have identified core programs for investment, increased allocation of funds for graduate fellowships can make a real difference to the character of our educational offerings as well as the level of our graduate enrollment.

To set this review in motion, I am asking the Deans of the Schools responsible for graduate groups to describe the current status of each group, including measures of the following:

- The current size of the graduate group in terms of faculty as well as students;
- The depth of the applicant pool for that group; and
- The placement record for recent degree recipients of that group.

A. Current Initiatives

Last year we set ourselves the challenge of developing new ways to stretch limited University funds and to assist our students in finding long-term educational financing. Our answer to this challenge is the *Penn Plan*—a new system of family-based financial assistance that meets three broad goals:

- In a time of diminishing applicant pools nationwide, the University will retain its ability to attract and admit the most qualified students without regard for financial need.
- Through the independent *Penn Plan Agency*, the University will provide access to educational capital for all qualifying students, aided as well as unaided, with equitable programs of long-term financing.
- Educational financing, including need-based aid, will proceed as a three-way partnership among the student, the family, and the University, with shared responsibility in fact as well as in spirit.

Starting next year, the *Penn Plan* will be available to incoming undergraduate and professional students. (Ph.D. students will not be eligible because the length of their graduate studies is not fixed.) Four basic arrangements have been developed, each targeted to meet a different set of financial needs and expectations:

- For students and families who want to prepay tuition costs in order to be guaranteed no tuition increases.
- For students and families who want to arrange for a ten-year, fixed interest, secured loan covering prepaid tuition costs for all four years.

- For students and families who want guaranteed access to educational capital with fixed monthly payments, though at variable interest rates, and variable terms of payment.
- For students and families who qualify for need-based aid.

These four arrangements will be made possible by the *Penn Plan Agency*, which will operate something like a bank. It will be both a receiver of funds—down payments by students and families, their prepayments, and their monthly payments—and a dispenser of revenue to the University in the form of tuition payments on behalf of those same students and families.

B. Next Steps

The *Penn Plan* was reviewed in some detail with the University Trustees earlier this month, and they expressed great enthusiasm. We expect public announcements and national publicity beginning in November. Next steps include:

- Development by each professional School of its approach to the *Penn Plan*;
- Formal establishment of the *Penn Plan Agency*;
- Initiation of the search for a director of the *Penn Plan Agency*.

Helen O'Bannon, Senior Vice President, will insure that all necessary arrangements are made for establishing the *Penn Plan Agency*. She will also organize the search for a director who can provide leadership in implementing innovative solutions to the financing problems of students and their families.

Conclusion

As a summary of the University's planning process, this agenda reflects the gains we have made over the past two years—our progress in completing the tasks we set for ourselves, and in articulating directions for the future. Over the coming decade, the momentum of these initiatives can carry us through some difficult times. Proceeding in tandem with our academic planning efforts is a major development program to raise \$130 million over the next three years to meet those key University needs identified in "Choosing Penn's Future." The same set of educational priorities will frame planning on the School level, as the Schools, in cooperation with the Academic Planning and Budget Committee, review and revise their five-year plans.

A fundamental shrinkage in the nation's pool of college-age youth, increases in the cost of supplying a quality education, declines in the growth of federal support for higher education and research—these trends, and the problems they present for colleges and universities such as our own, should not be underestimated. Still, our agenda of current and planned initiatives stands as evidence that external pressures are making Penn more, not less, creative in its commitment to educational excellence. To sustain that commitment, we must remain mindful of how our daily efforts fit within a larger framework of shared educational experience, reserving sufficient time, attention, and resources to build the connections that transform ideals into realities.