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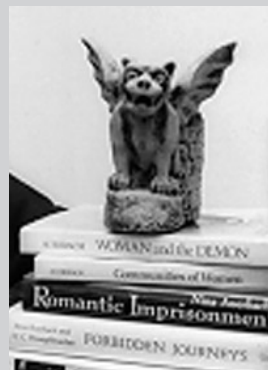
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It's Halloween:

Do you know where your colleagues are?

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or the silent *Phantom* in the
Curtis Organ Society's 24th
annual *frightfest* at Irvine.



Getting a Workout at New Bolton Center

See page 10

Photo by Jenny Friesenhahn

NEWS IN BRIEF

State of the Federal Budget, and Other Topics for the Research Community

As the U.S. House and Senate passed legislation last week that includes restructure and reduction of federal support for medical care and training at academic medical centers, President Judith Rodin and Trustee Chairman Dr. Roy Vagelos have written to President Clinton and to the Congressional leadership urging them in particular to sustain support already agreed to for the NIH in any final budget agreement. See page 7 for a longer report.

Engineering is afoot in the Research Administration process at Penn. Acting Vice Provost Ralph Amado and ORA Director Anthony Merritt give a progress report and list the key team members in an open letter on page 8.

On pages 5-7, Dr. Janice Madden and Karen Lawrence summarize the proceedings of October's three-day conference of the Association of Graduate Schools. One of the conference topics, post-doctoral education, is also the subject of an AAU survey by USC's Dr. Steven Sample, whose results are reported on pages 20-21.

Council: State of the University

At the November 1 meeting, President Judith Rodin and Provost Stanley Chodorow will lead the annual State of the University presentation, including reports on both the Perelman Quadrangle and the 21st Century Undergraduate Education projects.

On the agenda for information is the year-end report of the Personnel Benefits Committee which sums up recommendations made and adopted (e.g., PennCare and the new prescription coverage) as well as recording those made on some issues still pending (e.g., part-time benefits; tuition at community colleges for staff on deferred admission to Penn evening programs). The report is on pages 18-19 of this issue.

Note: Observers are reminded to register their interest in advance by calling Vanessa Silva at the Office of the Secretary, 898-7005.

Heading Penn's Way '96

Co-chairing this year's Penn's Way campaign, which kicks off tomorrow, are Carol Scheman, Vice President for Government, Community and Public Affairs, and Dean Ira M. Schwartz of the School of Social Work. After looking at the five-year history of Penn's workplace campaign, they have announced, in a campus letter shown on the back page of this issue, that the 1996 campaign will be a little different.



Vice President Scheman



Dean Schwartz



Dr. Warner



Dr. Balamuth



Dr. Narmour



Ms. Kneeley

New Structure, New Roles at SAS

On page 3 Dean Rosemary Stevens outlines the new structure of the administration in the School of Arts and Sciences, developed over the summer and phased in this fall. Four members of the School, all internal appointees, are in new roles. In the key academic deanships, Dr. Frank Warner has moved from associate dean to deputy dean, and Drs. David Balamuth and Eugene Narmour are new associate deans. Jean-Marie Kneeley, formerly director of development, became vice dean for external affairs, with dual reporting lines, to the Dean and to Vice President for Development Virginia Clark. See descriptions below.

Deputy Dean: Frank Warner

Dr. Warner, professor of mathematics, came to Penn as an associate professor in 1968, after taking his Ph.D. from MIT and teaching at Berkeley. His field is differential and Riemannian geometry. He has served the School as undergraduate chair and then department chair in mathematics; chair of the SAS Personnel Committee, and, since 1992, as associate dean for the natural sciences. He is the winner of two prestigious teaching awards—the Ira Abrams and the Lindback. A Guggenheim Fellow in 1976, Dr. Warner was named Fellow of the American Association for the Advancement of Science last year in recognition of his work as chair of the American Mathematical Society's Committee on Science Policy.

Associate Dean, Natural and Social Sciences: David Balamuth

Dr. Balamuth, professor of physics, also joined Penn in 1968. Chair of the Faculty Senate in 1988-89, Dr. Balamuth has served SAS as graduate chair of physics and more recently as the first chair of what is now the Department of Physics and Astronomy.

A Harvard alumnus with a Ph.D. from Columbia, he is an experimental nuclear physicist whose research interests focus on atomic nuclei of unusual composition. He has served in several capacities as an advisor to the federal government, including a year as Program Officer for Nuclear Physics at the National Science Foundation, and most recently as a member of the Long Range Plan Working Group of the Nuclear Science Advisory Committee. He is a Fellow of the American Physical Society.

Associate Dean, Humanities and Social Sciences: Eugene Narmour

Dr. Narmour, the Edmund J. Kahn Distinguished Professor of Music, took his Ph.D. from Chicago. He joined the Penn faculty in 1971. He has been a visiting professor at the Central Conservatory in Beijing, visiting lecturer at the Sibelius Academy in Helsinki and, on two occasions, visiting fellow of Wolfson College at Oxford. He has just completed a year as a Fellow of the Center for Advanced Studies in Behavioral Science at Stanford, and has been elected president of the Society for Music Perception and Cognition.

Twice chair of the music department, Dr. Narmour is the author of three books (*Beyond Schenkerism*, *The Analysis and Cognition of Basic Melodic Structures*, and *The Analysis and Cognition of Melodic Complexity*). Some of his numerous articles on music theory and analysis have been translated into French, Chinese, and Japanese.

Vice Dean for External Affairs: Jean-Marie Kneeley

Ms. Kneeley, who will be responsible for fund-raising strategies for the arts and sciences, is an alumna of Syracuse University who has been in fund-raising and alumni relations for more than ten years, six of them at Penn where she began as regional campaign director in New York. Since 1993 she has been director of development for SAS. Before coming to Penn she held development positions at Columbia, the Metropolitan Opera, and Cooper Union in New York City.

(More on the new structure, page 3)

SAS: Restructuring in the Dean's Area

On September 1, SAS moved formally into a new administrative structure in the Dean's Office. Frank Warner is the new Deputy Dean. David Balamuth is the new Associate Dean for the Natural Sciences, together with Economics, and History and Sociology of Science. Eugene Narmour is Associate Dean for the Humanities, Anthropology, Political Science and Sociology. Bob Rescorla continues as Associate Dean for Undergraduate Education, Walter Licht for Graduate Studies, and Richard Hendrix for Continuing Education. Ben Goldstein is Associate Dean for Computing, and Jean-Marie Kneeley is the Vice Dean for External Affairs.

This is an extraordinarily strong and dedicated team, distinguished by long service to the School and to Penn. The following statements explain the functions of individual positions and the rationale for change.

Basic Job Descriptions

The School of Arts and Sciences (SAS) is responsible for faculty, students, educational programs, budgets, fund-raising, long-range planning, and all other aspects of research and teaching in the arts and sciences at Penn. Students include undergraduates in the College of Arts and Sciences, undergraduates in other undergraduate programs at Penn (Wharton, Engineering, and Nursing) for whom SAS provides courses in the arts and sciences, graduate students, and continuing education students.

The Dean is responsible to the President and Provost for leadership of the School. The Dean provides the intellectual vision for the School. As the designated leader of the arts and sciences at Penn, the Dean directs both long-range planning and continuing operations.

The Dean organizes and supervises the School's programs on an ongoing basis, working with faculty and students, with University officials, the School's Board of Overseers, and with leaders of Penn's other undergraduate and professional schools. The Dean sets the tone of the School as an organization. She represents the School to the outside world, and has a vital role in fund-raising.

The Deputy Dean has delegated responsibility for budget, computing, facilities, and faculty/staff personnel issues. He works closely with the Dean on strategic planning, with a special role in

budgetary planning and strategic analysis. The Deputy Dean serves as Acting Dean in the Dean's absence. The Associate Dean for Computing reports directly to the Deputy Dean, as does the Executive Director for Administrative and Financial Services, the Director of Facilities Planning and Operations, and the Director of Institutional Research and Information Systems.

The Associate Dean for the Humanities and Social Sciences is responsible to the Dean for the Humanities departments, together with the departments of Sociology, Anthropology, and Political Science. He works with the Dean on priorities and long-term planning in these fields. Chairs in his Division work directly with him on matters of personnel, budget, space and facilities.

The Associate Dean for the Natural Sciences and Social Sciences is responsible to the Dean for the Natural Sciences departments, together with the departments of Economics, and History and Sociology of Science. He works with the Dean on priorities and long-term planning in these fields. Chairs in his Division work directly with him on matters of personnel, budget, space and facilities.

The Associate Dean for Undergraduate Education and Director of the College has delegated responsibility for undergraduate curricula, programs and students in all departments and non-departmental programs in SAS. He directs the College Office, together with its staff of student advisers, and works with the Dean on planning and priorities for undergraduate education in the arts and sciences at Penn.

The Associate Dean for Graduate Studies is responsible to the Dean for graduate education in the School. He works with the Dean on long-range planning for graduate education. He also holds primary responsibility for Centers in SAS, working with the Dean and Associate Deans.

The Associate Dean for Continuing Education has delegated responsibility for the College of General Studies, Summer Sessions, and for continuing education programs in the arts and sciences at Penn.

The Vice Dean for External Affairs has delegated responsibility for external relations and fund-raising for SAS, reporting directly to the Dean but with a dual reporting line to the Vice-President for Development and Alumni Relations.

Rationale

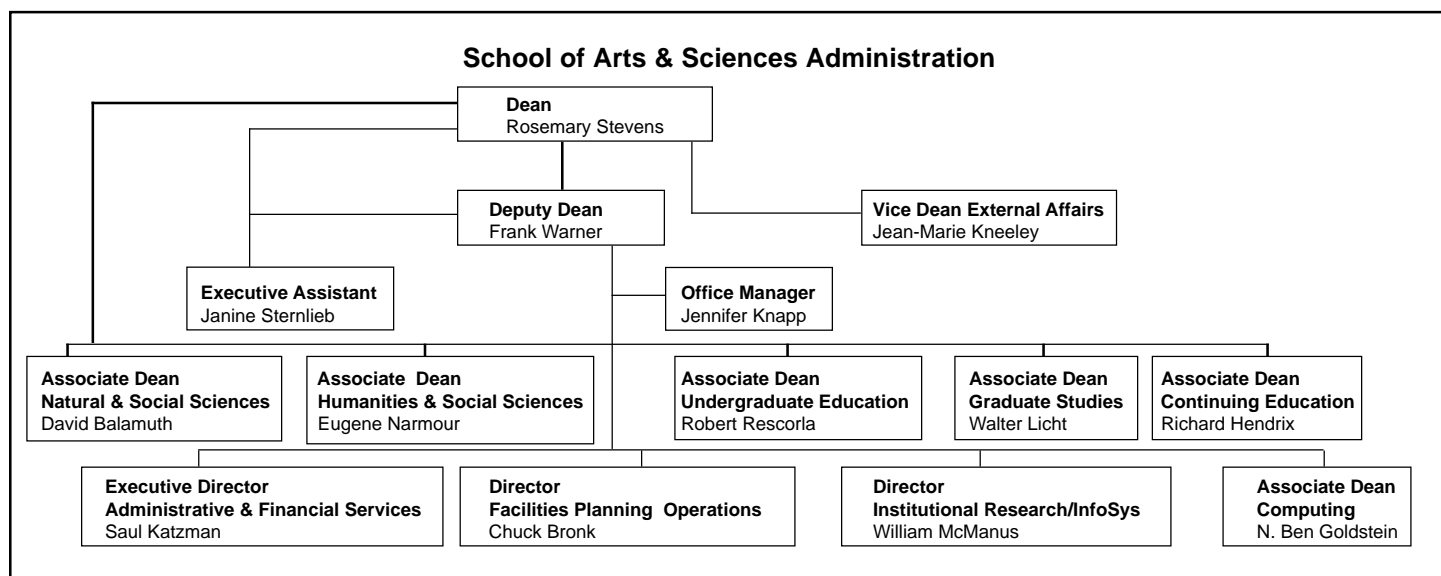
The School is a complicated and constantly changing organism. It must be responsive, simultaneously, to changes in knowledge, changes in faculty and student interests, and changes in the external environment of higher education. Yet at the same time, the School must shape and follow a path of constancy, safeguarding and nurturing knowledge as part of Penn's role as a leader and conservator of social thought and learning in the United States. A flexible organizational structure is essential. The administration of SAS is designed to provide maximum coordination across functional lines, and for the greatest possible connections with faculty and student needs and interests in the School.

For the next two to three years we will be facing questions whose successful resolution is vital to the future success of this great school—and indeed to the future of liberal education and to research universities in the United States. Questions include the best design of undergraduate education for the 21st century, appropriate approaches to graduate education in today's tight academic marketplace, how far (and in which directions) we should go in our ongoing commitments to continuing education, and the uncertain funding of scientific research and education. Decisions we make about faculty year by year have long-term implications for the School, and for the shape of its departments in the future. Of intense interest to us all are accurate yet aggressive estimates of budget projections as we plan ahead. The staff of the Dean's Office has been working very hard on all of these fronts, along the paths set out in the SAS Strategic Plan of 1993 (*Almanac Supplement 12/7/93*).

The new administrative structure will allow me to put more of my time and energy into designing the best possible future for the school: that is, into strategic planning. Fund-raising and the public image and visibility of the School also play an increasing role for me. The new structure will allow Frank Warner to spend more time on vital budget and planning projections, and on the effective operation and restructuring of the School's support services. Five strong, senior associate deans will help guide our faculty and educational agendas.

I feel privileged to work with such skilled and dedicated colleagues as my Deputy and Associates in this office.

— Rosemary A. Stevens



Speaking Out

The following letter was sent to the President, and later sent by its authors to Almanac for publication. The portion of Dr. Rodin's convocation address to which the letter refers is printed below.

A Challenging Vision

We are writing to express our appreciation of your convocation address to incoming students. When a Penn student challenged the University with difficult questions about its responsibility to the community, you did not become defensive. You used the opportunity to express the key element of your vision for 21st Century Education on this campus; i.e., the integration of theory and practice, of academic and intellectual growth combined with reflection on secular diversity. Your commitment to have Penn students actively engaged with the social, economic, and political realities of daily culture through their academic endeavors was clear.

Your foresighted vision is consistent with the application of the religious principles by which we operate our ministries and programs. It is consistent with the highest principle of academe; to use the intellect to ultimately enhance the quality of human life. We believe Benjamin Franklin would be pleased.

Please consider the religious communities your partners in this vision. You and the Provost are clearly blazing a trail for higher learning, which has the potential for revolutionizing the way we approach education. It marks a more integrative and holistic approach to learning that is remarkable in this era of specialization and fragmentation.

We commend your obvious commitment to being an innovative leader among the Ivy League schools.

*Rev. Andy Barasda, St. Mary's Episcopal
Jeremy Brochin, Hillel
Bob Cardie, Newman Center
Rev. Beverly Dale, Christian Association
Fr. Mark Hunt, Newman Center
Rev. Lawrie Hurr, Cathedral Church
Rev. Cynthia Krommes,
University Lutheran
Rev. David Tatgenhorst,
Calvary United Methodist*

Excerpt from Dr. Rodin's Address to the Class of 1999, September 3, 1995

You are here because of our outstanding faculty, and your single most important challenge is to boldly seek out the intellectual destinations that lie gathered around you in the minds of our faculty and the ideas you and they will invent together.

Your time at Penn will produce self-knowledge, career choices, lifetime interests, and personal passions. Many of these you will find in the rich intellectual, social and cultural life of

Penn's campus. Others can be discovered in the exciting city around us, in its museums and galleries, its parks and its politics, its historic sites and its stimulating shopping districts.

Out there, too, you will find opportunities for community service that will bring rewards beyond measure both to you and to those you decide to help.

One of last year's freshmen, Tal Golomb from Ridgefield, Connecticut, has written a brave challenge to you and to his own classmates. It appeared in the campus newspaper, *The Summer Pennsylvanian*.

Mr. Golomb spent his summer taking a seminar on revitalizing urban schools and their surrounding communities. As part of that seminar, he ran a summer camp program at the Turner Middle School right here in West Philadelphia. He learned not only the facts and theories of urban life, but the hard personal realities of what it takes to effect change and make a difference in someone else's life.

Mr. Golomb's experience prompted him to pose some hard questions to all of us: He asked "With one of the best medical institutions in the world," "why do our neighbors suffer an intolerably high infant mortality rate? With the best business school in the world, why is our community's economy crumbling?"

Of course the medical center and Wharton are and have been deeply involved in the community, as are so many schools and individuals at Penn, but we can all do more.

As Mr. Golomb challenged us, "No matter what club, activity, department, or school you are in," "continually question how you can focus your talents in partnership with our community, to better our community, to better yourself."

You will hear much over the next few years about how Penn tries to unite theory and practice in preparing you to live in the 21st Century. We believe with our founder Benjamin Franklin that theory and practice, knowledge and service, teaching and research, are merely different aspects of the same thing—education.

What we have in mind is what Franklin called "the great aim and end of all education," joining inclination and ability "to serve Mankind, one's Country, Friends and Family."

So, whether you take a service-oriented academic seminar like Mr. Golomb, or invent toys for disabled children in Professor Daniel Bogen's bioengineering seminar, whether you volunteer as a tutor for inner-city children or work for the political candidate of your choice in next year's election, you will find yourselves facing—and meeting—the challenge that Mr. Golomb and Mr. Franklin have posed to all of us.

You will become living, breathing, acting examples of what education is, in the truest and broadest sense, and what the University of Pennsylvania is fundamentally all about.

DEATHS

Bernard J. Ford, former Associate Director of Libraries, died at his home on October 10, at the age of 67. Born in England, Mr. Ford was educated at Oxford and the University of London. He joined the cataloging department of the Penn Library in 1956 and was appointed Head of Circulation in 1958. He became associate director in 1974, serving in that post until his retirement in 1992—and then returning to the Library to serve part-time until his passing.

He is survived by his wife, Margaret; three children, Stephen, Catherine, and Rachel Van Arsdal; and seven grandchildren.

A campus memorial service for Mr. Ford will be held Friday, November 3, at 4:30 p.m. in the Rosenwald Gallery, Special Collections (6th floor of Van Pelt-Dietrich Library Center). Contributions can be made to the Alzheimer's Association, 100 N. 17th Street, Philadelphia, PA, 19103, or Delaware Valley Transplant Program, 2000 Hamilton Street, Philadelphia, PA, 19130.

Dr. E. Dale Saunders, an emeritus professor of Japanese studies who was widely known for his writing and teaching, died on October 19 at the age of 76.

Dr. Saunders, who joined Penn in 1955 as assistant professor, became associate professor in 1963 and full professor in 1968. Teaching courses on Japanese Buddhism, Classical Japanese Literature, and East Asian Civilization, he was the author of *Mudra: A Study of Symbolic Gestures in Japanese Buddhist Sculpture* (1960), *Mythologies of the Ancient World* (1961), and *Japanese Buddhism* (1964).

After taking his A.B. degree from Western Reserve University in 1941 and an M.A. in Romance Philology from Harvard in 1942, Dr. Saunders entered the U.S. Naval Reserve, where he continued his studies of Japanese. He earned a Certificate of Proficiency from Colorado in 1944, an M.A. from Harvard in 1948, and the Doctorat de l'Université de Paris in 1953.

Dr. Saunders was a teaching fellow in Romance Languages and Literature at Harvard in 1942 and again in 1945-48. Prior to joining Penn he also held the positions of instructor in French at Boston University in 1946; Chargé de mission à titre étranger, Musée Guimet, in Paris in 1950; Lecturer at the University of Paris in 1951-52; and Assistant Professor at the International Christian University, Tokyo, 1954-55.

Rolan Thomas Wightman, an assistant head of stacks in Van Pelt Circulation, died on Saturday, October 7, at the age of 47. He had been a member of the Library staff for eight years.

Mr. Wightman is survived by his wife, Diana, a bibliographic assistant at the Biomedical Library, and by his mother, Claire; two sisters, Lees Velasquez and Jean Upton; and a niece and nephew. Memorial contributions may be made in his name to Jefferson University's Division of Neoplastic Diseases, c/o Dr. David Berd, Suite G4250 Gibbon Building, 111 South 11th Street, Philadelphia, PA 19107.

Lawrence Zuckerman, C '95, a first-year student in the School of Social Work, died October 17 at the age of 22, of complications from Duchenne's muscular dystrophy. A graduate of New York City's Ramaz High School, he was a Benjamin Franklin Scholar whose undergraduate major was history.

He is survived by his parents, Mr. and Mrs. Joseph Zuckerman, his brother, Brian, and his sister, Beth.

Speaking Out welcomes reader contributions. Short timely letters on University issues can be accepted Thursday noon for the following Tuesday's issue, subject to right-of-reply guidelines.

Advance notice of intention to submit is appreciated.—Ed.

When the graduate deans from the 60 AAU institutions met at Penn on October 1-3, 1995—for the first time in Philadelphia—their agenda touched on federal funding policy, the perceived overproduction of Ph.D.s, the controversial COSEPUP proposals to change the Ph.D. curricula and methods of funding, the NRC rankings just issued, and the future of postdoctoral education. Below, the University's Vice Provost for Graduate Education and the Assistant Vice Provost summarize the proceedings.

Notes from the 47th Annual Meeting of the Association of Graduate Schools

by Janice F. Madden and Karen Lawrence

OCTOBER 1, 1995

Plenary Session I: Research Policy in the 104th Congress

Congressman Robert Walker, Representative from the Sixteenth District in Pennsylvania, Vice Chair of the House Budget Committee, and Chair of the House Committee on Science.

Congressman Walker spoke about the changing priorities of the federal government, the commitment to balancing the budget within seven years, and the need to prioritize spending within the context of a balanced budget. He said that the government will still be spending hundreds of billions of dollars for science during the next seven years, but that a clearer prioritization is critical to guide that spending. What should be the right way to prioritize, he asked. He also expressed concern that the process of consensus-building in the academic community may inhibit what he saw as the proper priorities for funding science, citing inertia in support for priorities such as NASA's Mission to Planet Earth.

Rep. Walker said that Congress has made a fundamental decision, given limited resources, to assign basic science a higher priority than applied science and that some programs have been "de-prioritized" (i.e., advanced technology program). NSF, NASA, Energy research, and NOAA will be "held harmless" from cuts and may see some increase in funding over the next seven years.

The Congressman argued strongly for a comprehensive government approach to science and a Department of Science that would include the NSF, NASA, Energy research programs, and the core science programs in the Department of Commerce. In advance of such a department, he intends to bring to the House floor a single, comprehensive science authorization bill that includes each of these programs.

Rep. Walker also advocated holding down taxes (including lowering the capital gains tax that inhibits investment in long-term research), litigation, and regulations which reduce the positive impacts of basic science and technological achievements. He supported permanent R&D tax credits for investment in research programs and infrastructure and the creation of internationally funded partnerships for large scale R&D projects.

The Congressman concluded by citing two issues that must be resolved in the next year. First, he cited the need for a change in the indirect cost algorithm in order to provide a more equitable sharing of costs and savings with the federal government. Second, he expressed concerns about the peer review process. Although he supports peer review, Walker reported that many of his colleagues strongly object to a system that provides the vast majority of funding for research to a few elite universities that are geographically concentrated in only a few congressional districts.

In the question and answer exchange which followed Walker's talk, Walker strongly supported immigration policies which keep our universities open to the best students, researchers, and faculty, regardless of their citizenship or national origin. He also supported the proposal to close the National Endowment for the Arts and the National Endowment for the Humanities because these efforts are of lower priority and must be cut to balance the budget.

Plenary Session II: Research and Education Policy: The AAU Agenda

Cornelius J. Pings, President, Association of American Universities

Dr. Pings described the process involved in approving the federal budget (appropriations, reconciliation, handling the debt ceiling) and warned that we may not have a final budget until halfway through the fiscal year. Regarding funding for research, Pings expects that NIH will receive a 3.6% increase and that NSF funding will be off slightly (but very little cut in the basic research budget). He worried, however, that the "protection" of basic research may be threatened if there is a budget "showdown" resulting in intense negotiations and political trade-offs made in more private arenas. Dr. Pings confirmed that peer review is under attack in Congress. He also reported that certain areas of basic research (i.e., fetal research) are vulnerable. The Department of Education's budget will be substantially cut, with the graduate fellowship programs that the department supports (Javits and Patricia Roberts Harris) particularly vulnerable.

Dr. Pings cited the perceived overproduction of Ph.D.s, the recruitment and postgraduate placement of international students, the level of support for graduate students (relative to postdocs), prohibition against charging RA tuition to the fringe benefits pool, and the support of international students on research grants, as the major national issues in graduate education. Dr. Pings mentioned a variety of other issues affecting research universities including the cost of medical education, student loan programs, and direct lending programs. He urged that members lobby key congressmen to "invest in new minds and the new economy." Dr. Pings concluded by pointing to some key areas for research universities to work on with Congress: indirect costs; Department of Education programs; telecommunications policy; accreditation; postdoctoral education; reform of K-12 science education; and affirmative action.

OCTOBER 2, 1995

Plenary Session III: Responses to the COSEPUP* Report: *Reshaping the Graduate Education of Scientists and Engineers*

Dean Richard Attiyeh, University of California at San Diego, Dean Susan Allen of Tulane University, Dean Graham Glass of Rice University, Vice Provost Janice Madden of Penn, and Dean George Walker of Indiana University

A panel of AGS representatives from several research universities led a discussion of the COSEPUP report and then prepared a written response from AGS to the report. The response acknowledges the COSEPUP report as helping to focus national attention on a number of important graduate education issues that have been of long concern to AGS. AGS acknowledges that there are changes occurring in the labor market and in scholar-

* Committee on Science, Engineering and Public Policy of the National Academy of Sciences, National Academy of Engineering, and Institute of Medicine

ship that require some changes in graduate education, but argued strongly that the Ph.D. must remain a research degree. AGS made three specific recommendations: (1) AGS urged the AAU to carry out a review of graduate education that would include a re-examination of national goals and policies that influence graduate education, with particular attention to the federal role in funding graduate education. (2) AGS plans to form a task force to develop recommendations for institutional and departmental policies relating to time to degree, career advising, and professional skills training. (3) AGS emphasized the importance of continuing support for its Project on Doctoral Education, which has been collecting and analyzing data on doctoral education in 10 fields at the AAU institutions and that is providing important new insights on what influences success and failure in Ph.D. completion rates.

Plenary Session IV:

Discussion of the NRC (National Research Council) Research Doctorate Assessment: *Research-Doctorate Programs in the United States: Continuity and Change*

Dr. Joseph Cerny, Provost for Research, Dean of the Graduate School at the University of California at Berkeley and Dr. John D'Arms, former Vice Provost for Academic Affairs and Dean of the Rackham School of Graduate Studies at the University of Michigan. Both are members of the committee that prepared the study.

Dean Cerny described the methodology used and reviewed selective findings. The study included a much larger number of participants (274 universities) compared to rankings produced by the popular press. The NRC rankings were the result of evaluations by the most widely respected faculty in their respective fields.

Dean Cerny also reported on some studies he had conducted comparing the differences between the rankings of program faculty and the effectiveness of graduate education to the reports of Ph.D. graduates of those programs on their own satisfaction with programs at Berkeley. There was no correlation.

Dr. D'Arms took note of some of the study's shortcomings: the absence of a survey of recent Ph.D.s, of international reviewers, and of "value-added" non-degree granting centers and institutes for research and other scholarly collections, etc. on our campuses. Dr. D'Arms noted that there is a strong correlation between faculty size and the quality ranking. Faculty size has increased across all programs at the same time that Ph.D. production has declined. Dr. D'Arms indicated that in the future, the review data will be broadened, they will consider input and output measures and will include faculty data on women and minorities. He reminded members that much of the data will soon be available on CD-ROM.

Finally, Dr. D'Arms reported on his study of how rankings within fields shifted between the last rankings in 1982 and the current rankings. The greatest change occurred in Spanish, where the growing importance of cultural studies and of Latin America, created substantial changes in the ordering. English also experienced substantial reordering. Fields with less change in paradigm, such as physics and economics, had less change in the ranking of programs.

Questions and comments included: criticism that the structure of the process makes the rankings out of date by the time they are issued; concerns over whether the concept "graduate faculty" is universally understood; concern that users of the rankings may not appropriately take into account the increases

in the numbers of programs (i.e., 45/92 is better than 45/45). It was noted that faculty size has more to do with undergraduate education than graduate education; faculty recruitment is not done by graduate deans.

Electrifying the Seminar

Dr. James O'Donnell, Professor of Classical Studies at Penn, provided the host institution's demonstration of resources used in graduate education.

Dr. O'Donnell discussed the uses of electronic communication in graduate teaching, and also demonstrated how his graduate courses on Augustine and Boethius were offered over the Internet.

Open Forum

The effects of political and judicial influences on admissions and fellowship programs that target students from minority groups was discussed by Vice Chancellor for Academic Affairs Claudia Mitchell-Kernan of UCLA and Associate Provost for Research Ilene Nagel of the University of Maryland. Dr. Nagel argued that the public does not want to interfere in progress toward equality of opportunity but it does want to change the balance of what is being done. She contended that fellowship programs are more likely to withstand legal challenge if the targeted groups are determined by underrepresentation and if all underrepresented groups are targeted. Vice Chancellor Mitchell-Kernan described the actions by the University of California Board of Regents to eliminate race, ethnicity and gender as criteria for admissions or hiring. The Vice Chancellor anticipates significant decreases in the representation of African-

Americans and Latinos on California campuses. Dean Leslie Sims of the University of Iowa reported that federal agencies plan to continue minority add-on programs but will be looking at the impact of legal challenges. Dr. John Vaughn, Executive Director of AGS, urged that educators articulate the benefits of broader educational diversity to justify these programs.

OCTOBER 3, 1995

Mass Media and Cynicism About Institutions

Dr. Kathleen Hall Jamieson, Dean, The Annenberg School for Communication, provided the host institution's guest academic presentation.

Dean Jamieson discussed the results of her studies (performed jointly with Professor Joseph Capella) of how the presentation of news by the media affects the public's perception of government. She presented results of their study of media coverage of the Philadelphia mayoral contest. She also analyzed the press treatment of the New Hampshire meeting between President Clinton and Speaker Gingrich and the Minnesota Compact which offers guidelines on the use of media in campaigns. She argued that news presentations that emphasize conflict or "scoring" or personal interest in outcomes when describing policy issues undermine public trust, but that news coverage emphasizing the substance of the discussion and the conceptual issues creates a more positive public response to institutions and candidates.

In the question and answer period, Dean Jamieson urged that education for journalists should be substantively based in traditional academic fields of study and not focused on journalism as a technique.

(report continues next page)

October 2: The Conference Dinner

As host to the AGS Dinner in the University Museum, Penn's President Judith Rodin said the system of research and graduate education that has produced such extraordinary scholars and practitioners is under considerable stress, producing "fissures in the system in need of a fundamental rethinking." She continued:

That process, begun in the COSEPUP study, which you are now evaluating, need not create an entirely new system of graduate education. Indeed, as both the COSEPUP report and the AGS response suggest, the American system of graduate education that integrates research and training is the "most effective system yet devised" for advanced training. And we must defend it. But an honest and critical evaluation must take into account a fundamentally different environment for research and graduate study than the one in which we were trained. Let me briefly enumerate where some of the fault lines may lie:

(1) Certainly the most prominent is the dramatic change in the political climate in Washington and the mounting pressure to eliminate the federal deficit by 2002. In combination with long-standing legislative and executive branch concerns about the high cost of research and declining support for graduate fellowships, one need not be clairvoyant to see fundamental changes in federal support for the research and graduate training enterprise.

(2) Even at current levels of funding, support for graduate research fellowships and traineeships is harder to come by...and...policies limiting payment of graduate student tuition and postdoctoral stipends under research and training grants are already in place or under consideration at the NSF and the NIH.

(3) The House Appropriations Committee, commenting on the indirect costs of research, recently concluded that "it does not believe that the status quo is sustainable or defensible in an environment of steady or declining resources."

As part of a larger strategy, Dr. Rodin urged the AGS to help to make the research and graduate training enterprise more understandable, and more compelling to people outside the university, and to "use your energy to develop new cost-effective means for graduate training."

— J.F.M.

Plenary Session V: Postdoctoral Education

Steven B. Sample, President of the University of Southern California and Chair, AAU ad hoc Committee on Post Doctoral Education

President Sample presented a report from the committee. He defined postdoctoral training as essentially a research experience (not clinical training) involving work with a senior scholar at a research institution and publication of results. Based on an informal survey* which the AAU conducted of 25 institutions, it is clear that approximately half of postdocs are U.S. citizens or Permanent Residents and half are foreign postdocs; how many of the foreign postdocs received their Ph.D. training in the U.S. is not known. Little is known about postdocs at the national or local level; they are uncoun­ted and unregulated, with little uniformity of policy or monitoring even at the institutional level.

There has been a change in the nature of the postdoc position. Although it has been a stepping stone to a tenured position, it may now be a more permanent condition as tenured jobs become less available. This change

has legal implications. Another related question, for which the answer may be changing, is: What is the purpose of a postdoctoral traineeship? Is it a holding pattern, an educational experience, or a way to get a low-cost worker?

The perceptions that we may be failing to self-regulate and that we are allowing too many foreign postdocs to remain in the U.S. are hot political issues. The fact that the majority of postdocs are supported on federal grants and the potential that foreign postdocs may be an avenue for the transfer of technology are related concerns.

During the discussion it was noted that M.D.s appointed as postdocs often do not have rigorous research training and require more training to become productive researchers. Postdoctoral employment can be used as an immigration holding pattern as well as a job holding pattern. Some institutions (MIT and Rutgers) treat their postdocs as employees. Stanford and Cal Tech charge tuition.

NRC plans a major study of postdoctoral education.

* See page 20 of this issue for the survey results.—Ed.

The Federal Budget: Broad Outlines, Much Uncertainty

With most appropriations bills still unfinished and a deadline for raising the federal debt ceiling looming, Congress and the Clinton Administration appear to be headed toward a budget showdown, leaving spending decisions vital to Penn and its students unsettled.

In the current but unfinished versions of House and Senate spending bills, most scientific research, student aid, and several other programs of importance to higher education have fared relatively well compared with many other areas of federal spending, against a backdrop of reductions aimed at eliminating the Federal budget deficit by 2002. Included among the exceptions to this general rule are several areas, such as the National Endowment for the Humanities, environmental research programs, and research sponsored by the Agency for Health Care Policy and Research, which are slated for substantial cuts.

"The results of these Congressional actions so far are mixed, but are generally more favorable toward scientific research and student aid than might have been expected, given the 'glide path' to a balanced budget that Congress adopted in May," said David Morse, Assistant Vice President for Policy Planning. "Nevertheless, the funding decisions made so far this year suggest that the *growth* in federal support, particularly for scientific research, that we have experienced over the past quarter century, is unlikely to continue." And, said Mr. Morse, "even though the outlines are clearer and better than they appeared this spring, no one yet knows where we will end up this year, in terms of how higher education and the University will ultimately fare."

Congress and President Clinton appear to be far apart on several key spending bills, two of which are of great interest to faculty and students: Labor, Health and Human Services, and Education, which includes funding for student aid and the National Institutes of Health, and VA, HUD, and Independent Agencies, which contains funding for the National Science Foundation and NASA. The President has signaled that he would veto these bills if they reach him in current form, since they eliminate or substantially cut several key Administration programs or contain legislative directives that he has described as unacceptable.

Last week, the House and Senate passed "budget reconciliation" legislation that includes a tax cut and reduces spending in federal entitlement programs, including Medicare, Medicaid,

student loans. These bills, which restructure and reduce federal support for medical care and training at academic medical centers and for student loans, are also Presidential veto targets. President Rodin and Trustee Chairman Dr. Roy Vagelos have written to the President and to the Congressional leadership urging them in particular to sustain support already agreed to for the NIH in any final budget agreement.

This already volatile political battle is further fueled by uncertainty about how Congress and the President will deal with the statutory limit on the national debt. The debt ceiling of \$4.9 trillion will be reached around mid-November, after which the government may have insufficient funds to make interest payments to holders of federal bonds. The Congressional leadership has signaled that it may attach legislation to extend the debt ceiling to the budget reconciliation package.

Thus, the President is faced with an enormous "Hobson's choice." Congress will not send the appropriations, budget reconciliation, tax, and debt ceiling bills to the President, either separately or collectively, until close to November 13, when the current, short-term funding bill, known as a "continuing resolution," expires. This will force the President to choose between a shutdown of government services and spending, along with technical default on the federal debt, and acceptance of spending poli-

cies and directives he has stated are unacceptable—the so-called "train wreck" scenario. The resolution of this standoff could result in a further reordering of federal spending priorities, with uncertain effects on final funding of student aid and research programs, and on support for medical education and training, at Penn and peer institutions.

In late September, Congress and the Administration bought additional time by agreeing to a continuing resolution that permits federal spending between October 1—the beginning of the Federal fiscal year—and November 13. In general, the terms of this short-term continuing resolution reflect funding decisions made last year, with discretionary spending programs of student aid and research supported at levels between 5% and 10% below those adopted by Congress in FY 95.

Programs like the National Institutes of Health, Penn's largest research sponsor, which fared relatively well in the initial rounds of Congressional decision-making for FY 96 (with the House proposing an increase of 5.7% and the Senate 2.7%), are less favorably treated under the terms of the current continuing resolution. The same is true for the National Science Foundation, which Congress has initially slated for roughly the same amount of support as last year, and for many of the federal student aid programs. For programs, like the National Endowment for the Humanities, that Congress has targeted for reductions of greater than 10% in its initial action on FY 96 spending bills, the conditions governing the current continuing resolution are more favorable.

The federal agencies that fund research at Penn have indicated generally that, if the budget impasse is resolved by mid-November, there should be little or no effect on extra mural research awards. However, if a longer-term continuing resolution, under conditions similar to those of the short-term spending bill, is part of a final compromise, extra mural awards could be affected.

We will continue to keep the University community informed of the form and substance of these deliberations, and their likely effects on Penn, as the budget picture in Washington becomes clearer. Those interested in the status of particular funding issues or programs should call the Office of Policy Planning and Federal Relations at 898-1532.

— Carl Maugeri
Associate Director Federal Relations

Proposed appropriations for research in FY 1996: % increase/decrease compared to FY 1995

	House	Senate	Conference
NEH	-44 %	-38 %	-38 % *
NIH	+5.7 %	+2.7 %	no conference
NSF	-1 %	-1 %	no conference
DOD (basic research)	-4.4 %	-9.6 %	- 4.8 % *
DOD (exploratory Dev.)	-7.5 %	-8.2 %	- 5.6 % *

* Conference Reports rejected by the House

Proposed appropriations for student aid in FY 1996: % increase/decrease compared to FY 1995

*includes Pell Grants, Perkins Loans,
Work-Study, Capital and SSIG*

House	Senate
- 5.5 %	- 2.1 %

Research Foundation Awards — Spring Cycle 1995

Michael Acker, Surgery, School of Medicine, *Skeletal Myoblast Transplantation Into the Rodent Heart*.

Andrew Alford, The Wharton School, *Predicting Long-Term Stock Return Volatility: Implications for Accounting and Valuation of Equity Derivatives*.

Endla Anday, Pediatrics, School of Medicine, *Factors Associated with Maternal-Fetal HIV-1 Transmission*.

Ivor Benjamin, Obstetrics & Gynecology, School of Medicine, *Treatment of Human Ovarian Cancer with Adenovirus-Mediated Transfer of the Thymidine Kinase Gene*.

Robert Berkowitz, Psychiatry, School of Medicine, *Fenfluramine and Phentermine in the Comprehensive Treatment of Morbid Obesity in Adolescents*.

Gordon Bodnar, Finance, The Wharton School, *A Balanced Assessment of Derivatives Usage by U.S. Non-Financial Firms*.

Nancy Bonini, Biology, SAS, *Molecular*

Genetic Control of Cell Survival in the Nervous System.

Kenneth Brayman, Surgery, School of Medicine, *Intrathymic Islet Transplantation and Tolerance Induction in a Large Animal (Canine) Model*.

Edward Breuer, Religious Studies, SAS, *From Enlightenment to Orthodoxy: The Jewish Cultures of the Early Nineteenth Century*.

Susannah Chang, Neuroscience, School of Medicine, *Molecular Characterization of DM-GRASP*.

Charles Clark, Orthopaedic Surgery, School of Medicine and Jeanne Myers, Biochemistry & Biophysics, School of Medicine, *Cloning and Initial Characterization of a Unique Cartilage Proteoglycan*.

Avital Cnaan, Pediatrics, School of Medicine, *Using Housing to Predict Urban Children's Lead Poisoning*.

Kermit Daniel, Management, The Wharton School, *Is There a Culture of Poverty? Evidence*

From a Natural Experiment.

Peter Davies and Takeshi Egami, Materials Science & Engineering, SEAS, *Synthesis and Characterization of New Dielectric and Ferroelectric Oxides*.

Gabriel de la Haba, Cell & Developmental Biology, School of Medicine, *Collagen and the Terminal Differentiation of Myoblasts in Culture: Is an Oxidative Deficiency of Myoblasts Responsible for Their Failure to Differentiate Into Myotubes Unless Alanine and Serine, or Collagen, are Provided in the Culture Medium?*
Joseph DiRienzo, Microbiology, School of Dental Medicine, *Identification of Differentially Expressed Genes in Disease-Associated Genotypes of a Periodontal Pathogen*.

Peter Drain, Physiology, School of Medicine, *Molecular and Kinetic Mechanism of Shaker K Channel Gating Regulation by Phosphorylation of Its C-Terminal Domain*.

Arthur Dunham, Biology, SAS, *Feeding Rates and Net Assimilated Energy of the Iguanid*

Reengineering the Research Administration Process

As John Fry described in his recent article, "Restructuring at Penn: Four Basic Questions and Some Interlocking Goals" (*Almanac* October 17), Penn has begun to redesign the administrative processes that support research. Sponsored research amounted to almost \$300 million last fiscal year, roughly 30% of the University's non-health care budget. An enterprise of this magnitude needs to be managed efficiently, and Penn's current infrastructure supporting research is old and often cumbersome to use. With the introduction of the new Financial Management System* and purchasing procedures, we have the opportunity to design new administrative processes and systems that will work synergistically to support research.

The goal of the redesign project is to develop a design and model for process, organizational and technical improvements to Penn's research infrastructure that will enable the University to provide cost effective, high quality service to its faculty and sponsoring agencies. It will examine all components of the process for obtaining and managing sponsored research support from funding source identification to project close-out. More specifically this project will involve:

- Identification and confirmation of the research community's needs and requirements;
- Identification of process improvements to assure effective delivery of administrative services;
- Creation of a new organizational model, including participant roles and responsibilities, and training requirements;
- Identification of information and functional requirements of all phases of the process.
- Development of a technology strategy and requirements; and
- Development of business case for change and an implementation plan.

Two groups will provide the leadership and hard work necessary to ensure that the project will be successful. A Steering Committee will establish and oversee the general direction of the project. This group will also provide required resources, resolve high-level policy and organizational issues, provide feedback on redesign concepts, and communicate to the Penn community on the importance of the project's objectives.

The Steering Committee will be led by Executive Vice President John Fry and Provost Stanley Chodorow, and includes Acting Vice Provost Ralph Amado, David Balamuth, Physics and Astronomy; Robin Beck, UMIS; Comptroller Alfred Beers, Dean Raymond Fonseca, Dental Medicine, Vice President Steven Golding, Finance; Janet Gordon, EVP Office; Michael Hindery, Medical Center Finance; Dwight Jaggard, Electrical Engineering; Dean Alan Kelly, Veterinary Medicine; Anthony Merritt, ORA; and Richard Tannen, Medicine.

The data-gathering and analysis of the reengineering effort will be carried out by a Redesign Team which will be led by Ralph Amado and Anthony Merritt. Other members of the team are Berenice Saxon, ORA; Kristine Briggs, Office of the EVP; Elizabeth Garlatti, School of Medicine; Robert McCann, Comptroller; George Palladino, Department of Chemistry; Edward Read, UMIS; Denise Scala, School of Nursing; Paul Weidner, School of Medicine; and Audrey Masciocchi, Department of Physics and Astronomy.

The Redesign Team will carry out its initial assessment of the current process through the use of four tools:

- work distribution analysis to determine the amount of time and dollars spent on administering research;
- a survey of current "best practices" at peer institutions;
- an assessment of existing technology, both centrally and in the schools; and
- extensive surveying of faculty through a questionnaire and in-depth focus groups.

The information-gathering activity is the most critical element of the Redesign Team's work. The success of the project will, in large part, depend on active participation in these survey activities. Should you receive a survey, we urge you to respond as candidly and thoughtfully as possible. We need everyone's ideas on how to make the process as effective and user-friendly as possible. Therefore, in addition to the survey, we have established an e-mail address for this project at evpproj@pobox. Please send us your comments and suggestions.

— Ralph Amado, Acting Vice Provost for Research

— Anthony Merritt, Executive Director for Sponsored Projects

* See Mr. Fry's "Innovation Corner," a Compass feature in *Almanac* October 10.

Lizard Sceloporus Merriami, Measured by Turn-over of Stable Carbon Isotopes.

Stephen Dunning, Religious Studies, SAS, *Completion of a Book Entitled "Dialectics of Interpretation."*

Jeff Dyer, Management, The Wharton School, *Effective Interfirm Collaboration: How Transactors Simultaneously Achieve High Asset Specificity and Low Transaction Costs.*

Charles Emerson, et al., Cell & Developmental Biology, School of Medicine, *Drosophila Media Facility.*

Joseph Farrell, Classical Studies, SAS, *Studies in Greek and Latin Literature and Culture.*

Jeffrey Field, Pharmacology, School of Medicine, *Role of Ras Oncogene Processing in the Regulation of Yeast Adenylyl Cyclase.*

Leif Finkel, Bioengineering, SEAS, *Computational Modeling of Hippocampal Function: Excitotoxicity, Spatial Navigation, and the Construction of Memory.*

Loretta Flanagan-Cato, Psychology, SAS, *Adrenal Steroid Hormone Modulation of Renal Oxytocin Receptors.*

Dean Foster, Statistics, The Wharton School, *A Competition on Learning to Play Economic Games.*

Samuel Freeman, Philosophy, SAS, *Democracy and the Social Contract Tradition.*

R. Freifelder, Radiology, School of Medicine and R. VanBerg and N. Lockyer, Physics, SAS, *Improving the PENN-PET Scanner's Count-rate Capabilities: A Collaboration Between the Depts. of Radiology and Physics.*

Susan Freiwald, Legal Studies, The Wharton School, *The Communications Assistance for Law Enforcement Act: A Case Study in Balancing Privacy and Law Enforcement on the Information Superhighway.*

David Friedman, Pediatrics, School of Medicine, *Development of Human V Gene Repertoires.*

Audrey Gift, School of Nursing, *Symptoms and Functional Outcomes for Lung Reduction Surgical Patients.*

Marissa Martino Golden, Political Science, SAS, *Interest Groups in the Rulemaking Process: Who Participates? Whose Voices Get Heard?*

Joel Goldwein, Radiation Oncology, School of Medicine, *A Prototype Multimedia Atlas of Oncology on the Internet.*

Nicholas Gonatas, Pathology & Lab Medicine, School of Medicine, *Molecular Signals for Intracellular Trafficking and Targeting.*

W.R. Graham, et al., Materials Science & Engineering, SEAS, *Diamond-Like Carbon Films for Device Applications.*

David Graves, Chemical Engineering, SEAS, *Studies on Transport, Adsorption and Reaction Processes in Heterogeneous DNA Hybridization.*

Monique Guignard-Spielberg, Operations & Information Management, The Wharton School, *Branch-and-Bound for Lagrangean Relaxation.*

Jinyong Hahn, Economics, SAS, *A Consistent Semiparametric Estimation of the Average Consumer Surplus.*

Wilhelm Halbfass, Asian & Middle Eastern Studies, SAS, *Research and Reflection: Studying India and Understanding Indian Studies.*

Christopher Hanes, Economics, SAS, *Patterns of Wage Adjustment in 1893, 1929 and 1981.*

Christopher Hasty, Music, SAS, *Meter as*

Rhythm, Oxford University Press (scheduled for publication fall 1996).

Kerry Haynie, Political Science, SAS, *African American Legislators in the American States.*

G. John Ikenberry, Political Science, SAS, *The Politics of Funding International Organizations.*

Olena Jacenko, Animal Biology, School of Veterinary Medicine, *Molecular Mechanisms of Endochondral Skeletogenesis.*

Leigh Jefferies, Pathology & Lab Medicine, School of Medicine, *Investigation of the Effect of Cocaine on Hematopoietic Progenitor Cells.*

Madeleine Joulle, Chemistry, SAS, *Anti-HIV Properties of Modified Cyclodextrin Sulfates.*

Katalin Kariko, Medicine, School of Medicine, *Ribozyme Synthesis In Vivo by Self-Maintaining T7 RNA Polymerase Expression.*

Nicholas Kefalides, Medicine, School of Medicine, *Expression of the $\alpha 2$ Subunit of Laminin and Metastatic Propensity in Cancer Cells.*

Michael Kelly, Psychology, SAS, *Connectionist Models of Language Processing.*

Marsha Lester, Chemistry, SAS, *Infrared Spectroscopy and Reaction Dynamics of Hydroxyl Radical Complexes.*

Arnold Levinson, Medicine, School of Medicine, *Intrathymic Nicotinic Acetylcholine Receptors and the Pathogenesis of Myasthenia Gravis.*

Noam Lior, Mechanical Engineering & Applied Mechanics, SEAS, *Matching Funds for the Approved Research Contract "Solar/Desiccant Dehumidification Energy Conservation and Air Pollution Abatement."*

Maureen Maguire, Ophthalmology, School of Medicine, *Choroidal Neovascularization Prevention Trial: Pilot Study.*

Karen Dorman Marek, Nursing, *Patient Health Care Problems and Provider Practices.*

Franz Matschinsky, Biochemistry & Biophysics, School of Medicine, *State of the Art Fluorescence Imaging in the Pancreatic Islet Cell Biology Core of the Diabetes Research Center.*

Abby Maxson, Clinical Studies, School of Veterinary Medicine, *Effects of Upper Airway Dysfunction in Exercising Horses on Arterial Blood Gas Values and Cardiac Rhythm.*

Paul McGonigle, Pharmacology, School of Medicine, *Development of an In Vitro Model System for the Study of Alzheimer's Disease.*

Diane Merry, Neurology, School of Medicine, *Identification of Androgen Receptor-Binding Proteins.*

Philippe Met, Romance Languages, SAS, *The Genesis of Poetic Fragmentation.*

Margaret Mills, Folklore & Folklife, SAS,

Preparation for Publication of Encyclopedia of South Asian Folklore, (continued).

George Murphy, Dermatology, School of Medicine, *Tumor Necrosis Factor-alpha Transgenic Mouse as a Model for Graft-versus-Host Disease.*

Mary Naylor, School of Nursing, *Home Follow-Up of Elderly Patients with Heart Failure: A Pilot Study.*

Philip Nichols, Legal Studies, The Wharton School, *Discovering Doctrines Created by Gatt Dispute Settlement Panels.*

Howard Pack, Public Policy & Management, The Wharton School, *The Effects of Increased Economic Interaction Among Israel, Jordan and the West Bank-Gaza.*

Julia Paley, Anthropology, SAS, *Economic Restructuring and Urban Social Movements: A Comparative Study of Mexico and the United States, Part I: Mexican Border.*

Daniel Raff, Management, The Wharton School, *Product-, Process-, and Industry Evolution in the Early Automobile Industry.*

Jagmohan Raju, Marketing, The Wharton School, *Effect of Superior Market Information on Firm Performance: Does Mode of Competition in the Industry Matter?*

Sumathi Ramaswamy, History, SAS, *Bodies to Earth, Souls for Language: The Somatics of Tamil Nationalism.*

Jay Reise, Music, SAS, *A Recording to Three Musical Compositions.*

Robert Ricciardi, Microbiology, School of Dental Medicine, *Blocking Replication of Human T Cell-Tropic Herpesviruses.*

Lawrence Rome, Biology, SAS, *Design of the Frog Muscular System for Jumping: Do Frogs Use an Elastic Spring to Jump?*

Joseph Rykwert, Graduate School of Fine Arts, *Body, Building: An Essay on the Orders of Architecture.*

Catherine Schrand, Accounting, The Wharton School, *Forecasts Based on Voluntary Disclosure of Earnings Components.*

Martin Seligman, Psychology, SAS, *Causal Attributions for Interracial Failure.*

Susan Sidlauskas, History of Art, SAS, *The Body in the House: Imaging Interiority in 19th Century Culture.*

Steven Spitalnik, Pathology & Lab Medicine, School of Medicine, *Structural Analysis of Rabies Virus Glycoprotein.*

Dwight Stambolian, Ophthalmology, School of Medicine, *A Mouse Knockout Model for Galactosemia.*

Thomas Sugrue, History, SAS, *White Backlash Politics and the Transformation of Liberalism in the Urban North, 1945-1968.*

Donald Voet, Chemistry, SAS, *The X-Ray Structures of Active Site Mutants of Yeast Inorganic Pyrophosphatase.*

Eric Weinberg, Biology, SAS, *Patterning of the Zebrafish Forebrain and Midbrain.*

John Weisel, Cell & Developmental Biology, School of Medicine, *Structural Studies of Arterial Thrombi.*

Keith Williams, Pharmacology, School of Medicine, *Properties of Mutant NMDA Receptors.*

Saul Winegrad, Physiology, School of Medicine, *Functional Implications of Changes in Thick Filament Structure in Cardiac Muscle.*

Ruilin Zhou, Economics, SAS, *Currency Nondiversification and Exchange Rate Volatility.*

Reminder for Grant Applicants

As announced in *Almanac* last week along with the Research Foundation Guidelines, the 1995 Fall Cycle deadline is *November 1* and the Spring Cycle deadline is *March 15* each year.

The Guidelines are now available year-round on Penn Web. From the Penn Home Page, choose Faculty and Colleagues Worldwide, then Vice Provost for Research, then **Research Information**.

Up and Running: New Bolton's Treadmill Gives Clues to Animal Ailments



By Jon Caroulis

The first time Waji, a seven-year-old gelding, was put on the treadmill at New Bolton Center, he was nervous. But after a few times, he got the hang of it and took to it pretty quickly.

"Horses, unlike people, accept things," said Laura May, a staff member at New Bolton.

For the past three years, Penn's Veterinary School faculty at the Chester County facility has put hundreds of animals through thousands of miles on the treadmill, looking for both ailments and cures.

Waji is being treated with a new medication to determine if it can alter oxygen consumption and lactic-acid production during exercise. Horses breathe anywhere from 100 to 135

breaths per minute, producing very high gas flows that need special equipment for measurement and analysis, said Lawrence Soma, a veterinarian who specializes in medications. Breaths are collected and instantly analyzed for content. Concentrations of glucose or lactic acid tell the staff about a horse's metabolism.

"The current system in use allows us to measure oxygen consumption and carbon-dioxide production on a continuous basis as the data is updated by the computer every second," said Dr. Soma.

Turns on the treadmill aren't always for scientific study. Sometimes the horses run on it to stretch their legs or get a light workout when recovering from an injury.

The Jeffords High Speed Treadmill—one of only several in use at vet schools across the country and the only one built in Pennsylvania—enables veterinarians to

examine horses and other animals in action. It allows horses to run as fast as 38 to 39 miles per hour.

Looking at animals while they are standing still can tell a physician only so much. Getting them up and running, when heart and respiratory rates are increased, tells doctors much more about injuries.



Photograph by Jenny Friesenhahn

Two staff members at New Bolton monitor a horse on the treadmill.

For race horses, "it's as close to racing conditions as possible," explained Ben Martin, director of the treadmill and assistant professor of sports medicine. "We can actively monitor heart and respiratory rates."

The treadmill, which was installed three years ago, is in use five to six days a week, said Dr. Martin. Most of the patients are race horses, although "pet" horses have been examined, as have field dogs and even llamas.

Unlike humans, animals can't tell doctors what's wrong or where they are hurting. Putting them on the treadmill helps doctors find out what and where the problem is and how best to treat it.

If horses are a bit skittish when they start on a treadmill, they're more so when they get on the treadmill with a tube up their nose. The tube is an endoscope, one

of the most valuable tools for examining a horse.

A small video camera at the end of the tube allows veterinarians to see a horse's muscles, blood flow and upper airway functions while in motion. The image of inside the horse's throat is projected onto a

screen to allow doctors to see what's happening while the horse runs. It also records the images so doctors can examine the film to see problems that aren't immediately recognizable.

"The horses don't mind it when they get up and running," said Eric Parente. The endoscope—which is also used by physicians to examine humans—is held in place by Velcro. The horse is warmed up on the treadmill for a few minutes; after resting, the endoscope is inserted.

"The horse's metabolism is more dynamic than when it is standing in place, and this gives

us a better view of the entire physiology," said Dr. Parente. "It's like giving a stress test for people." He and Dr. Martin have examined more than 600 horses on the treadmill in less than three years.

The most unusual problem that Dr. Parente has seen with the scope is a condition he has found in only two of the many horses he has examined. A horse's epiglottis, found in the throat and made of cartilage and mucus membranes, is stationary and faces forward. In these cases, Dr. Parente said, the epiglottis faces backward and flaps back and forth while the horse runs, inhibiting its breathing and making a gurgling sound.

"We don't know what causes it," he said. "But we are looking at a way of treating them."

(See sidebar about other New Bolton programs, p. 11)

In Print and Sound Bite, Penn Makes the News

In the past two weeks, Penn faculty has been quoted in the national media on a wide range of subjects. Some samples:

“The old traditional idea of a family sitting around a dining room, eating, is more of a treat than it is anything else. It’s a special event, increasingly, throughout our society.”— **Sol Katz**, professor of anthropology, in a CNN story about American eating habits.

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“Just as the responsible physician must consider the symptoms, the state of mind, and the resources of the patient, the responsible profession has a vital creative obligation to diagnose and treat the health-care system itself.”— Dean **Rosemary A. Stevens** in an Inquirer op-ed story about the American Medical Association’s Medicare proposals.

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“They gave themselves a new and improved afterlife.” — **David Silverman**, curator of the Egyptian Section; professor and chairman of Asian and Middle Eastern studies, in a USA Today story about his recent excavation. He was referring to

two tombs that suggest a pair of ancient Egyptian officials secretly built themselves a royal stairway to heaven.

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“They have become an element of the normalization of hyperbole. The danger is that it exhausts the capacity of language to express outrage. When someone actually does act like Hitler now, we don’t have the words anymore. Crying wolf doesn’t work anymore.”— Annenberg Dean **Kathleen Hall Jamieson** in a New York Times story about the rising use of references to Nazism for political shock value.

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“It was [Johnnie] Cochran, with his skill at indicting the police, but also his mastery of ethnic code words, clothing and symbols, who managed to turn O.J. into a ‘race man’—the kind of historical figure that African-Americans believe they must defend at all costs.”— Sociology professor **Elijah Anderson** in a Newsweek article about the aftermath of the Simpson verdict.

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“Talking about race for people of color in this nation is the natural thing to do.

Blacks carry race around with them all the time. But for whites, talking about race is uncomfortable. It’s a wild card. Whites believe blacks rejoiced in the verdict because it was a payback for white racism, or that blacks are gloating because a black man got away with murdering two white people.... The rejoicing is not that somebody got away with murder, but that somebody beat the system.” — Law professor **Lani Guinier** in Newsweek and on “Face the Nation” and “CBS This Morning.”

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“Even though this is the earliest frog, it was clearly a good jumper. It’s a very unique and specialized design that didn’t evolve overnight in a single step.” — **Neil Shubin**, professor of biology, in a Los Angeles Times story about the results of his work that sheds light on how frogs evolved. In Navajo territory, a team discovered fossils of what are believed to be the earliest known frog dating back 190 million years. The hind limbs, which are longer than its forelimbs, point to one of the main factors in what makes a frog a frog—its leap.

New Bolton Center: From Acupuncture to Barn Calls

Men were holding down the patient, who was having a difficult delivery. The doctor gave the mother anesthesia and prepared to operate on the fetus—right there on the farm, in the middle of the night.

The calf couldn’t be saved, but the mother survived. The farmer was grateful. His cow could always get pregnant again. And while the veterinarian was there, another cow began to give birth, again with complications.

Just another typical day for Elaine Hammel, a veterinarian who makes house calls from Penn’s New Bolton Center in rural Chester County, 40 miles southwest of Philadelphia. She is one of the center’s 325 physicians and staff members who provide a variety of health-care and services for animals.

Once a week, Dr. Hammel is the doctor “on call” who responds to emergencies at odd hours. She carries a beeper just like doctors who care for humans. She has been at New Bolton since 1968.

During the day, she and the staff and students visit farms within a 25-mile radius of the center, tending to horses, pigs, cows, goats, sheep—almost any animal found on a farm. There are births to monitor, inoculations to give,

joints to splint and wounds to stitch. The spring, when most livestock give birth, is her busiest time.

“It’s a little like James Herriot’s books,” she says, referring to the popular series that began with “All Creatures Great and Small.”

“I can empathize with his books. They’ve had a large impact on veterinary medicine. I still get students who tell me they wanted to become veterinarians after reading Herriot.”

Other faculty at New Bolton tend animals in a variety of ways, include the following:

- Dr. Ben Martin uses acupuncture to treat back pain in horses.
- Rob Sigafoss makes special shoes for injured horses. The shoes act as a cast until their injury is healed. Sometimes he uses advanced polymer materials for the shoes. Sometimes the shoes are made of the same materials as a pair of Reeboks, and sometimes he’ll simply glue a shoe on until the horse is better.
- And Dr. Charles Ramberg has begun a program to study aquaculture—raising fish in tanks. Research is seeking a method of biofiltration to constantly reuse the same water to raise additional fish.

—Jon Caroulis

Nursing Researchers Recognized for Improving Standards of Care for the Elderly



The timing is ironic. Just as Congressional Republicans attempt to repeal nursing-home regulations, two Penn Nursing School researchers are about to be honored for their work in improving standards of care for nursing-home patients.

At the same time, Leadership Professor of Nursing Claire Fagin has added her voice to the national debate about relaxing federal standards for nursing homes. (*See below.*)

Nursing School researchers Lois Evans and Neville Strumpf will be recognized Nov. 5 during the scientific sessions of the Sigma Theta Tau International Honor Society of Nursing's Biennial Convention for playing a major role in changing the practice of routinely restraining the elderly—tying patients in beds or wheelchairs to “manage” behavior.

Drs. Evans and Strumpf will receive the Baxter Foundation Episteme Award, which Dr. Fagin refers to as “the Nobel Prize for nursing.”

In research that began in 1986, Drs. Evans and Strumpf have conducted nine research projects totaling more than \$2.5 million, and brought national and international attention to the physical and emotional problems of older patients confined to nursing homes and hospitals. In the late 1980s, more than 500,000 patients were physically restrained in the United States, about 40 percent of nursing-home patients

and 25 percent of the elderly in hospitals.

In two cross-cultural studies in Sweden and Scotland, Drs. Evans and Strumpf looked at ways of caring for patients without physical restraints. In contrast to typical U.S. practices, these countries were noteworthy for minimal or no use of restraints.

Based on their observations in restraint-free settings abroad and in the United States, the researchers developed methods of caring—other than the use of physical restraints—for patients at risk of falling, wandering, or removing their tubes and dressings.

Physical restraints, the researchers found, led to numerous physical and psychological problems, the rapid development of complications including loss of function, and an increase in serious injuries, as well as the devastation associated with anger and discomfort. The Penn researchers also noted that the practice of physically restraining patients—supposedly to protect them from harm—had been

the subject of little systematic research.

The research team currently has a \$1.7 million grant from the National Institute on Aging to investigate more appropriate care for nursing-home residents who go to the hospital. They are

particularly interested in minimizing the problems associated with the hospitalization of frail elderly patients and examining the cost of this care.

Since 1988, the Penn researchers have been widely

cited in professional literature. Virtually every article written on the subject of restraint reduction contains a reference to their research.

This work is particularly significant today because approximately 2 million Americans now reside in nursing homes, and the number is expected to grow as the baby-boomer generation ages. An estimated 43 percent of people over 65 are expected to spend some time in a nursing home.



Photo courtesy of Nursing School

Drs. Lois Evans (left) and Neville Strumpf

Dr. Claire Fagin: Fighting to Save Federal Regulations for Nursing Homes

Claire Fagin is nothing if not persistent. She wrote a letter to the editor of *The New York Times*. Nothing. She revised it and sent off another version. Nothing. Third try: It was printed on October 14. Prominently. At the top of the page with the headline: “Don’t Repeal Nursing Home Rules That Work.”

“I was absolutely dogged, I admit,” she smiled.

Four days later, *The Times* published an editorial which, like her letter, rang an alarm that Congression-

al attempts to relax federal nursing-home standards “may invite a return to the nursing home disasters of the past.”

Leadership Professor of Nursing, Dr. Fagin cares deeply about enforcing and maintaining nursing-home standards. With a Robert Wood Johnson Foundation research grant a few years ago, she documented that implementation of the federal Nursing Home Reform Act of 1987 had led to significant improvements in nursing-home care.

The law set national standards for staff training, individual patient assess-

ments and protection of basic patient rights, including the right not to be restrained physically, the right to voice grievances and the right to be notified before transfer or discharge.

If Congress repeals the law and turns nursing-home regulations back to the states, Dr. Fagin believes the results would be extremely detrimental.

“We’ve made progress after all those years of struggle,” she noted during an interview in her sunny office, crammed with boxes of books and papers. Conditions “are far from the best, but that law is part of the progress.”

If the law is repealed or if federal standards are relaxed, Dr. Fagin and other advocates for the elderly believe

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that regulations which are determined by individual states will revert to past indignities when neglect of residents and untrained personnel were the order of the day in nursing homes.

As she wrote in her letter to The Times, "My findings indicated a positive beginning in changing care to nursing home residents, a reduction in the use of physical and chemical restraints, and some progress in staffing, evaluations and collaboration by nurses, doctors and other staff members.... Those most active in the nursing home arena shared the view that progress has been made and that the most important thrust of the law—the focus on the residents, their rights, care and dignity—had begun to be realized."

Federal nursing-home standards were established in the first place, she pointed out, as a result of "the abysmal record of states and the private sector in nursing home care." While the enactment of federal standards have helped—now 20 percent rather than 40 percent of patients are physically restrained, some research shows—there is still much room for progress.

"Even eight years after federal regulation," Dr. Fagin noted in her letter, "there is tremendous variation among the states in the degree and the rapidity



Dr. Claire Fagin

of their improvement." If standards are abolished altogether and responsibility reverts to the states, she fears that

progress achieved may be lost.

While Republican control of Congress indicates a likelihood that the Nursing Home Reform Act will be weakened if not repealed, Dr. Fagin refuses to give up.

"No, I'm not pessimistic," she said. "I haven't given up because this issue is getting good attention."

—**Martha Jablow**

Dr. Ingrid Waldron Examines Gender Differences in Health Behaviors and Their Links with Male/Female Roles

By Esaúl Sánchez with Jerry Russo

On average, women in the United States live longer than men. But why? How do certain behaviors affect their health and life span?

Dr. Ingrid Waldron, Penn professor of biology, looks at national data that indicates health trends by gender and age in the United States, and tries to find reasons for those trends. She has recently written chapters on the subject for two books that update research linking behavior with health.

The longevity edge that women enjoy over men has been attributed to a combination of factors such as these:

- Fewer women smoke than men. Although recent trends show similar numbers of male and female smokers among young adults, in older age groups—where smoking is a big killer—the number of male smokers is greater.
 - More men drink heavily and, as a result, develop liver diseases.
 - More men engage in higher-risk behaviors such as drunk-driving and holding dangerous jobs. Even in childhood, boys' play is riskier than girls' play.
 - Women's biochemistry tends to reduce their risk of heart disease. The female hormone estrogen lowers the type of cholesterol in the blood that increases risk of heart disease. But the male hormone testosterone reduces the type of cholesterol that safeguards against heart disease.
 - Women tend to accumulate fatty deposits around legs and thighs (the "pear shape"). Men tend to develop fatty deposits above the waist (the "apple shape"). Fatty deposits associated with the apple shape appear to increase the risk of diabetes, high blood pressure and heart disease.
 - Since the late 1980s, women have started using seat belts more frequently than men.
 - Women eat more fruits and vegetables. Yet these advantages may be offset by certain behaviors that hurt women's health. Examples include:
 - Women exercise less than men.
 - Women tend to practice excessive dieting, which has a negative impact on health.
- By analyzing recent trends in gender differences in health behavior in the United

States, Dr. Waldron has shown that women and men are becoming more similar in some types of health behavior, but gender differences in other types of health behavior are not decreasing. Gender differences in smoking, for example, have decreased substantially, but gender differences in heavy drinking remain very large. Similarly, gen-

Estrogen lowers the cholesterol that increases risk of heart disease.

Testosterone reduces the cholesterol that safeguards against it.

der differences in amount of driving have decreased in recent decades, but gender differences in seat-belt use have actually increased during the 1980s.

Dr. Waldron believes that these trends can be explained by considering the compatibility of particular types of health behavior with male and female roles. Many young women, for example, are smoking as a way to control weight. "Women are supposed to look slender and beautiful. Women are very appearance-oriented with good reasons. Appearance affects their success in a variety of spheres," she observed.

In contrast, heavy drinking is less compatible with women's roles, including responsibility for sexual restraint and care of small children. "Drinking does make it hard to be a parent the next morning if you're totally hung over," Dr. Waldron explained. In many families, she added, "Men are only expected to work during the week, which is less affected by weekend drinking."

Gender roles and the differing social expectations and pressures on men and women, therefore, continue to have powerful effects on gender differences in health behavior and mortality in the contemporary United States, according to Dr. Waldron.

Jerry Russo is a freshman workstudy student in News and Public Affairs.

Interview with a Vampire (Aficionado)

By Jerry Janda

Nina Auerbach first took a trip to Transylvania in the 1950s.

At the age of 14, she and her best friend discovered Universal horror movies. Every Saturday night, the two girls would sit in front of the television and watch "The Mummy," "Frankenstein" and, their personal favorite, "Dracula." They were mesmerized by the Count and his bloodsucking brood.

Unfortunately, the girls' nocturnal activities didn't meet the approval of their par-

Angeles, which was the most ghastly, surreal, terrifying, awful sort of place," Dr. Auerbach said. "During my first week there, I drove about 100 miles to see 'Dracula Has Risen from the Grave,' and I felt better."

Looking back, Dr. Auerbach realizes that the Hammer films—with their overabundance of buxom actresses—are "sexist and patriarchal." Still, from a feminist's standpoint, the movies do have their positive points. "I loved those women being docile, doughy wives, and then suddenly they turn into vampires, and they prowl

they flaunted their vampirism. They contrast starkly with more contemporary vampires. "The vampires of the 1980s are depressed," Dr. Auerbach noted, "and they've become disempowered."

Literally disempowered. In movies such as "Fright Night" (1985) and "The Lost Boys" (1987), vampires are changed back into mortals—"unvamped," as Dr. Auerbach calls the process. Unvamping also occurs in "Near Dark" (1987), an obscure film Dr. Auerbach raves about. She found the closing sequence in which Mae (Jenny Wright) is unvamped particularly chilling.

"I have never been so frightened by a vampire movie," Dr. Auerbach said. "It's like losing immortality. It's another kind of death. Maybe it's supposed to be a happy ending, but I think it's the most awful despair and loss of faith—even loss of faith in fantasy."

Dr. Auerbach claims that the downtrodden vampires of the '80s say something about the political climate of the country at the time. "There was absolute despair of individual powers in the Reagan years," she said. "Vampires in the 1960s and '70s had been political subversives and feminists—empowered beings. In the '80s, there was no belief in those powers."

The vampires of Anne Rice novels also suffer from occasional bouts of depression. But with their good looks and lavish lifestyles, it's easy to forget the odd melancholy moment. Dr. Auerbach finds that Rice's books are reminiscent of the vampire stories of Byron and Polidori from the early 19th century. "They're beautiful; they're aristocrats; they're socially adept," she said. "They're gorgeous and similar to Anne Rice."

Although she thinks there are better vampire writers than Anne Rice, Dr. Auerbach does note that her books have caused a resurgence of interest in the vampire genre. "Anne Rice made vampires very glitzy, psychedelic, beautiful and deathless," she noted.

The current breed of hip vampires has
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Photograph by Candace DiCarlo

Dr. Nina Auerbach, professor of English and vampire enthusiast, has written a book exploring the evolution of the undead in literature and film.

ents. "They thought this was very sick," recalled Dr. Auerbach, a professor in Penn's English department. "Our parents wanted us to go to parties and dances on Saturday night."

In the end, the parents won out: The girls were forced to socialize. But, in their hearts, they were still children of the night. "We'd go to these horrible, wholesome parties that we hated and make vampire faces at each other," Dr. Auerbach said triumphantly.

Dr. Auerbach never outgrew her fascination with the fanged. During the 1960s, Hammer studio's vampire films served as a source of entertainment, giving her an opportunity to escape daily worries.

"I got my first job as a professor in Los

and are powerful," she explained. "They're empowering sexy, transforming sexy."

This is the kind of insight found in Dr. Auerbach's new book, "Our Vampires, Ourselves" (University of Chicago Press). Looking at the genre through the eyes of a literary critic, she contends that vampires mirror the societies into which they are born—ironic, since classic vampires cast no reflections themselves.

Starting with the earliest examples of vampire literature, Dr. Auerbach traces the evolution of the undead. She demonstrates that, despite the common characteristics shared by vampires, telling changes take place over time.

Consider the vampires that haunted the 1960s and 1970s. Proud of their powers,



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struck a vein with audiences. Some troubled souls are so enamored by these vampires, they claim to be vampires themselves. Dr. Auerbach speculates that these people change their identities in order to cope with the very real fears they must face.

"Vampires are immortal, and this is an age haunted by the deaths of the young," she noted. "Vampires don't have to get jobs. One thing about the vampires in Anne Rice that's interesting—and this isn't just Anne Rice—they're all very rich.... The great fear of this generation is that they'll be living less well than their parents."

Dr. Auerbach, who at one time taught a course on vampires at Penn, has had firsthand experiences with people who believe they are undead. She found their attitudes more terrifying than any work of fiction.

"In my first vampire course at Penn in '91, a whole group of students came to the last class dressed as vampires," she remembered. "And I thought it was funny, but it wasn't funny, because they were announcing who they were.... They just sat there with dead faces, not even taking notes. I was extremely unsettled. I hated to think I'm teaching these Penn students with their lovely faces and their future

before them who in their hearts know they're vampires."

Vampire buffs unable to separate fantasy from reality are nothing new. For years, some scholars have claimed that Dracula was actually Vlad Tepes, who ruled Wallachia in the 15th century.

"Something happened in the 1960s in America that made us want to believe that Dracula was Vlad the Impaler, because then there really was a Dracula," Dr. Auerbach said. "It was like King Arthur: Maybe he'd come back. But there was no evidence. In [Bram] Stoker's notes, Vlad the Impaler is never mentioned. And Vlad the Impaler was quite unlike Dracula."

In actuality, Dracula was based upon Stoker's employer, Henry Irving, according to Dr. Auerbach. "Stoker worked for a tyrant," she explained. "Irving was a great actor, and he was a dictator at the Lyseum." The Lyseum was the theatre run by Irving and his partner, Ellen Terry, the English actress.

Dr. Auerbach sees Stoker's book as a legacy for the 20th century, foretelling the coming of fascism. Apparently, Stoker was wise to fashion Dracula, the "fascist tyrant," after Irving. Ellen Terry's children, who grew up around Irving,

eventually became followers of Mussolini.

"They were English, but they really admired [Mussolini] because they said he was just like Henry Irving," Dr. Auerbach explained. "No one could mesmerize the crowds the way Mussolini could—except Irving. Stoker really knew about what was going to become fascism."

For some reason, Dracula's megalomania is ignored in film adaptations of the novel. The tyrant from Stoker's novel transforms into a lover on the screen. "There's this whole schtick in movies that the girls are really attracted to the vampire, and that isn't in Bram Stoker: He's disgusting, and he wastes them," Dr. Auerbach said. "Maybe our vampire movies don't depict what we're most afraid of, which is not love and sex, but tyranny and power over others."

Irving may have been a tough boss, but he certainly wasn't a vampire. So are there any real vampires? Probably not. Then again, Bela Lugosi was buried in his Dracula costume.

"I hope he came back to life," Dr. Auerbach said with a smile. "I hope he's flitting around right now. People think that's such a pathetic thing for an old actor, but I'm sure he was doing it because it made him immortal. It is immortality."

Vampire Viewing

Looking for a few flicks to make your Hallowe'en evening complete? Try renting a few of these vampire films from your local video store. They all receive high ratings from Nina Auerbach.

"I don't know if these are the scariest around," she said, "but they provide a good spectrum for those who think vampires are only one thing."

Nosferatu (1922): This silent film still packs plenty of scares today. Based upon Stoker's "Dracula," this film from F.W. Murnau is a product of the German Expressionist era.

Max Shreck's skeletal, ratlike vampire is a terrible thing to behold. Dr. Auerbach also recommends the 1979 remake from Werner Herzog.

Dracula, Prince of Darkness (1966): The first sequel in the long series of

Dracula movies from Hammer Films. Terence Fisher returns to direct Christopher Lee, who once again dons cape and fangs as the bloodsucking Count.

Dracula (1979): Dr. Auerbach's favorite screen version of Stoker's classic tale, and, in her opinion, the one with the strongest feminist undertones. Frank Langella plays the title role, and Sir Laurence Olivier sharpens a few stakes as Van Helsing. Kate Nelligan gives a terrific performance as a "brave, rebellious Lucy who longs to become a vampire so she can soar away from her dreary fiancé," Dr. Auerbach said. John Badham directs.

The Hunger (1983): Tony Scott's stylish take on the Whitley Strieber novel. After time runs out on her lover (David Bowie), vampire Miriam (Catherine Deneuve) turns her attention to Sarah, a blood specialist played by Susan Sarandon. Bauhaus, a goth band favored by vampire fans,

performs "Bela Lugosi Is Dead" at the beginning of the movie.

Near Dark (1987): Dr. Auerbach loves this direct-to-video gem directed by Kathryn Bigelow. A nomadic band of hard-living vampires prowls the desert, looking for victims. Dr. Auerbach particularly admires the performance of Jenny Wright, who plays a vampire named Mae. A still of Wright, blood smeared on her lips, adorns the cover of Dr. Auerbach's "Our Vampires, Ourselves."

Carmilla (1989): This hour-long film, based on the Sheridan Le Fanu tale of the same name, was originally made for the cable-television series, "Nightmare Classics." Dr. Auerbach believes it is the only film version true to the spirit of the original story. Meg Tilly plays the title vampire, Ione Skye the woman she befriends.

A Penn Employee for Nearly 30 Years, Marion Friedman Prepares for Retirement

By Jerry Janda

Marion Friedman has received four parties from her co-workers: one for her graduation, one to celebrate her 25th anniversary at Penn, one for her 65th birthday, and another when she turned 70.

Perhaps her associates in the College's advising office will give the administrative



Photograph by Mark Garvin

Marion Friedman's dedication and wit will be missed at the College's advising office.

assistant one last bash—to bid her farewell. "I hope to retire on the last day of November," said Mrs. Friedman, "unless they kick me out the door before then."

Not likely. "Marion is well-respected by everyone who works with her," said Linda Kaelin, the College's business administrator.

A Penn employee for nearly three decades, Mrs. Friedman first came to the University in 1960 as a student. While her father-in-law was in a nursing home, "a woman was brought in who couldn't talk English," Mrs. Friedman explained. "She was from Vienna." In order to converse with the woman, Mrs. Friedman decided to learn German and enrolled in a course at Penn.

Initially, Mrs. Friedman had no intention of majoring in German: She audited her first class. However, fellow students and Sidney Friedman, her late husband, convinced her to pursue a degree. She held a day job, so she went to school in the evening. Never a driver, she hit the books while riding the bus and train. "That's where I did most of my studying," she recalled.

In 1966, Penn canceled the night classes that Mrs. Friedman needed to graduate. To earn a degree, she would have to go to

school in the afternoon. Rather than abandon her studies, she took a job as a secretary in Penn's chemistry department and continued her education during her lunch breaks. In 1981, she received an A.B. in German from the College of General Studies.

"It took me 21 years to graduate, one course at a time here and there, but I did it," Mrs. Friedman said.

Four years before graduating, she transferred from the chemistry department to the College's advising office, where she now handles transfer credits. "She has a genuine concern for the students," Ms. Kaelin said. "That's where her heart lies—with the students. And she'll follow through until she knows the students' needs have been met."

Despite her serious work ethic, Mrs. Friedman has a lighter side. "We'll certainly miss her sense of humor," offered Dr. Kent Peterman, assistant dean for academic affairs for the College.

When she's not delivering punch lines, Mrs. Friedman is demonstrating her agility. According to Dr. Flora Cornfield, the College's assistant dean for advising and study abroad, Mrs. Friedman has been known to do somersaults at Christmas parties.

"They said, 'Don't do them anymore, you're embarrassing us,' but I'm 71 and still limber," she said, proving the statement by kicking up her leg and touching her outstretched palm with her toes.

Mrs. Friedman has always made an effort to stay fit. Her extracurricular activities at Penn reflect her interest in athletics. During the '80s, for example, she helped organize Penn's Ice Skating Club—before the University started one officially. In addition to participating in sports groups, she was active in community-relations and employee organizations, and served on the Open Expression Committee for four years.

Ice skating may no longer be part of Mrs. Friedman's typical routine, but stretching and other simple exercises are—whether she's at home, at the office, or even standing at a bus stop. "While I'm waiting for the bus I walk backwards, but I make like I'm looking for the bus to come," she said. "Because

if you walk backward, you're using different muscles than when you walk forward."

Dancing also keeps her in shape. "If the radio's playing 'Chattanooga Choo-Choo,' I'll jitterbug," she said.

Mrs. Friedman developed an interest in dance at the Northeastern Hebrew Orphans Home, where she lived from age four to age 18. She performed in the shows the children put on for the home's supporters, and she took dancing lessons.

Mrs. Friedman's parents divorced when she was young. Her father later died in a hunting accident, and her mother, suffragist Reba Gomborov, couldn't care for her. "She had some hardships," Mrs. Friedman explained, "and it was the Depression time, you know."

Every Sunday, Ms. Gomborov would visit her daughter at the home; and later in life, Mrs. Friedman looked after her ailing mother. "For a few years, I didn't go to night school," she said. "I worked, came home and took care of her."

Although Mrs. Friedman considers herself "liberated," she doesn't share all of her mother's attitudes. For example, she prefers not to be addressed as *Ms.* Friedman, pointing out that "Ms. is a designation for manuscript, and I am not a sheaf of paper."

Never a mother herself, Mrs. Friedman participated in the Big Sister Program for 10 years. Perhaps the only thing she loves as much as children are animals. A staunch vegetarian since the age of 11, she is vice president of Beauty Without Cruelty, an organization of animal activists who, among other things, urge manufacturers not to use ivory.

In addition to rallying for animals' rights worldwide, Mrs. Friedman performs animal charity close to home. During her lunch break, she feeds the squirrels and birds around campus. Now that she's leaving Penn, she is concerned about the future of her furry and feathered friends.

"That's why when I retire, I want to do volunteer work, and I want to do it near here," Mrs. Friedman said. "I called the hospital, and I want to work in the children's department, so I can still come around and feed the animals."



On the Shelf...

As Penn faculty, staff and students publish books, an occasional column will appear on these pages to inform the University community of new releases.



TEACHING CHILDREN OPTIMISM

What parent wouldn't want an optimistic child, especially in a climate where the media report almost daily the rising incidence of childhood depression and teen suicide?

Can children be taught thinking patterns that will protect them from mental illness? Martin E. P. Seligman, Penn professor of psychology, believes that children can be immunized against pessimism, hopelessness and depression if they are taught skills to promote optimism before adolescence. He sets forth these tenets and skills in "The Optimistic Child" (Houghton Mifflin). Dr. Seligman also is the author of the national bestseller, "Learned Optimism."

His latest book focuses on 8- to 12-year-olds because, he maintains, most mental-illness problems begin before puberty. Dr. Seligman and researchers with the Penn Depression Prevention Project have found that pessimistic thinking in young children can put them at higher risk for more serious mental illness in later life.

Pessimism, "The Optimistic Child" contends, is a view of reality that children learn from parents, teachers, coaches and the media. Pessimists believe that bad things last a long time, undermine everything they do, and are their own fault. But children can be taught to become realistic, resilient optimists who see a defeat as a temporary setback caused by bad luck or circumstances brought about by others, not themselves.

WHAT MAKES ART?

"On Margins of Art Worlds" (Westview Press) features a collection of original studies based on research conducted by Larry Gross, professor of communication, and graduate students at the Annenberg School for Communication. Essays in the volume, which was edited by Dr. Gross, question the social arrangements that determine the recruitment and training of artists, the institutional mechanisms that govern distribution and influence success, the process of innovation within art worlds, and the emergence of new formations

around new media or new players.

"By approaching the study of art worlds within the context of communication studies, these scholars were at once free from the disciplinary boundaries that separate the study of art into social, historical, and aesthetic domains and at the time obliged to follow the threads of their questions wherever they led them, without resorting to the security of those same disciplinary constraints," writes Dr. Gross in the book's introduction.

FROM MEMORY TO TRADITION

In "Recovered Roots" (University of Chicago Press), Yael Zerubavel examines how members of society remember and interpret historical events and how the meaning of the past is constructed and altered over time.

More precisely, she shows how a new nation can create a past by reawakening a dormant "national memory." History and memory interweave, creating a national history written not by government policy-makers alone, but by writers, educators and politicians collaboratively.

Dr. Zerubavel, associate professor of modern Hebrew literature and culture in Penn's Department of Asian and Middle Eastern Studies, looks at Hebrew culture and explores how—in the years prior to Israel's birth in 1948—Zionist settlers in Palestine consciously attempted to rewrite Jewish history by molding Jewish memory. She goes back to 73 C.E. and the defense of Masada against the Romans and follows a thread to the Bar Kokhba revolt of 133-135 and to the 1920 defense of a new settlement in Tel Hai. Dr. Zerubavel demonstrates how these events, which ended in death and defeat, were transformed by collective memory into symbols of heroic national revival.

GAMES CITIES PLAY

Sports franchises: Cities that have them want to keep them; cities that don't will go to great lengths to get them.

Bargains, threats and deals are all part of the big leagues, according to Kenneth L. Shropshire, associate professor of legal

studies and real estate at the Wharton School. In "The Sports Franchise Game: Cities in Pursuit of Sports Franchises, Events, Stadiums, and Arenas" (University of Pennsylvania Press), Dr. Shropshire takes a look at the power plays that unfold in the offices of city officials.

The competition involved in the "sports franchise game" rivals the competition on any gridiron, diamond, court or ice rink. Dr. Shropshire provides interesting examples of the extremes to which some cities are willing to go to satisfy a sports franchise. He also demonstrates how manipulative owners profit from the system.

In the end, Dr. Shropshire points out that cities may not be getting a practical return for their investments. Before playing the game, cities must first realize what's at stake—and ask if it's really worth winning.

WHEN EXPERIMENTS CAN'T BE CONTROLLED

A new book from Paul Rosenbaum, professor of statistics in the Wharton School, provides a sound statistical account of the principles and methods used in the design and analysis of observational studies. Logically enough, the book is titled "Observational Studies" (Springer-Verlag).

So what, exactly, is an observational study? Dr. Rosenbaum defines it as "an empirical investigation of treatments, policies, or exposures and the effects they cause, but it differs from an experiment in that the investigator cannot control the assignment of treatments to subjects." When controlled experiments are not possible, observational studies are employed instead. Scientists from a wide range of disciplines find such studies useful in their work.

The book may be a bit overwhelming for readers without a basic knowledge of statistics and probability. Others will find it easy to follow. Illustrative examples of actual observational studies support the author's ideas. These studies include smoking and lung cancer, lead in children, nuclear-weapons testing, and placement programs for students.

University of Pennsylvania Personnel Benefits Committee 1994-1995 Year End Report

The Personnel Benefits Committee met on September 22, 1994; October 17, 1994; October 24, 1994; November 17, 1994; January 27, 1995; February 20, 1995, March 22, 1995 and May 9, 1995.

The Death of Professor Paul Taubman

The Committee expresses its loss at the death of Professor Paul Taubman. His commitment to the Personnel Benefits Committee was a demonstration of his commitment to the Penn community. He will be missed by members of the Committee.

Open Enrollment 1995-1996: Health Insurance Issues

University of Pennsylvania Health Systems (PennCare): The Personnel Benefits Committee (PBC) worked with the Benefits Office to determine the appropriateness of implementing a University of Pennsylvania Health Systems managed care plan option for Open Enrollment 1994-1995. Martha Marsh, Executive Director of Managed Care at the University of Pennsylvania Medical Center, attended the October 17, 1994 meeting to share with the Committee information on HUP's directions and to learn what the University would need from a HUP plan.

The PBC examined several pertinent issues such as the limitation of the current PennCare network of providers; folding the Blue Cross Comprehensive Plan into the PennCare plan versus maintaining the Comprehensive plan as a separate plan option; the assumption of financial risk for the plan resting with the Medical Center rather than the University, and quality of care.

Recommendation: The PBC recommended implementing PennCare for Open Enrollment 1994-1995 provided that the Medical Center assumed the financial risk. The PBC further recommended that the University maintain the Blue Cross Comprehensive plan as a separate plan option. The recommendation was initiated and PennCare was added to the University's medical plan options for Open Enrollment 1994-1995.

Reduction of Life Insurance Rates: The Benefits Office brought this item to the attention of the PBC. For the first time in several years the University's life insurance rates fluctuated significantly enough to warrant a change in flex dollars. There will be a decrease in rates for 1995-1996. Since flex dollars are tied to the cost of life insurance, flex dollars for 1995-1996 will decrease. The reduction in flex dollars will not diminish the individual faculty or staff member's purchasing power in terms of life insurance.

Cost Savings in Pharmaceuticals Under the Blue Cross Plans: Benefits Management proposed that the University "carve out" prescription drugs from the Blue Cross plan as a cost savings measure. "Carving out" prescription drugs is an administrative change which will remove prescription drug coverage from the major medical portion of the plan and allow it to stand alone as another component of the plan. The change will be relatively seamless for employees and save the University approximately \$200,000.

Benefits Management also explored the possibility of changing administration of prescription drugs from Blue Cross to Pharmaceutical Card Systems (PCS). This change was considered in light of Pharmaceutical Card Systems' ability to provide a comparable prescription drug coverage to Blue Cross at a lower cost.

Recommendation: The PBC recommended carving out prescription drug coverage and supported a change in administration from Blue Cross to PCS provided that there is no additional deductible for prescription drugs. The PBC supported implementing a change mid-year outside of Open Enrollment.

Greater Atlantic Network: Greater Atlantic enhanced its plan for Open Enrollment 1995-1996 to include an out-of-network benefit. After negotiations with Benefits Management, Greater Atlantic added the out of network component with no added premium costs in an effort to remain competitive with the University's other HMO plans. The PBC supported this addition to the plan since it enhances the plan for employees at no added cost to the University or employees.

Request For Pro-Rated Benefits For Part-Time Employees

The PBC was charged by the Steering Committee of University Council to make a recommendation on pro-rated benefits for regular

part-time employees. The Steering Committee asked that they receive the PBC recommendation by December 5, 1994. The issue had been brought forward to interim President Fagin by regular part-time professional staff. The following summarizes a detailed report prepared by the Committee.

There are approximately 160 to 180 regular part-time staff. The PBC considered including part-time faculty in the discussions; however, defining part-time status for faculty proved to be too complicated for the Committee to resolve in the given time frame. The Committee agreed to examine the issue as it pertains to regular part-time staff only.

The Committee discussed the strategic importance of benefits in the recruitment and retention of employees. It was agreed that the strategic value of part-time benefits was pertinent to the discussion; yet, outside of the Committee's purview. The Committee focused on issues within its purview such as a review of the current part-time benefits package; the costs associated with providing pro-rated part-time benefits and the impact of these benefits on the full-time benefits package. The Committee concluded that the Basic Tax Deferred Annuity (TDA) plan would be excluded from the Committee's recommendation due to compliance issue with non-discrimination regulations and cost. Tuition benefits would also be excluded from the recommendation for reasons of cost.

The Committee developed three potential approaches to benefits for regular part-time employees. They are as follows:

- 1) A recommendation not to change the current part-time benefits package.
- 2) A recommendation that the University develop a cost neutral part-time benefits plan. The Plan would not add cost to the University's benefit plans; however, it would entail administrative costs. Such a plan could conceivably leave the current part-time package in place and add the option of participating in a health care expense account and the option of buying disability insurance. It would not include tuition benefits or participation in the Basic TDA Plan.
- 3) A recommendation that the University provide pro-rated benefits to include medical, tuition, dental, life insurance, long term disability and a health care pre-tax expense account provided there is funding for this expansion of benefits. The level of Benefits under this option is dependent upon the funding available as determined by the administration. It would not include participation in the Basic TDA plan.

Eligibility criteria for receipt of part-time benefits such as service requirements under each option would be determined by the administration.

The Committee vote was in favor of option number (2). The recommendation was forwarded to the Steering Committee of University Council within the appropriate time frame. The issue of a change in the part-time benefits package was placed on hold pending a review of the University's benefit package.

Request for the University to Pay Tuition at Community College of Philadelphia for Employees on Deferred Admissions Status to CGS or Wharton Evening

In cooperation with Richard Hendrix, Associate Dean of SAS and Director of CGS, and Provost Stanley Chodrow, the PBC examined the situation of employees on deferred admission status to CGS or Wharton Evening. The following summarizes a detailed report prepared by the Committee. Employees on deferred admission status brought to the Committee their concern that they were unable to use the employee tuition benefit. Certain employee-applicants to the University are placed in a "deferred" admission status and are required to take four courses at Community College of Philadelphia and obtain grades of at least "B" in order to demonstrate their academic preparedness for studies at Penn. Employees who cannot afford the tuition at Community College never have the opportunity to use the tuition benefit at Penn.

Recommendation: The PBC and Dr. Hendrix recommended an amendment to the tuition policy to pay tuition at approved, accredited community colleges for employees on deferred admission status to CGS or Wharton Evening. The full recommendation was published in *Almanac*. The recommendation was presented to the Steering Committee of University Council and placed on hold pending a review of the full benefits package.

(report continues next page)

Accelerated Death Benefits Under The Life Insurance Plan

Benefits management brought the issue of adding accelerated death benefits to the University's life insurance plan. Accelerated death benefits became a plan option when the University changed life insurance carriers from CIGNA to TIAA. TIAA offers accelerated death benefits at no additional cost. These benefits allow terminally ill individuals to access all or a portion of their life insurance benefit while living.

Recommendation: The Committee unanimously recommended the addition of accelerated death benefits to the life insurance plan. The recommendation went into effect as of March 1, 1995.

Retirement

The PBC examined two aspects of retirement: 1) University contributions to the Basic TDA plan and 2) retirement benefits for support staff. The Committee concluded that both issues need further evaluation and noted its understanding of the need to ensure adequate retirement income for support staff. The Committee agreed that the issue of retirement is complicated with significant importance to both the University and Faculty/Staff. Given the complexity of the issues and their wide ranging impact, the Committee concluded that retirement plan design issues must be reviewed in the context of benefits re-design.

Recommendation: The Committee recommended that the issues of university contributions to the Basic TDA plan and retirement benefits for support staff should be included in the University's total benefits re-design effort.

Life Insurance: Coverage Levels; Flex Dollars and Minimum Coverage Requirement

The PBC reviewed the current design of the University's life insurance benefit in terms of both cost effectiveness and responsiveness to employee needs. The Committee examined the coverage levels for older faculty and staff; the link between flex dollars and life insurance and the requirement for minimum coverage.

The Committee agreed that the current design does not provide for optimum cost effectiveness or optimum responsiveness to employee needs. Employees who have no dependents may not need life insurance at all. For employees who have no need for life insurance, all money spent on premiums is wasted. For other employees, the amounts of insurance needed, the appropriate form of insurance—term vs. cash value products—and the company from which insurance would best be purchased may vary widely. Usually the need for insurance declines as an individual ages due to an increase in assets and reduced obligations to dependents. The cost of term life insurance increases dramatically at older ages. Thus, many employees are forced to purchase expensive life insurance at a point in their lives when they have little or no need for it. Employees who have no need for insurance, or who obtain insurance outside of the University, would benefit from removing the requirement that all employees purchase insurance.

Although the current policy clearly represents a potential waste of money for some employees, there is a concern that certain employees, given the opportunity, would behave in a highly irresponsible fashion by dropping needed insurance with the University and fail to replace it from other sources. There was a concern that the dependents of these employees would then demand a payment from the University on the grounds that the University should have forced the employee to purchase life insurance. It was argued that, if there was a minimal death benefit, however inadequate for the dependents needs, then this would prevent any such claims from being made. In fact, the staff of the Benefits Office know of no such claims against the University under the current system of mandatory coverage. Another argument against dropping mandatory coverage was the impact on cost of coverage for those who choose to continue to purchase life insurance through the University. According to TIAA, dropping mandatory coverage would be expected to result in adverse selection with healthy and younger employees leaving the plan, while older employees and those who could not medically qualify for coverage elsewhere remained in the plan. Some felt that mandatory coverage should be maintained in order to lower the cost of life insurance for those who purchase it through the University. Others believed that, by forcing certain employees to subsidize the cost of insurance for others, this unfairly exploited those who would prefer to drop coverage. This issue of fairness was left unresolved.

The Committee concluded that tying flexdollars to the cost of life insurance was not an optimal approach. This policy was adopted for historical reasons at the time that Pennflex was instituted, in order to insure that employees were not disadvantaged by what was then a new benefit design. However, since life insurance costs escalate with age, this approach leads to rapidly increasing costs to the University for older employees. Costs of other benefits, such tuition, etc. do not systematically rise with employee age. Linking flexdollars to age does not necessarily benefit older employees as long as they are required to use their flexdollars to buy life insurance.

The Committee explored the possibility of dropping the requirement

for minimum coverage of one times salary or \$50,000, or dropping the requirement only for employees above a certain age. Either change would benefit older employees who do not need the coverage through the University.

Recommendation: The Committee recommended that the level of flex dollars should not be linked to life insurance costs, with the caveat that this delinking should not produce a reduction in benefits. Although the Committee considered several options for determining flexdollars, it did not come to a conclusion about a suitable alternative. The Committee did not endorse fully voluntary life insurance coverage. Instead, it recommended permitting employees over age 55 to reduce their life insurance coverage by \$5,000 a year until they reach some minimum required level of coverage such as \$10,000. The Committee acknowledges that adverse selection could arise with this approach, but believes it should be mitigated due to the slow decline in coverage over time.

Basic Tax Deferred Annuity (TDA) Plan: Request For Hardship Withdrawals

A request was made for the University to allow hardship withdrawals under the Basic TDA Plan. Currently, hardship withdrawals are permitted under the Supplemental TDA plan. The Committee examined the issue of hardships, and the impact to the plan should hardship withdrawals be permitted. Comparability with the Retirement Allowance Plan (RAP) for support staff was also given consideration. The Committee further sought the advice of legal counsel on issues of non-discrimination. As of the end of the year, the opinion of counsel was that hardship withdrawals would be legally permissible, but might create problems with compliance with non-discrimination rules. Debra F. Fickler of the Office of the General Counsel provided this statement to the Committee Chair after the last meeting of the year:

"At your request, I am providing you with the legal justification for not adding hardship withdrawals to the basic tax deferred annuity plan at this time. Pending different guidance in the regulations, the nondiscrimination requirements for retirement plans that officially go into effect in 1997 and are technical requirements that are designed to prevent discrimination in favor of highly compensated employees, provide that in order for two plans to be comparable (i.e., the TDA and RAP), they must have comparable benefits, rights and features. Hardship withdrawals are considered a feature. If features are not comparable, i.e., if there are withdrawals permitted from the TDA, but not permissible under the RAP, the University would have to demonstrate that the difference does not discriminate in favor of highly compensated employees, which may prove difficult."

Recommendation: The Committee accepts the advice of legal counsel and recommends not moving forward with hardship withdrawals on the Basic TDA Plan until the impact on compliance with non-discrimination regulations is clarified.

Request to Review Leave Policy for Adoption

The issue of the treatment of faculty leave time for adoption verses the leave time for the birth of a baby was brought to the Committee. Faculty receive paid leave time in the form of sick time/disability for the birth of a child and must use vacation or unpaid leave for the adoption of a child. The request sought to have leave time for both adoption and maternity treated identically as paid leave. The implication was that the two situations should receive the same treatment.

The University policy for time off for the birth of a baby is in compliance with law which requires that employers not discriminate against pregnancy in disability policies. The policy assumes that a standard period of six to eight weeks is required for physical recovery from pregnancy and child birth with no complications. Some Committee members agreed that the current policy unfairly favors pregnancy over adoption. Although adoption does not require physical recovery on the part of the parents, time off gives adoptive parents or birth mother time to bond with the child and adjust to the family transition. Other Committee members believed the difference in policy for adoption vs birth is appropriate because childbirth creates a need for physical recovery that does not exist with adoption. In addition, sick time cannot be extended for individuals without an illness or disability (again, this assumes a fixed duration of disability for birth mothers).

Recommendation: Since the Committee opinion was divided on this issue, the Committee agreed to forward both opinions to University Council.

Committee Members:

Sarita Battish, Patricia Danzon, Robin Goldberg-Glen, Donna Hawkins, Harriet Joseph, Paul Lloyd, Patricia Noel-Reid, Karl Otto, Carl Polsky, Sheldon Rovin, Daniel Shapiro, David Silverman, Paul Taubman

Committee Chair: David Hackney

Ex-Officio Members:

Alfred Beers, John Gould, Phyllis Lewis, Dennis Mahoney

During the meeting of the Association of Graduate Schools summarized on [pages 5-7](#) of this issue, Dr. Sample, President of the University of Southern California, discussed his recent survey of the 25 member institutions of the Association of American Universities. His summary of the responses from 18 institutions appears below.

AAU Ad Hoc Committee on Postdoctoral Education Survey

A Summary of Results by Steven Sample

Quantitative Description of Institution's Postdoctoral Activity

1. How many postdoctoral fellows are currently working at your institution? How are they distributed by discipline?

The average number of postdoctoral fellows at the institutions surveyed is 661 (1,814 high, 208 low). Of the identified postdoctoral fellows, the most are categorized as medical fellows, followed by biological sciences fellows, physical sciences and mathematics fellows, engineering fellows, social and behavioral sciences fellows, and arts and humanities fellows.

2. What are the trends over time in number of postdocs by discipline? What are the trends in length of stay?

Overall, the number of postdoctoral fellows has increased or remained stable over the last 5-10 years (10 respondents). A majority of institutions did not submit a breakdown of the number of postdoctoral fellows by discipline. Two institutions indicated that as the number of grants increased, so did the number of postdoctoral fellows.

The average length of stay for postdoctoral fellows at the 8 schools which responded is approximately 3 years.

3. How many of your institution's postdoctoral fellows are supported with institutional funds and how many by external funds?

Every institution surveyed indicated that a majority of their postdoctoral fellows received all or most of their funding from external sources. The most commonly cited external source was the federal government. Ten of the 16 institutions that provided data indicated that a small number of postdoctoral fellows received institutional funding exclusively or in addition to external funding.

4. What portion of your institution's postdoctoral fellows are U.S. citizens or permanent residents and what portion are foreign nationals?

Of the 9,561 postdoctoral fellows identified by nationality, U.S. citizens and permanent residents accounted for 52% (4,995), and foreign nationals made up 48% (4,566).

Four institutions did not distinguish between U.S. citizens and permanent residents and consequently, 1,291 postdoctoral fellows were jointly classified as U.S. citizens or permanent residents. Of the remaining 3,704 postdocs in this dual classification that were separately identified, U.S. citizens numbered 3,489, permanent residents 215.

General Administrative Structure

5. Describe the administrative structure governing postdoctoral fellows at your institution: What policies governing postdoctoral fellows apply institution-wide? What policies are set by schools or departments?

Most institutions reported some general institutional policies governing postdocs—e.g., purpose of postdoctoral appointments, compensation ranges or minimums, and other general personnel policies—with specific policies such as compensation schedules established by schools or departments. At one institution, the graduate division and the major colleges establish most postdoc policies; at another institution, all policies are established by schools or departments. Two institutions have no specific policies governing postdocs at either the institutional or departmental levels.

Recruitment, Selection, and Appointment Policies

6. How are potential postdoctoral fellows identified? How can they identify available positions at your institution, e.g., are institutional listings of postdoctoral positions available?

All institutions surveyed indicate that professional contacts is the primary method by which postdocs are identified and by which prospective postdocs learn of available positions. Twelve institutions indicate advertising in some fashion, and 3 reported on the role of unsolicited applications. Only 3 institutions responded that they compile listings of postdoctoral fellowships—all at the departmental level.

7. Does your institution have specific policies governing who is eligible to be a postdoctoral fellow (e.g., recent Ph.D.s [or equivalent doctorates] only, or any Ph.D.s)? Does your institution have a position on offering postdocs to its own Ph.D.s?

Sixteen institutions indicated that they have policies governing who is eligible to be a postdoctoral fellow. The typical policy stipulates that a doctorate, M.D., or advanced degree is required (15 institutions indicated this). Six institutions stated that the required degree must have been earned within a recent time period, most typically within 5 years.

No institution indicated an institution-wide policy prohibiting offering postdocs to its own Ph.D.s. Most institutions reported having no position; a few reported that this practice was discouraged, and in some cases departments prohibit the practice.

8. Does your institution regulate the number of postdoctoral fellows assigned to one faculty member or defined space? Is there any central (institutional, departmental) control over postdoctoral admissions or are the numbers determined by faculty members' discretion and finances?

No institution reported central control over postdoctoral admissions; in all cases, number of postdocs is controlled by some combination of available funding, space, and faculty discretion.

9. Does your institution place a limit on the length of time a person can hold a postdoctoral fellowship, on the number of sequential postdoctoral appointments that a person can hold, or both? How does your institution differentiate between postdoctoral fellows and non-tenure-track research staff who occupy open-ended or permanent career positions?

Ten institutions reported having no time limit placed on the length of postdoctoral appointments; one of these institutions reported that a 5-year limit is under consideration. Of the remaining 8 institutions that reported time limits, 4 reported 5-year limits, and 4 reported 3-year limits (one of these, in a burst of candor, reporting the limit routinely ignored by departments). Some institutions indicated that postdocs may sometimes move from one category to another to extend their time, and one institution indicated the possibility of extension based on undertaking work in a new field.

Most institutions (13 of 16 responding) indicated that they differentiate postdocs from other research staff by employment category.

10. Does your institution have funds set aside for postdoctoral fellowships? If so, how are these allocated by discipline?

Thirteen institutions indicated no institutional funds are set aside for postdoctoral fellowships; of these, 7 institutions indicated that specific endowment funds or funds of some schools may be used for postdocs. Of the 5 institutions that report central funds used for postdocs, 4 indicated that they are used to support minorities and women.

11. Does your institution exert any control over the proportion of foreign and domestic postdoctoral fellows? Are there any differences in policies governing foreign and domestic postdoctoral fellows? What visa status is used for foreign postdocs—student, exchange visitor, temporary employee, all of these?

All institutions reported that they exert no control over the proportions of foreign and domestic postdocs and that the same policies govern both groups. Most institutions reported using J or H visas for foreign postdocs; 4 reported using F-student visas as well.

12. Does your institution have special postdoctoral programs to recruit women or minorities as members of groups underrepresented in postdoctoral programs?

Eleven institutions reported some institution-wide efforts to recruit underrepresented minorities or minorities and women as postdocs. Four of these have institutional funds for this purpose (question 10 above), and four indicated such recruitment efforts are part of postdoctoral search processes.

Policies Governing Terms of Appointment and Financial Support

13. How are postdoctoral fellows classified for employee support and benefits issues: do they have academic, nonacademic employee, student, or other status and benefits? Are they granted leaves of absence under specified conditions? Do postdoctoral fellows supported with institutional funds have a different status from postdoctoral fellows supported with external funds?

Most postdoctoral fellows are classified as academic employees with the designation of research associate. Approximately one third of the institutions surveyed indicated that they have two or more levels of classifying postdoctoral fellows and in those cases the typical categories are students or academic employees.

Nearly 100% of postdoctoral fellows at all the institutions surveyed, except those postdoctoral fellows who are classified as students, receive benefits. About 75% of institutions grant leaves of absence to their postdoctoral fellows.

External and institutional funding sources have no impact on the status of postdoctoral fellows at all institutions.

[Note: This question appears to have been misinterpreted: generally, postdocs funded from grants are treated as employees and receive benefits, while postdocs funded with external fellowships like NIH postdocs are not classified as employees and do not receive benefits. Both groups are considered postdocs, however, and this appears to be the “status” question being responded to.]

14. Is postdoctoral remuneration a stipend or compensation? Does the institution have any floors or ceilings on postdoctoral remuneration?

Seven of the 17 institutions which provided data indicated that postdoctoral remuneration can be either a stipend or compensation, depending on the status of the postdoctoral fellow. Five institutions report that postdoc remuneration is a stipend, and 5 report that it is compensation.

A majority of institutions, 12 out of 17, indicated that some form of a floor and ceiling policy applicable to postdoctoral remuneration exists. These policies may be institutional, government agency related (NIH), or departmental.

15. Are support levels for domestic and foreign postdoctoral fellows required to be the same, are they de facto the same, or do they differ?

In most cases, 10 of 18, support levels for domestic and foreign postdoctoral fellows are required to be the same (two institutions mentioned H1 visa requirements may affect support level differences). Four institutions indicated that support levels are de facto the same. Seven institutions indicated that they have no policy regarding support levels for postdoctoral fellows.

16. Does your institution have policies or guidelines concerning the degree of independence accorded postdoctoral fellows in their research—for example, are postdoctoral fellows allowed to serve as principal investigators on research grants?

Of the 10 institutions which responded, only 1 reported such a formal policy on postdoctoral independence in research. However, 8 institutions indicated that postdoctoral fellows cannot serve as principal investigators. Three institutions indicated that postdoctoral fellows

may serve as a principal investigator, and 3 more indicated that they may do so under certain circumstances.

17. Do postdoctoral fellows have to comply with institutional conflict-of-interest rules? Do they report on their “business” interests? Does your institution have rules or guidelines governing outside consulting and teaching by postdocs?

Sixteen of the institutions reported that postdoctoral fellows must comply with institutional conflict of interest rules. Nine institutions indicated that postdoctoral fellows must report business interests. Also, 9 institutions reported having a set of rules or guidelines governing consulting, and 7 reported having guidelines governing teaching.

18. What liability or complaint procedures are followed when charges such as academic misconduct or sexual harassment are filed against postdocs or when postdocs wish to file charges or complaints? If your institution has separate procedures for resolving charges or complaints against faculty, nonacademic employees, and students, under which of these procedures are postdocs treated? Are the grievance procedures available to postdocs comparable to those available to faculty, nonacademic employees, or students?

Only four of the institutions outlined what procedures are followed when liability or complaint charges are filed against postdoctoral fellows. Three of these institutions indicated the presence of an ombudsman on campus with whom postdoctoral fellows can consult.

Postdoctoral fellows are most commonly treated as faculty/academic employees (9 of 14 schools which responded) when liability or complaint charges are levied against them. The remaining 5 institutions indicated that postdoctoral fellows are most commonly treated as non-academic employees, academic/research support staff, or that the institution has no formal set of grievance procedures for postdoctoral fellows.

Of the 14 institutions which responded, 7 have a set of grievance procedures available to postdoctoral fellows that are most comparable to those procedures available to faculty. The other 7 institutions indicated that grievance procedures available to postdoctoral fellows most closely resemble those available to research or academic support staff or that there is no formal set of procedures.

19. Does your institution treat postdoctoral fellowships strictly as positions providing additional research experience, or are other activities incorporated into the fellowship—e.g., opportunities to develop additional teaching experience; courses or seminars on the ethics of research, sexual harassment, or affirmative action; instruction in grant writing or scientific presentations?

Nearly all institutions explicitly stated or implied that they treat postdoctoral fellowships as positions providing additional research experience.

Over half of the institutions indicated that opportunities to develop additional teaching experience are provided or encouraged (11 out of 17 responses). A majority of the institutions also indicated that opportunities to take courses or receive instruction in research ethics (12 out of 17), grant writing (11 out of 17), or topics such as sexual harassment and affirmative action (5 out of 17).

Placement and Future Tracking Activities

20. Do any postdoctoral fellows receive a certificate of completion or some other formal acknowledgment of completion of the fellowship?

Only 2 of the 17 institutions which responded indicated that postdoctoral fellows receive a certificate of completion. Of the two institutions which did award certificates, one institution did so only in its school of medicine, and the other only awarded a certificate if it was requested by the supervising department. One institution reported that it awards certificates to minority postdoctoral fellows supported by the institution. Also, one institution indicated that it recognizes accomplishments of outstanding former postdoctoral fellows.

Two institutions reported that letters of recommendations or performance assessments are provided for postdoctoral fellows to submit to potential employers.

21. Do postdoctoral fellows receive any formal job placement assistance beyond that which might be provided by the fellow's faculty supervisor?

No institution reported any formal job placement assistance mechanism specifically provided to postdoctoral fellows. Most institutions indicated that mentors or campus career centers provide assistance to postdoctoral fellows.

OPPORTUNITIES at PENN

Listed below are the job opportunities at the University of Pennsylvania. To apply please visit:

University of Pennsylvania Job Application Center
Funderburg Information Center, 3401 Walnut Street, Ground Floor
Phone: 215-898-7285

Application Hours: Monday through Friday, 9 a.m.-1 p.m.

Positions are posted on a daily basis, Monday through Friday, at the following locations:

Application Center—Funderburg Center, 3401 Walnut Street (Ground level) 9 a.m.-1 p.m.

Blockley Hall—418 Guardian Drive (1st Floor and 2nd Floor)

Dental School—40th & Spruce St. (Basement-across from B-30)

Houston Hall—34th & Spruce St. (Basement-near the elevators)

Wharton—Steinberg Hall-Dietrich Hall (next to Room 303)

Job Opportunities and daily postings can also be accessed through PennInfo. A position must be posted for seven (7) calendar days before an offer can be made. The Job Opportunities Hotline is a 24-hour interactive telephone system. By dialing 898-J-O-B-S and following the instructions, you can hear descriptions for positions posted during the last three weeks. You must, however, have a push-button phone to use this line.

The University of Pennsylvania is an equal opportunity employer and does not discriminate on the basis of race, color, sex, sexual or affectional preference, age, religion, national or ethnic origin, disability or veteran status.

WHERE THE QUALIFICATIONS FOR A POSITION ARE DESCRIBED IN TERMS OF
 FORMAL EDUCATION OR TRAINING, PRIOR EXPERIENCE IN THE SAME FIELD MAY BE SUBSTITUTED.
 POSITIONS WITH FULL DESCRIPTIONS ARE THOSE MOST RECENTLY POSTED.

ANNENBERG SCHOOL

Specialist: Clyde Peterson

COORDINATOR V (10471CP) Identify source of new funding & maintain contact with past funders; write grant proposals, reports & develop budget for research projects, databases & research materials; supervise team of student research assistants; disseminate findings through conferences, press releases and publications; act as liaison to subcontractors and foundations; responsible for financial reports & adherence to policies, exercise resource stewardship & ensure compliance with policies and procedures. **Qualifications:** MA in communications required; two-four yrs. related experience, particularly in the area of grant proposal writing, research coordination or equivalent experience; previous experience working within University setting and supervisory experience desirable; demonstrated organizational skills; strong oral and written communications skills. **Grade:** P5; **Range:** \$28,800-37,600 10-23-95 Annenberg School **PART-TIME (BUSINESS ADMINISTRATOR III) (20 HRS) (10438CP)** (*Work schedule: M-F 4 hrs. daily*) P4; \$14,976-19,490 10-10-95 Annenberg School

ARTS AND SCIENCES

Specialist: Nancy Salvatore

FINANCIAL ADMINISTRATOR III (10503NS) Perform financial, payroll and administrative duties; under broad guidelines, monitor and oversee the review approval and input of payroll, budget and financial transactions to ensure the integrity and compliance with University policies and procedures for the school. **Qualifications:** BA/BS, preferably in accounting, business or equivalent; four-six yrs. experience in accounting, finance or business administration; thorough knowledge of accounting & office standards and practices; thorough knowledge of established accounting systems; ability to resolve discrepancies & problems with alacrity and sensitivity. **Grade:** P5; **Range:** \$28,800-37,600 10-27-95 Administrative & Financial Services-Dean's Office **RESEARCH SPECIALIST, JR. (09374NS)** Manage laboratory and provide administrative and technical support to the PI; assist with care of research plants; prepare and photograph prints and slides using conventional and computer assisted techniques; assist in the preparation of grants and publications; carry out library searches and catalogue references in database; maintain equipment; monitor expenses and supervise work study students.

Qualifications: BA/BS in scientific or related field or equivalent experience in plant molecular biology; tissue culture and green house experience preferred; knowledge of Macintosh computers, Excel, Canvas, Word Processing, Endnote and network applications highly desirable; ability to work with employees at all levels; administrative and bookkeeping experience preferred. **Grade:** P1; **Range:** \$19,700-25,700 10-25-95 Biology **ASSISTANT DEAN ACADEMIC ADVISING I (08214NS)** (*Minority candidates encouraged to apply*) P5; \$28,800-37,600 8-15-95 CGS

COORDINATOR II (10465NS) (*Minority candidates are especially encouraged to apply*) P2; \$21,700-28,200 10-12-95 CGS

COORDINATOR III (09384NS) P3; \$23,900-31,000 9-26-95 Linguistics/LDC

PROGRAMMER ANALYST II (09318NS) P6; \$31,900-40,600 9-12-95 IRIS

PROGRAMMER ANALYST III (10469NS) P7; \$35,000-43,700 10-13-95 Linguistics/LDC

RESEARCH SPECIALIST, JR. (10468NS) P1; \$19,700-25,700 10-13-95 Chemistry

RESEARCH SPECIALIST II (09339NS) P3; \$23,900-31,000 9-14-95 Chemistry

ADMINISTRATIVE ASSISTANT II (06117NS) G10; \$18,700-23,300 6-27-95 Psychology

ADMINISTRATIVE ASSISTANT II (10433NS) G10; \$18,700-23,300 10-5-95 College

ADMINISTRATIVE ASSISTANT III (09386NS) G11; \$19,900-25,300 9-26-95 Linguistics/LDC

OFFICE ADMINISTRATIVE ASSISTANT II/III (09338NS) G10/G11; \$18,700-23,300/\$19,900-25,300 9-13-95 SAS Administration

OFFICE ADMINISTRATIVE ASSISTANT III (09376NS) G11; \$19,900-25,300 9-22-95 Economics

OFFICE ADMIN. ASSISTANT III (37.5 HRS) (10437NS) G11; \$21,321-27,107 10-5-95 Chemistry

TECH, AUDIO VISUAL I (10436NS) (*End date: 6/30/96*) G9; \$17,100-21,400 10-5-95 SAS Computing

PART-TIME (TECH, ASSISTANT LAB ANIMAL) (08241NS) (20 HRS) G7; \$7,967-9,945 8-22-95 Psychology

DENTAL SCHOOL

Specialist: Clyde Peterson

DIRECTOR III (07095CP) P6; \$31,900-40,600 7-25-95 FISOPS

RESEARCH COORDINATOR (10472CP) P3; \$23,900-31,000 10-16-95 Oral Surgery/Pharmacy

ADMINISTRATIVE ASSISTANT II (09407CP) G10; \$18,700-23,300 9-28-95 International Relations

CLERK III (08238CP) G6; \$13,600-16,700 8-21-95 Clinic Management

DENTAL ASSISTANT I (40 HRS) (07098CP) G7; \$16,571-20,686 7-24-95 Dental Medicine

DENTAL ASSISTANT I (40 HRS) (10429CP) G7; \$16,571-20,686 10-5-95 Dental Care Center

SCIENTIFIC EQUIPMENT STERILIZATION ATTENDANT (10459CP) G5; \$14,286-17,486 10-11-95 IMS

ENGINEERING/APPLIED SCIENCE

Specialist: Clyde Peterson

INFORMATION MANAGEMENT SPECIALIST I (10464CP) P4; \$26,200-34,100 10-12-95 CETS

RESEARCH SPECIALIST IV (09403CP) (*End date: duration of funding*) P6; \$31,900-40,600 10-2-95 Bioengineering

SYSTEM PROGRAMMER II (08055CP) (*Ongoing Contingent on Funding*) P7; \$35,000-43,700 5-17-95 CIS/IRCS

SYSTEMS PROGRAMMER III (10440CP) P8; \$38,500-48,100 10-9-95 CIS

PART-TIME (EDITOR ASS'T II) (20 HRS) (09414CP) P3; \$13,655-17,711 10-3-95 Systems Engineering

ADMINISTRATIVE ASSISTANT II (09330CP) G10; \$18,700-23,300 9-18-95 MSE

ADMINISTRATIVE ASSISTANT III (10439CP) G11; \$19,900-25,300 10-9-95 CIS

EXECUTIVE VICE PRESIDENT

Specialist: Nancy Salvatore/Susan Curran

AUDIT SPECIALIST (10502NS) Supervise internal auditors engaged in audits throughout the Health System including specialized and complex financial and information systems to assure that audit objectives are achieved; issue recommendations to effectuate improvements; obtain thorough understanding of the Health System functions, procedures and accounting cycles and systems and problem of control weakness. **Qualifications:** BS in accounting, business or related field; MBA desirable; CIA or CPA required; CISA and CFE desirable; minimum of five yrs. in internal audit and/or public accounting; two yrs. healthcare experience; three yrs. supervisory experience; knowledge of healthcare operations and accounting; demonstrated ability to direct several simultaneous audits; demonstrate oral and written communication skills; in-depth knowledge of information systems applications controls and integrity controls desirable. **Grade:** P9; **Range:** \$42,300-52,900 10-27-95 Internal Audit

CUSTOMER SERVICE ASS'T II (37.5 HRS) (10491NS) Responsible for answering and monitoring telephone lines; assist with coordination and organization of departmental orders; assist with administrative and clerical duties; provide information and support to customers. **Qualifications:** High school graduate or equivalent with additional high school training; two yrs. general office and clerical experience preferably in high volume office; excellent interpersonal and communication skills and a professional manner; knowledge of office practices and procedures and ability to handle multiple tasks; working knowledge of Macintosh computers; familiarity with personal computers and software. **Grade:** G9; **Range:** \$18,321-22,929 10-25-95 Book Store

ACCOUNTANT II (10476NS) P4; \$26,200-34,100 10-17-95 Comptroller

ACCOUNTANT/FINANCIAL ANALYST I (08163NS) P6; \$31,900-40,600 8-30-95 Student Financial Services

ASSISTANT MANAGER COMPENSATION (09324SC) P8; \$38,500-48,100 9-11-95 Human Resource Services

CONTRACTS ADMINISTRATOR II (09343NS) P5; \$28,800-37,600 9-15-95 Research Administration

DIRECTOR VI (07041NS) P9; \$42,300-52,900 7-13-95 Student Financial Services

OPPORTUNITIES at PENN

DIRECTOR, CENTER TECHNOLOGY TRANSFER (06043NS) Blank; 6-13-95 Ctr. for Tech. Transfer

DIRECTOR, FACULTY CLUB (08237NS) P9; \$42,300-52,900 8-21-95 Faculty Club

DIRECTOR, INTERNAL AUDIT (08180NS) P12; \$63,700-77,700 8-9-95 EVP

GRAPHIC DESIGNER II (10479NS) P4; \$26,200-34,100 10-19-95 Publications

SR. COMPENSATION SPECIALIST (09323SC) (*Application deadline date: 9/27/95*) P6; \$31,900-40,600 9-11-95 Human Resource Services

ADMINISTRATIVE ASSISTANT I (37.5 HRS) (09413NS) G9; \$18,321-22,929 10-5-95 Book Store

ADMINISTRATIVE ASSISTANT II (09342NS) G10; \$18,700-23,300 9-15-95 Research Administration

ADMIN. ASSISTANT III (40 HRS) (09341NS) G11; \$22,743-28,914 9-15-95 Executive Vice President

ASSISTANT SUPERVISOR, TRANSPORTATION & PARKING (40 HRS) (10478NS) (*May be required to be on-call 24 hours per day, seven days a week*) G10; \$21,371-26,629 10-19-95 Transportation & Parking

EXECUTIVE SECRETARY (40 HRS) (07077NS) G12; \$25,371-32,686 7-17-95 Exec. Vice President

ELECTRICAL OPERATOR (08220NS) (08221NS) (08222NS) (08223NS) Union 8-18-95 Physical Plant

FINANCIAL SERVICES ASS'T II (08251NS) G10; \$18,700-23,300 8-30-95 Student Financial Services

GRAD SCHOOL OF EDUCATION

Specialist: Clyde Peterson

ASSOCIATE DIRECTOR NCAL (08267CP) Blank 8-30-95 National Center on Adult Literacy

COORDINATOR III (09396CP) (*On-going contingent upon funding*) P3; \$23,900-31,000 9-28-95 NCAL

INFORMATION MANAGEMENT SPECIALIST I (10490CP) P4; \$26,200-34,100 10-20-95 GSE/Computing Resources

PROJECT COORDINATOR (08266CP) (*On-going contingent upon grant funding*) P4; \$26,200-34,100 10-2-95 Center on Adult Literacy

ADMINISTRATIVE ASSISTANT I (09364CP) (*End date: contingent on funding*) G9; \$17,100-21,400 9-21-95 ALPIP/PhilWP

TECH, PSYCHOLOGY I (09394CP) (*On-going contingent upon funding*) G10; \$18,700-23,300 9-28-95 CHANGES/PED

GRAD SCHOOL OF FINE ARTS

Specialist: Clyde Peterson

LIMITED SERVICE (MACHINIST, JR.) (09410CP) (*End date: 6/30/96*) G9; \$16,279-20,373 10-3-95 Office of the Dean

LAW SCHOOL

Specialist: Clyde Peterson

ASSISTANT DIRECTOR (10484CP) Counsel and develop job resources for law students, with a focus on public sector, "alternative" careers and careers for foreign attorneys studying for LL.M.; develop and maintain library resources; develop and maintain contacts with legal employers and funding sources; serve on bar association and school committees. **Qualifications:** Graduate degree in counseling or equivalent; JD preferred; two-four yrs. related experience; significant experience in public sector law employment; counseling experience; organizational skills; strong written & verbal communication skills; good collaborative skills. **Grade:** P6; **Range:** \$31,900-40,600 10-23-95 Career Planning

DIRECTOR IV (06035CP) P7; \$35,000-43,700 6-12-95 Law Development & Alumni Rels.

SECRETARY IV (09408CP) G9; \$17,100-21,400 10-2-95 Law School

PART-TIME (ADMINISTRATIVE ASSISTANT II) (28 HRS) (05003CP) (*Ongoing contingent on funding*) G10; \$10,275-12,802 6-8-95 Institute for Law & Economics

MEDICAL SCHOOL

Specialist: Ronald Story/Janet Zinser

ADMINISTRATIVE COORDINATOR (10462JZ) Manage the interface between offices for student and resident education and the office; provide primary care clinical education experiences; organize and staff meetings; oversee processes of securing the involvement of faculty and identification of off-campus teaching sites; coordinate student schedules in several courses and programs involving primary care experiences; coordinate residents' primary care electives; develop related operating procedures; oversee systems for monitoring and evaluating the educational experiences; prepare and distribute information about educational programs and teaching opportunities. **Qualifications:** BA/BS degree; three yrs. professional administrative experience; excellent organizational abilities and interpersonal skills; excellent ability to deal effectively with diverse constituencies; excellent oral, written and interpersonal communication skills; excellent computer skills, including ability to work with communications, spreadsheet, database and word-processing software; familiarity with an academic medical environment preferred. **Grade:** P4; **Range:** \$26,200-34,100 10-13-95 Academic Programs/Network and Primary Care Education

INFORMATION SYSTEM SPECIALIST II (10492JZ) Provide Unix system administration support for the center; implement and maintain system hardware and software; assist users with system operations; orient and train new users; implement and maintain system maintenance and security procedures; act as liaison with University Unix systems administrator community and vendors; identify and recommend hardware and software for purchase. **Qualifications:** BS in computer or information science plus four yrs. system administration experience or completion of at least two yrs. of college in computers or information science and five yrs. of experience as above; ability to work accurately and quickly under pressure; ability to work with a wide variety of professionals. **Grade:** P5; **Range:** \$28,800-37,600 10-23-95 CCEB

PROGRAMMER ANALYST III (10447JZ) Assist in supporting and enhancing production version of NJ-CIP application; analyze and write specifications for application enhancements to support the objectives of the project, including new report specifications; assist in developing, testing and implementing program source code both on the client and server; support data extract and load procedures for transfer of data from client site systems to central Registry database; participate in investigating, testing and implementing newer technology to further the goals of the project; assist in maintaining production environment for project database server; assist in various phase of developing technical and user documentation; participate in training clients in use of registry applications; attend meetings with various clients, state agencies and local, State and Federal regulatory agencies. **Qualifications:** BA/BS degree in computer science or related field or equivalent work experience required; four yrs. experience in developing database applications, including relational database and client/server applications; detailed knowledge of C and UNIX environments and MS Windows necessary; previous experience with client server application development tools required, preferably Visual Basic or Oracle Forms; experience with relational database management systems (RDBMS) required, preferably Oracle; strong oral and written communication, analytical and problem solving skills essential; experience in an academic and/or health care setting helpful; willingness to provide limited "after hours" support necessary. (*End date: 12/31/96*) **Grade:** P7; **Range:** \$35,000-43,700 10-25-95 General Medicine

RESEARCH SPECIALIST II (10493RS) Participate in on-going research projects studying the expression of a novel transcription regulator in keratinocyte; assist in keratinocyte culture, immunocytochemical, routine biochemical and molecular biology experiments; monitor equipment, inventories and order supplies; monitor rou-

tine laboratory maintenance including radiation safety; perform computer data analysis and bibliographical search; keep logs and write reports; attend regular laboratory meetings; recommend and follow safety procedures. **Qualifications:** BA/BS degree or higher in biology, chemistry or medicine required; MA/MS preferred; two-three yrs. experience in tissue culture, molecular biology and general scientific research desirable; knowledge in keratinocyte and skin biology preferred. **Grade:** P3; **Range:** \$23,900-31,000 10-23-95 Dermatology

RESEARCH SPECIALIST II (09312RS) Make cDNA constructs; run Northern and Southern; perform in situ hybridization; perform RT-PCR; run sequencing gels and make retroviral constructs; write methods section of paper and lab reports; oversee lower grade technicians and students; assign tasks to student workers; attend lab meetings; assist in plan for protocol; test new procedures. **Qualifications:** BA/BS in biological sciences required; three-five yrs. experience in conducting molecular biology research required. (*On-going contingent upon grant funding*) **Grade:** P3; **Range:** \$23,900-31,000 10-25-95 Pathology & Lab Medicine

RESEARCH SPECIALIST II (10500RS) Construct ribozymes, transfect expression vectors into cells; test cells for metastasis and tumorigenicity in nude mice; maintain cells in tissue culture; extract DNA and RNA from cells; evaluate DNA by Southern blot and PCR; evaluate RNA by Northern blot; perform gelatinase gels; supervise graduate students and fellows. **Qualifications:** BA/BS in biological chemistry; MA/MS preferred; 3-5 years experience in similar position. (*Ongoing contingent upon funding*) **Grade:** P3; **Range:** \$23,900-31,000 10-26-95 Pathology & Lab Medicine

RESEARCH SPECIALIST II (04098RS) Perform experiments in genetics & molecular biology; extract DNA from blood samples; carry out PCR amplifications and gel electrophoresis, DNA sequencing and screening DNA clones. **Qualifications:** BA/BS in scientific field; three-five yrs. research experience in molecular biology; exposure to independent lab work. **Grade:** P3; **Range:** \$23,900-31,000 10-27-95 Hematology

RESEARCH SPECIALIST IV (10496RS) Conduct experiments using DNA and RNA viruses including data analysis; search & translate Japanese scientific papers/contact Japanese industry; manage overall operations; of the lab; supervise students & technicians; computer maintenance & purchasing; write papers and grant applications. **Qualifications:** BA/BS in pharmaceutical sciences; five plus yrs. of virus research experience (five yrs. DNA virus/RNA virus); fluency in Japanese; strong computer skills; must be able to use various operating systems & software. **Grade:** P6; **Range:** \$31,900-40,600 10-25-95 Microbiology

ADMIN. ASSISTANT III (40 HRS) (09320JZ) Act as personal assistant to the Director of the Pain Center; coordinate educational and research activities with regard to data acquisition, maintenance and reporting; manage office budget; perform project planning with Director and general secretary duties; manage calendar. **Qualifications:** High school graduate, college preferred; two yrs. experience as an AAI or equivalent required, preferably at the Medical Center; supervisory experience required; excellent verbal and written communication skills; experience in report preparation using electronic media; knowledge of medical terminology. **Grade:** G11; **Range:** \$22,743-28,914 10-25-95 Anesthesia

CLERK III (40 HRS) (10498JZ) Sort and distribute incoming mail; assist in office mailings; answer phones and file; pickup, process and deliver mail; maintain postage meter and billing; maintain departmental archival storage and retrieval; pickup and sort weekly and monthly checks; distribute weekly and monthly CUP and University checks; assist with copying and moving of equipment in office areas. **Qualifications:** High school graduate; one yr. general clerical experience or equivalent; ability to operate postage meter and postage scale; ability to prioritize work and communicate well; ability to operate office equipment; must be able to lift 50lbs. **Grade:** G6; **Range:** \$15,543-19,086 10-25-95 Psychiatry

OPPORTUNITIES at PENN

RESEARCH LAB TECHNICIAN III (40 HRS) (06019RS) Process tissue samples for histopathologic analysis; develop and maintain culture facilities; perform small animal surgery; maintain cell cultures; perform statistical analysis & prepare graphic representation of data and maintain histopathology laboratory. **Qualifications:** BA/BS in biological or natural sciences required; laboratory experience helpful. (*Ongoing contingent upon funding*) **Grade:** G10; **Range:** \$21,371-26,629 10-26-95 Surgery/Neurosurgery

SECRETARY, SR. (05083JZ) Perform complex secretarial and administrative duties for Vice Dean for Education and staff; using judgment and initiative; arrange Vice Dean's calendar and travel arrangements; type and proofread standard and complex materials; develop and maintain filing system; arrange meetings; compose general correspondence; screen meeting requests and calls. **Qualifications:** High school graduate with business curriculum and related post-high school training or equivalent; six yrs. increasingly responsible secretarial experience; ability to type 60 wpm; knowledge of Macintosh system, including Microsoft Word preferred; experience with other MAC software desirable. **Grade:** G11; **Range:** \$19,900-25,300 10-26-95 Vice Dean for Education

PART-TIME (SCIENTIFIC EQUIPMENT STERILIZATION ATTENDANT) (28HRS) (10474RS) Operate high pressure autoclave, high temperature automatic washing machines, deionizer machines and drying ovens; prepare contaminated glassware for automatic washing; clean machines periodically and report and/or correct operating malfunctions; load and unload glassware in drying ovens; maintain the sterilization; pick up and deliver glassware to laboratories. **Qualifications:** High school diploma or equivalent; ability to push or pull up to 50 lbs. and able to lift up to 25 lbs.; ability to exert 20 lbs. of pressure on autoclave. **Grade:** G5; **Range:** \$6,868-8,407 10-16-95 Pathology and Lab Medicine

ASSISTANT MANAGER II (05057JZ) P2; \$21,700-28,200 5-18-95 Ophthalmology

FINANCIAL ADMINISTRATOR II (09406JZ) P4; \$26,200-34,100 10-3-95 CCEB

FISCAL COORDINATOR II (10435JZ) P2; \$21,700-28,200 10-10-95 Cancer Center

MEDICAL DEPARTMENT ADMINISTRATIVE OFFICER (07053JZ) Blank 7-21-94 Rehab Medicine

NURSE II (09423RS) (*On-going pending funding*) P4; \$26,200-34,100 10-6-95 Infectious Diseases

PROGRAMMER ANALYST II (09357JZ) P6; \$31,900-40,600 9-20-95 Psychiatry

PROJECT MANAGER II (10445RS) P7; \$35,000-43,700 10-10-95 Cancer Center

REIMBURSEMENT ANALYST I (05104JZ) P6; \$31,900-40,600 9-8-95 Medicine/Billing

RESEARCH COORDINATOR (10442RS) P3; \$23,900-31,000 10-10-95 Cancer Center

RESEARCH COORDINATOR, JR. (07038RS) (*Week-ends may be required, hours vary between 6 a.m.-9 p.m.*) (*End date: 9/30/96*) P2; \$21,700-28,200 10-5-95 Anesthesia

RESEARCH SPECIALIST, JR. (07138RS). (*On-going contingent on funding*) P1; \$19,700-25,700 8-3-95 Surgery/HDSR

RESEARCH SPECIALIST, JR. (09397RS) (*End date: 9/30/97*) P1; \$19,700-25,700 10-2-95 IHGT

RESEARCH SPECIALIST, JR. (10428RS) (*End date: 10/31/97*) P1; \$19,700-25,700 10-6-95 IHGT

RESEARCH SPECIALIST, JR. (10456RS) P1; \$19,700-25,700 10-12-95 Physiology

RESEARCH SPECIALIST, JR. (09405RS) P1; \$19,700-25,700 10-13-95 Genetics

RESEARCH SPECIALIST, JR. (10488RS) P1; \$19,700-25,700 10-20-95 Genetics

RESEARCH SPECIALIST, JR./I (09426RS) (*End date: 6/30/98*) P1/P2; \$19,700-25,700/\$21,700-28,200 10-6-95 Molecular and Cellular Engineering

RESEARCH SPECIALIST JR./I (10481RS) P1/P2; \$19,700-25,700/\$21,700-28,200 10-19-95 IHGT

RESEARCH SPECIALIST I (03098RS) (*On-going contingent upon grant funding*) P2; \$21,700-28,200 8-23-95 Pathology & Lab Medicine

RESEARCH SPECIALIST I (08278RS) P2; \$21,700-28,200 8-31-95 Center for Sleep

RESEARCH SPECIALIST I (09312RS) (*On-going contingent upon grant funding*) P2; \$21,700-28,200 9-11-95 Pathology & Lab Medicine

RESEARCH SPECIALIST I (08206RS) P2; \$21,700-28,200 9-26-95 Medicine/Renal

RESEARCH SPECIALIST I (08172RS) P2; \$21,700-28,200 10-10-95 Genetics

RESEARCH SPECIALIST I (10448RS) (*Ongoing per grant availability*) P2; \$21,700-28,200 10-10-95 Medicine/Endocrine

RESEARCH SPECIALIST II (08239RS) P3; \$23,900-31,000 9-7-95 Radiology

RESEARCH SPECIALIST II (04098RS) P3; \$23,900-31,000 10-2-95 Hematology

RESEARCH SPECIALIST II (09418RS) (*End date: two yrs. limit, then contingent on funding*) P3; \$23,900-31,000 10-6-95 Physiology

RESEARCH SPECIALIST II (10457RS) P3; \$23,900-31,000 10-12-95 Otorhinolaryngology

RESEARCH SPECIALIST II/III (06106RS) P3/P4; \$23,900-31,000/\$26,200-34,100 6-26-95 Hematology/Oncology

RESEARCH SPECIALIST II/III (08188RS) (*On-going contingent upon grant funding*) P3/P4; \$23,900-31,000/\$26,200-34,100 9-12-95 Surgery

RESEARCH SPECIALIST II/III (09345RS) P3/P4; \$23,900-31,000/\$26,200-34,100 9-18-95 Hematology/Oncology

RESEARCH SPECIALIST III (08240RS) P4; \$26,200-34,100 9-7-95 Radiology

RESEARCH SPECIALIST III (09421RS) (*End date: two yrs. limit, then contingent on funding*) P4; \$26,200-34,100 10-6-95 Physiology

RESEARCH SPECIALIST IV (09372RS) P6; \$31,900-40,600 9-22-95 Medicine/Rheumatology

STAFF ASSISTANT III (10458JZ) P3; \$23,900-31,000 10-19-95 Psychiatry

SUPERVISOR (EXEMPT) (09350RS) (*Off-site location on Girard Avenue at AIDS/drug treatment center*) (*On-going contingent on grant funding*) P2; \$21,700-28,200 9-25-95 Psychiatry

SYSTEMS ANALYST II (05026JZ) P7; \$35,000-43,700 5-10-95 Ophthalmology

PART-TIME (ASSOCIATE DIRECTOR IV) (17.5 HRS) (02089JZ) P6; \$13,100-17,050 3-1-95 CCEB

PART-TIME (RESEARCH SPECIALIST I) (20 HRS) (09379JZ) (*End date: 8/31/96*) P2; \$12,400-16,114 10-2-95 Geriatric Medicine

ADMINISTRATIVE ASSISTANT II (40HRS) (08260JZ) G10 \$21,371-26,629 9-22-95 Venture & Industry

ADMINISTRATIVE ASSISTANT II (10446JZ) G10; \$18,700-23,300 10-10-95 General Internal Medicine

ADMINISTRATIVE ASSISTANT III (08279JZ) (40HRS) G11; \$22,743-28,914 8-31-95 Pulmonary

ADMINISTRATIVE ASSISTANT III (40HRS) (09320JZ) G11; \$22,743-28,914 9-13-95 Anesthesia

ADMINISTRATIVE ASSISTANT III (40HRS) (09358JZ) (*On-going pending funding*) G11; \$22,743-28,914 9-20-95 Center for Experimental Therapeutics

ADMINISTRATIVE ASSISTANT III (40HRS) (09371JZ) G11; \$22,743-28,914 9-25-95 Medicine/Rheumatology

CLERK II (40 HRS) (09322JZ) G5; \$14,286-17,486 9-12-95 Dermatology

FINANCIAL SERVICES ASSISTANT III (40 HRS) (08290JZ) G11; \$22,743-28,914 9-12-95 Rehabilitation Medicine

OFFICE ADMINISTRATIVE ASSISTANT I (08301JZ) G9; \$17,100-21,400 9-12-95 Biomedical Grad Studies

OFFICE ADMINISTRATIVE ASSISTANT II (40HRS) (02030JZ) (*Ongoing Contingent on Grant Funding*) G11; \$22,743-28,914 2-9-95 Surgery/Neurosurgery

OFFICE SYSTEMS COORDINATOR (10467JZ) G11; \$19,900-25,300 10-13-95 CCEB

OPERATOR, COMP COMPII (09353JZ) G10; \$18,700-23,300 9-19-95 CCEB

RESEARCH LAB TECHNICIAN III (03032RS) (*Ongoing Contingent on Grant Funding*) G10; \$18,700-23,300 3-14-95 Pathology and Lab Medicine

RESEARCH LAB TECHNICIAN III (40 HRS) (06019RS) (*Ongoing contingent upon grant funding*) G10; \$21,371-26,629 6-7-95 Surgery/Neurosurgery

RESEARCH LAB TECHNICIAN III (40 HRS) (08174RS) G10; \$21,371-26,629 8-8-95 Anesthesia

RESEARCH LAB TECHNICIAN III (08281RS) G10; \$18,700-23,300 8-31-95 Cell & Dev Biology

RESEARCH LAB TECHNICIAN III (09311RS) G10; \$18,700-23,300 9-11-95 Psychiatry

RESEARCH LAB TECHNICIAN III (09310RS) (*On-going contingent upon grant funding*) G10; \$18,700-23,300 9-11-95 Pathology & Lab Medicine

RESEARCH LAB TECHNICIAN III (09319RS) G10; \$18,700-23,300 9-12-95 PA Muscle Institute

RESEARCH LAB TECHNICIAN III (06129RS) G10; \$18,700-23,300 9-20-95 Orthopaedic Surgery

RESEARCH LAB TECHNICIAN III (09382RS) G10; \$18,700-23,300 9-26-95 Neuroscience

RESEARCH LAB TECHNICIAN III (10475RS) (*On-going contingent upon grant funding*) G10; \$18,700-23,300 10-16-95 Pathology & Lab Medicine

SECRETARY IV (40 HRS) (07127JZ) G9; \$19,543-24,457 9-7-95 IHGT

SECRETARY V (40 HRS) (07140JZ) G10; \$21,371-26,629 10-2-95 Psychiatry

SECRETARY, SR. (05083JZ) G11; \$19,900-25,300 5-22-95 Vice Dean for Education

SERVICE ASSISTANT II (40 HRS) (10480JZ) G10; \$21,371-26,629 10-19-95 Architecture & Facilities Management

TECH PSYCHOLOGY I (08157RS) G10; \$18,700-23,300 8-7-95 Psychiatry

TECH, PSYCH I (09398RS) G10; \$18,700-23,300 10-5-95 Psychiatry

TECH PSYCHOLOGY I (10486RS) G10; \$18,700-23,300 10-20-95 Psychiatry

PART-TIME (COLLECTION ASSISTANT) (08276JZ) G10; \$10,275-12,802 8-31-95 Ophthalmology

PART-TIME (CONTROL CENTER OPERATOR) (24 HRS) (08284JZ) (08285JZ) *Work schedule: (S-S, 7 a.m.-7 p.m. & S-S, 7 p.m.-7 p.m.)* G9; \$9,396-11,758 9-8-95 Architecture & Facilities Management

PART-TIME (RESEARCH LAB TECHNICIAN III) (20-25 HRS) (10443RS) G10; \$10,274-12,802 10-10-95 Clinical Research Center

PART-TIME (SECURITY OFFICER) (22 HRS) (05073JZ) (*Considered essential employee & as such is required to make it to work regardless of weather or other factors*) (*Saturday & Sunday, 9:00 a.m. - 9:00 p.m.*) G8; \$8,626-10,769 9-28-95 Architecture & Fac. Mgmt.

NURSING

Specialist: Ronald Story

ADMINISTRATIVE ASSISTANT II (37.5 HRS) (1049RS) Provide administrative/clerical support for the Health Annex; establish and maintain clinical program clerical procedures, records and confidential health care files consistent with local, state, federal and accreditation requirements; compile program data; arrange client appointments and transportation; schedule meetings; record minutes for clinical committees and group; type and proofread technical material, clinical forms; maintain accurate health care and billing records; respond to inquiries; prioritize work; manage the clinical office work of the Health Annex. **Qualifications:** Completion of high school business curriculum and related post high school training or equivalent; at least two yrs. experience at the AAI level or comparable; thorough knowledge of general and medical office procedures, practices and methods; thorough knowledge of word processing packages and office automation equipment; knowledge of medical terminology; excellent oral and written communication skills; excellent customer service skills; ability to type at least 45 wpm; an understanding of African American culture and experience with culturally diverse populations desired. (*Work schedule: Mon-Fri, 10:30 AM-7:00 PM*) **Grade:** G10; **Range:** \$20,036-24,964 10-24-95 Nursing

OPPORTUNITIES at PENN

ADVANCE PRACTICE NURSE (NURSING SCHOOL) (09348RS) P9; \$42,300-52,900 10-3-95 Nursing
MANAGER, PROJECT II (09420RS) P7; \$35,000-43,700 10-5-95 Nursing
PART-TIME (ADMINISTRATIVE ASSISTANT I) (20 HRS) (08209RS) G9; \$9,396-11,758 10-2-95 Nursing
PART-TIME (SECRETARY IV) (21 HRS) (08211RS) G9; \$9,396-11,758 8-17-95 Nursing

PRESIDENT

Specialist: Susan Curran/Janet Zinser

ASSISTANT DIRECTOR II (06055JZ) P3; \$23,900-31,000 6-14-95 Medical Center Development
ASSISTANT DIRECTOR II (09367JZ) P3; \$23,900-31,000 9-21-95 Development & Alumni Relations
ASSOCIATE DIRECTOR V (08265JZ) P7 \$35,000-43,700 8-29-95 Dev. & Alumni Relations
ASSOCIATE DIRECTOR INDIVIDUAL GIFTS (03029JZ) P7; \$35,000-43,700 3-10-95 Development and Alumni Relations
ASSOCIATE DIRECTOR INDIVIDUAL GIFTS (09366JZ) P7; \$35,000-43,700 9-21-95 Development & Alumni Relations
ASSOC. EXECUTIVE VP MEDICAL CENTER DEVELOPMENT (05044JZ) Ungraded; Blank 5-15-95 Medical Center Development
DEVELOPMENT OFFICER II (07082JZ) P10; \$47,400-59,200 7-19-95 Development & Alumni Relations
DIRECTOR ALUMNI RELATIONS (09309JZ) P11; \$54,500-68,200 9-7-95 Dev. & Alumni Relations
DIRECTOR, UNIVERSITY COMMUNICATIONS (10473SC) Blank 10-18-95 University Relations
EXECUTIVE DIRECTOR RESOURCE, PLANNING & BUDGET (09344SC) Ungraded; Blank 9-14-95 Office of the President
MAJOR GIFTS OFFICER II (06054JZ) P8; \$38,500-48,100 6-14-95 Medical Center Development
PROGRAMMER ANALYST I (08194JZ) P4; \$26,200-34,100 8-11-95 Development & Alumni Relations
PUBLICATIONS DESIGN SPECIALIST (10449JZ) P5; \$28,800-37,600 10-10-95 Development & Alumni Relations
STAFF WRITER II (04062JZ) (Two Writing Samples Must Accompany Application) P3; \$23,900-31,000 4-24-95 Development and Alumni Relations
STAFF WRITER III (08199SC) Two writing samples must accompany application. P5; \$28,800-37,600 8-14-95 Office of the President
ADMINISTRATIVE ASSISTANT I (08225JZ) (37.5 HRS) G10; \$20,036-24,964 8-17-95 Medical Center Development
ADMINISTRATIVE ASSISTANT II (03041JZ) G10; \$18,700-23,300 10-10-95 Dev. & Alumni Relations

PROVOST

Specialist: Clyde Peterson

PART-TIME (ADMINISTRATIVE ASSISTANT I) (20 HRS) (10507CP) Staff the Department of Special Collections reading room in Van Pelt Library; provide directions; register patrons and advise them of policies and procedures; monitor the use of material and maintain security; keep, tabulate and report on public service statistics; provide invoices for and receive payments for reprographic orders; maintain public service files; maintain and order supplies. **Qualifications:** High school graduate; BA/BS preferred; previous library experience preferred; experience working effectively with the public in a positive manner essential; experience working in an on-line environment required; attention to detail and ability to work in a team environment essential. **Grade:** G9; **Range:** \$9,396-11,758 10-27-95 Special Collections-University Libraries
ASSISTANT COACH I (07132CP) P3; \$23,900-31,000 7-28-95 DRIA
ASSISTANT REGISTRAR, UNIVERSITY MUSEUM (06047CP) P2; \$21,700-28,200 6-14-95 Museum

CHAPLAIN (08247CP) Ungraded 8-23-95 Provost's Office
EDITORIAL ASSISTANT I (10461CP) G10; \$18,700-23,300 10-16-95 University Press
HELP DESK ANALYST (10477CP) P4; \$26,200-34,100 10-18-95 Information Systems and Computing
HELP DESK ANALYST, SR. (06143CP) P6; \$31,900-40,600 8-18-95 Information Systems & Computing
INFORMATION SYSTEMS SPECIALIST I/II (09334CP) P3/P5; \$23,900-31,000/\$28,800-37,600 9-14-95 University Libraries
INFORMATION SYSTEMS SPECIALIST I/II (09335CP) P3/P5; \$23,900-31,000/\$28,800-37,600 9-14-95 University Libraries
INFORMATION MANAGEMENT SPECIALIST II (08191CP) P6; \$31,900-40,600 CRC
INFORMATION MANAGEMENT SPECIALIST II (08192CP) P6; \$31,900-40,600 8-14-95 CRC
INFO. SYSTEMS SPECIALIST II (000439CP) P5; \$28,800-37,600 6-16-95 Biomed Library
INTERN ATHLETICS (07110CP) (End date: eleven months from start date) Blank; \$10,000 7-27-95 DRIA
PROGRAMMER ANALYST II (09365CP) P6; \$31,900-40,600 9-21-95 IRHE
RESEARCH SPECIALIST IV (08303CP) P6; \$31,900-40,600 9-7-95 LRSM
SYSTEMS PROGRAMMER IV (01040CP) P9; \$42,300-52,900 5-1-95 DCCS
TECHNOLOGY TRAINING SPECIALIST (06085CP) P5; \$28,800-37,600 6-21-95 Tech. Learning Services
VICE PROVOST FOR RESEARCH (08248CP) Ungraded 8-25-95 Provost's Office
AIDE LAB ANIMAL (40 HRS) (07016CP) (07017CP) (May include shifts other than M-F, overtime, weekends and holiday work) G5; \$14,286-17,486 7-10-95 ULAR
GARDENING AIDE (40 HRS) (09347CP) (End date: 6/30/97) G5; \$14,286-17,486 9-15-95 Morris Arboretum
OFFICE ADMINISTRATIVE ASSISTANT I (08228CP) G9; \$17,100-21,400 8-18-95 Annenberg Center
TECH, ELECTRONIC III (03006CP) G11; \$19,900-25,300 3-3-95 DCCS
TECH, THEATER SR. (08269CP) G11 \$19,900-25,300 8-30-95 Annenberg Center
TECH, VET TRAINEE (40 HRS) (09361CP) (May include overtime, holiday work & weekends) G7; \$16,571-20,686 9-20-95 ULAR
LIMITED SERVICE (SALES CLERK) (09307CP) (Schedule: 12-6 p.m., evenings & weekends required) \$10,413-\$12,745 9-11-95 Annenberg Center
PART-TIME (ADMINISTRATIVE ASSISTANT I) (20 HRS) (07135CP) G9; \$9,396-11,758 7-31-95 South Asia Reading Room
PART-TIME (ADMINISTRATIVE ASSISTANT II) (20-25 HRS) (08305CP) G10; \$10,275-12,802 9-7-95 Arthur Ross Gallery

VETERINARY SCHOOL

Specialist: Nancy Salvatore

RESEARCH SPECIALIST I (08190NS) P2; \$21,700-28,200 8-11-95 Pathobiology
RESEARCH SPECIALIST III/IV (07136NS) (Position located in Kennett Square, PA; no public transportation) P4/P6; \$26,200-34,100/\$31,900-40,600 10-13-95 Clinical Studies-NBC
STAFF VETERINARIAN (07101NS) (Position located in Kennett Square, PA; no public transportation) Blank 7-25-95 Clinical Studies-NBC
ADMINISTRATIVE ASSISTANT I (07102NS) (On-going contingent on funding) (Position located in Kennett Square, PA; no public transportation) G9; \$17,100-21,400 7-25-95 Clinical Studies-NBC
LAB ASSISTANT II (09327NS) G8; \$17,943-22,400 9-13-95 VHUP-CLM
RESEARCH LAB TECHNICIAN III (40 HRS) (06040NS) (Position located in Kennett Square, PA; no public transportation) G10; \$21,371-26,629 6-12-95 Clinical Studies-NBC

RESEARCH LAB TECHNICIAN III (40 HRS) (07025NS) (End date: one year, continuation contingent on funding) (Position Located in Kennett Sq., PA; no public transportation) G10; \$21,371-26,629 Clinical Studies-NBC 7-11-95
RESEARCH LAB TECH III (40 HRS) (07100NS) (Position in Kennett Square, PA; no public transportation) G10; \$21,371-26,629 7-25-95 Clinical Studies-NBC
RESEARCH LAB TECHNICIAN III (09377NS) G10; \$18,700-23,300 9-22-95 Clinical Studies
TECH, VET. I/II (40 HRS) (09326NS) (09328NS) (09329NS) (Work schedule: rotating/ nights/weekends) G8/G10; \$17,943-22,400/\$21,371-26,629 9-13-95 VHUP
TECH, VET. I/II (40 HRS) (09411NS) G8/G10; \$17,943-22,400/\$21,371-26,629 10-4-95 Large Animal Hospital
PART-TIME (PHARMACIST ASSISTANT I) (27 HRS) (07050NS) (Schedule: M-F 4-8 p.m., Sun 8 a.m.-3 p.m.) G8; \$8,626-10,769 7-14-95 VHUP-Pharmacy
PART-TIME TECH. VET I/II (26 HRS) (09325NS) (Work schedule: Wed., 8 a.m.-8 p.m., Thurs., 8 a.m.-4 p.m. & Fri., 12-6 p.m.) G8/G10; \$8,626-10,769/\$10,275-12,802 9-13-95 VHUP

VICE PROVOST/UNIVERSITY LIFE

Specialist: Clyde Peterson

ASSISTANT DIRECTOR RESIDENTIAL MAINTENANCE (07043CP) (End date: 6/30/97) P6; \$31,900-40,600 7-13-95 Residential Maintenance
COORDINATOR V (09389CP) P5; \$28,800-37,600 9-28-95 Student Performing Arts
COORDINATOR, TUTORING SERVICES (09363CP) P3; \$23,900-31,000 9-21-95 Academic Support Svcs.
ADMINISTRATIVE ASSISTANT II (08250CP) G10; \$18,700-23,300 8-25-95 Academic Support Programs
SECRETARY IV (08202CP) G9; \$17,100-21,400 8-14-95 Academic Support

WHARTON SCHOOL

Specialist: Janet Zinser

DIRECTOR EUROPEAN REGION (07001JZ) (Position is located in Paris, France) P11; \$54,500-68,200 7-6-95 International Relations
DIRECTOR, WHARTON DEV. SERVICES (08170JZ) P10; \$47,400-59,200 8-18-95 External Affairs
INFORMATION SYSTEMS SPECIALIST I (08253JZ) P3; \$23,900-31,000 8-24-95 WCIT
INFORMATION SYSTEMS SPECIALIST II (08161JZ) P5; \$28,800-37,600 8-7-95 WCIT
PROGRAMMER ANALYST I (09308JZ) P4; \$26,200-34,100 9-19-95 WCIT
PROG. ANALYST I/II (08295JZ) P4/P6; \$26,200-34,100/31,900-40,600 9-1-95 Computing & Info Systems
PROGRAMMER ANALYST I/II (09354JZ) P4/P6; \$26,200-34,100/\$31,900-40,600 9-19-95 WCIT
PROGRAMMER ANALYST II (04012JZ) P6; \$31,900-40,600 4-10-95 WCIT
PROGRAMMER ANALYST II (09387JZ) P6; \$31,900-40,600 9-28-95 Statistics
RESEARCH SPEC. I (09370RS) (End date: 8/31/96) P2; \$21,700-28,200 10-19-95 General Int. Medicine
SYSTEMS PROGRAMMER I/II (07021JZ) P6/P7; \$31,900-40,600/\$35,000-43,700 8-9-95 WCIT
SYSTEMS PROGRAMMER I/II (09315JZ) P6/P7; \$31,900-40,600/\$35,000-43,700 9-11-95 WCIT
TECHNICAL WRITER (09417JZ) (Final candidates may be asked to submit a writing sample) P6; \$31,900-40,600 10-4-95 External Affairs
TECH, WRITER/EDITOR (09419JZ) (Final candidates may be asked to submit writing sample) P8; \$38,500-48,100 10-4-95 Deputy Dean
CUSTOMER SERVICE ASSISTANT II (37.5 HRS) (10441JZ) (Periodic overtime on evenings and Saturdays required; no vacations during the months of September, October, January and February allowed) G9; \$18,321-22,929 10-9-95 WCIT

Final Report of the Ad Hoc Committee on the Selection of a Deputy Provost

The committee was convened on December 5, 1994, and completed its work on January 31, 1995. Members of the Committee were: Richard Dunn, Jeanette and Roy F. Nichols Professor of History, Chair; Patricia Grimes, Associate Professor of Ophthalmology; Daniel Malamud, Professor of Biochemistry, School of Dental Medicine; Ann Mayer, Associate Professor of Legal Studies; Samuel Preston, Professor of Sociology; and John Quinn, Robert D. Bent Professor of Chemical Engineering. Linda Koons, Executive Assistant to the Provost, served as staff to the committee.

Only internal candidates were considered for the position. The committee sought out faculty having a strong record of scholarship; extensive knowledge of the University, its faculty, and its policies and practices; and evidence of administrative ability and experience, particularly with budgeting and academic planning. It solicited nominations from faculty and deans and placed a notice in Almanac. It also reviewed the nominations from the previous search for a Deputy Provost.

The committee received nominations of twelve possible candidates, discussed another possible fourteen, and interviewed the nine faculty who seemed to them the strongest prospects. After completing this process, the committee submitted a list of three men and three women to Provost Staley Chodorow from which he subsequently appointed Michael Wachter, Professor of Economics and Law, as Deputy Provost.

— Richard Dunn, Chair

Final Report of the Ad Hoc Committee on the Selection of an Associate Provost

The search committee was established in early June under the chairmanship of Michael Wachter, Professor of Law and Economics and Deputy Provost-Designate. Its members consisted of Jacob Abel, Professor of Mechanical Engineering; Janice Bellace, Professor of Legal Studies and Deputy Dean, the Wharton School; Robert Gorman, Professor of Law; Janice Madden, Professor of Sociology and Vice Provost for Graduate Education; and Joan Mollman, Associate Professor of Neurology and Chair of the Medical School Faculty Senate. Linda Koons and Jo-Ann Zoll in the Provost's Office staffed the committee.

Only internal candidates were considered for the position. Candidates were sought who had extensive knowledge of the University and its policies and practices and who had some experience in dealing with the faculty personnel system. A total of sixteen faculty were considered and eleven were interviewed, of whom two were minority candidates and two were women. The Provost named one of the two women candidates, Barbara Lowery, as Associate Provost, effective August 1.

— Michael Wachter, Chair

Check Cashing at the Bookstore

The Penn Bookstore has recently added Cash America, an outside financial organization, to its check-cashing department in an effort to improve its level of service and provide more flexibility, Bookstore Director Michael Knezic has announced. Cash America offers the University community the option to cash personal, credit union, and payroll checks at a "low rate" without any limit to the amount of the check, he said. In addition to unlimited check cashing, he listed the following services: authorized utility and cable bill payment center, SEPTA tokens and TransPasses, Notary Public, Western Union, credit card advances, money orders for 39 cents each and postage stamps. "This partnership is part of ongoing efforts to restructure and provide better service," said Mr. Knezic.

Procurement Credit Card

The MasterCard Procurement Credit Card is a new procurement tool which offers an alternative to existing University procurement processes and provides an extremely efficient and effective method for purchasing and paying for business related goods and services with a total value less than \$500.

The procurement credit card concept facilitates point-of-demand procurement by delegating authority to the ultimate customer (with an appropriate level of control at the point of sale), who can quickly and efficiently purchase approved commodities directly from suppliers that accept the MasterCard credit card. This program, implemented in July 1994, was created with the help of many University staff and faculty members.

The benefits of the MasterCard Procurement Credit Card are significant:

- Allows cardholders to obtain goods and services faster and more easily;
- Significantly reduces workload related to the purchase of, and payment for, goods and services;
- Enables the cardholder to be more efficient and to focus on value added aspects of the job.

For additional information on the MasterCard Procurement Credit Card Program please check the Penn Purchasing World Wide Web page (URL location: <http://www.upenn.edu/purchasing>).

To receive a procurement credit card application, please contact the University Credit Card Administrator Roger Feters, at 898-3606 or e-mail: feters@pobox.

— Martin Alexander, Assistant Comptroller
— Ralph Maier, Associate Director, Purchasing

Research Ethics Lectures

The Center for Bioethics and the Biomedical Graduate Studies will sponsor a four-day lecture series by members of the Center for Bioethics in November. All lectures are held from noon to 1 p.m. in Dunlop Auditorium, Stemmler Hall. For more information, contact Maggie Krall, Biomedical Graduate Studies, 898-1030 or krall@al.mscf.upenn.edu.

8 Ethical Issues in Research; *The History of Research Ethics*, Art Caplan; *When Something Goes Wrong: Fraud, Conflict of Interest, Whistleblowing*, Glenn McGee.

10 Ethical Issues in Science Training; *Authorship, Control and Impropriety in the Lab*, Mildred Cho; *Who Owns My Data? Ethics of the Notebook*, Jon Merz.

15 Human and Animal Subjects; *Animal Experimentation*, Art Caplan; *Informed Consent, IRBs*, Jon Merz.

17 Ethics of Participation in Research Institutions; *Business, Research and You: Technology Transfer*, Glen McGee; *Cases in Research Ethics: The Future*, Art Caplan.

Note: The Samitz Lecture in Cutaneous Medicine, 10 a.m. 11/2/95, has moved from Medical Alumni Hall to the Austrian Auditorium, CRB.

Laser Safety Programs

The Office of Environmental Health & Safety will conduct Laser and Safety Training on November 28, 1995 for all members of the Penn community who use lasers in their research. The seminar will be held in room 216 Moore School from 10-11:30 a.m. Topics to be discussed include use responsibilities, medical surveillance, and recommended work practices. All faculty, students and staff who use lasers and have not already attended a University sponsored laser safety training program must attend training.

The training program is one element of the University's Laser Safety Program. The program also includes a laser safety manual, a laser registry, a medical surveillance program and a lab inspection program. Penn's Laser Safety Manual is based on ANSI Z136.1 (1993), a nationally recognized standard for the safe use of lasers. To obtain a copy of the manual contact OEHS at 898-4453 or consult the OEHA web site, <http://www.oehs.upenn.edu>.

Principal investigators who use lasers in their research must complete a registry form listing the location and type of laser(s) they use along with the names of all users. A copy of the form is attached to the Laser Safety Manual.

A medical surveillance program has been established for faculty and staff that use Class 3B and Class 4 lasers. Ocular examinations are conducted by the Ophthalmology Department at HUP to establish a baseline for each user's eyes. To be eligible for the program, principal investigators must complete the laser registry form and return it to the Office of Environmental Health & Safety, 1408 Blockley Hall/6021.

If you would like to sign up for the training or if you have any questions, contact Laura Peller at 898-4453 or e-mail laura@oehs.upenn.edu.

Two Arrests in Auto Thefts—and Steps Toward Prevention

After a rash of vehicle break-ins and thefts of property from autos parked inside Lot #14 (38th and Spruce Streets, northwest corner), Penn Police made two separate arrests on October 24. Three juvenile males were apprehended at about midnight on the 200 block of S. 38th Street, and an adult male was arrested inside the lot around 9 p.m.

"The Division of Public Safety and the Department of Transportation and Parking are continuing their efforts to alleviate this crime problem," said Maureen Rush, Director of Victim Support and Special Services. "They are especially asking people not to leave their belongings exposed inside a vehicle; to avoid leaving a vehicle parked for prolonged periods; and to report any suspicious activity or persons in or outside a parking lot to Penn Police by calling 573-3333 or 511—or picking up a Blue Light Phone, which connects automatically with the campus police."

Last week all motorists using Penn lots and garages received this letter on their windshields:

The University is experiencing an increase in property crimes directed primarily at parking lots and garages. This activity includes breaking vehicle windows and removing personal property and items of value.

The Department of Transportation and Parking is working in tandem with the Division of Public Safety to remedy this situation. We have increased patrols throughout Penn's parking lots; additional security personnel are being placed in specific facilities where this activity is the highest; daily inspections are being made to insure that all doors are closing and locking, that security grates and fencing are secure, that lighting is sufficient and that all access control devices are properly functioning. We are also removing illegally parked vehicles and challenging suspicious persons and/or activity in the lots. We need your help, too!

We need your eyes and ears in the parking lots. If you observe unusual activities or unsafe conditions while in a Penn lot or anywhere on campus it is important that you report them by calling Penn Police.

You may also reduce your vehicle's exposure to crime by exercising the following precautionary measures when parking your vehicle:

- close all windows and lock all doors;
- install the "Club" or similar device on the steering wheel; and
- remove all items of value (i.e., clothes, radios, car phones, briefcases, loose change, cigarettes) from view, preferably locking them in the trunk before entering a parking lot or garage.

We need you to be aware and involved in the prevention of crime by diminishing the opportunity for crime to occur.

Robert Furniss
Director, Transportation and Mail Services

George Clisby
Chief, Campus Police

The University of Pennsylvania Police Department Community Crime Report

About the Crime Report: Below are all Crimes Against Persons and Society in the campus report for **October 16 to October 22, 1995**. Also reported were **Crimes Against Property including 54 thefts (1 of autos, 25 from autos, 8 of bikes and parts); 7 burglaries; 6 incidents of criminal mischief and vandalism; 1 incident of forgery and fraud; 1 incident of trespassing and loitering**. Full reports are in this issue of *Almanac* on the Web (<http://www.upenn.edu/almanac/v42/n10/crimes.html>).—Ed.

This summary is prepared by the Division of Public Safety and includes all criminal incidents reported and made known to the University Police Department between the dates of **October 16, 1995 and October 22, 1995**. The University Police actively patrol from Market Street to Baltimore Avenue and from the Schuylkill River to 43rd Street in conjunction with the Philadelphia Police. In this effort to provide you with a thorough and accurate report on public safety concerns, we hope that your increased awareness will lessen the opportunity for crime. For any concerns or suggestions regarding this report, please call the Division of Public Safety at 898-4482.

Crimes Against Persons

34th to 38th/Market to Civic Center: Robberies (& attempts)—2, Threats & harassment—3, kidnapping & unlawful restraint—1

10/17/95	5:03 PM	Vance Hall	Unwanted phone calls received
10/17/95	8:23 PM	Mudd Bldg.	Unwanted calls received
10/18/95	11:32 PM	Houston Hall	Store robbed by two unknown males
10/19/95	4:51 PM	3600 Blk. Chestnut	Unknown male took wallet/fled in auto
10/19/95	7:54 PM	100 Blk. 36th	Attempt to take occupied baby carriage
10/20/95	10:29 AM	Johnson Pavilion	Unwanted messages received

38th to 41st/Market to Baltimore: Threats & harassment—3

10/18/95	6:06 PM	Harrison House	Person struck on head by unknown liquid
10/20/95	1:07 PM	Chi Omega	Unwanted phone calls received
10/22/95	8:31 PM	4000 Blk. Walnut	Unwanted advances from unknown male

30th to 34th/Market to University: Aggravated assaults—1

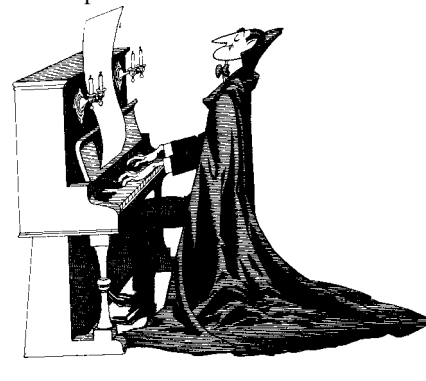
10/18/95	11:15 PM	3200 Blk. Walnut	Compl. stabbed w/pencil by unknown male
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Outside 30th to 43rd/Market to Baltimore: Threats & harassment—1

10/17/95	1:41 PM	2126 Pine St.	Harassing email received
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The Phantom at Irvine

The Irvine Auditorium's 12,000-pipe organ comes alive tonight as musicians Lee Erwin and Ramona Peterson give the voice to the silent movie *The Phantom of the Opera*. The Curtis Organ Restoration Society's annual Halloween fright-film screening features Lon Chaney and one of the last and largest symphonic organs of the silent film era. For tickets, \$5 each, call 898-6791 or buy them at the door for the 8 and 10 p.m. shows.



Almanac

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E-Mail: almanac@pobox.upenn.edu
URL: <http://www.upenn.edu/almanac>

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Coming November 28: Billy Crudup as Septimus and Jennifer Dundas as Thomasina will give script-in-hand readings from *Arcadia* starting at 4 p.m. in Zellerbach Theater. For a November 1 head start on interpreting the play, see below.

Steinberg Symposium: 'Arcadia' November 1, 28

Arcadia, the 1995 New York Drama Critics' Circle Award Winner for Best Play and the text for the 1995-96 Penn Freshman Reading Project, will also be the centerpiece of the School of Arts & Sciences' Steinberg Symposium this year.

Three interwoven events make up the series:

November 1: A Penn Faculty Colloquium sets the stage.

November 28: The five central actors from the New York stage production of *Arcadia* give readings and hold a conversation with the audience.

February 6-8: Playwright Tom Stoppard comes to campus for a three-day residency.

The Steinberg Symposium—funded by Gayfryd and Saul Steinberg and presented by SAS—brings writers, artists, and scholars to campus for classes, readings, lectures, and colloquia for students and the public.

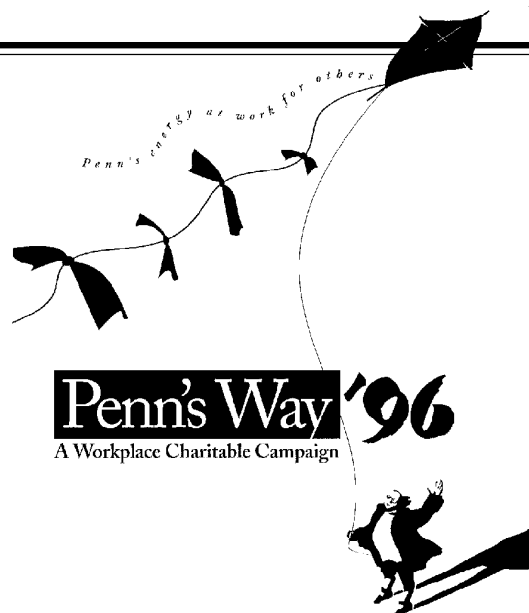
This is the first year that the Steinberg Symposium has been organized around the Reading Project text. "If this model proves successful, we intend to relate future Steinberg Symposiums with the Reading Project, whenever it's appropriate," said Dr. Robert Lucid, professor of English and director of the Steinberg Symposium.

"*Arcadia* is about the intersection of two groups of people separated in time by almost two centuries, but connected by blood, culture, science, mathematics, literature, and even landscape, into a common human situation," explains Dr. Christopher Dennis, director of Academic Programs in Residence. "The play was enthusiastically discussed by over 2,500 freshmen and faculty session leaders in September."

Now all students, faculty, and friends of the University have the opportunity to further explore the complex themes of the play during the Steinberg Symposium, Dr. Dennis added.

The *Arcadia Colloquium* will be held on Wednesday, November 1 at 4 p.m., at the Annenberg School Auditorium. A faculty panel—Professors Stuart A. Curran (English), Dennis DeTurck (Mathematics), John Dixon Hunt (Landscape Architecture and Regional Planning), and Professor Lucid—will discuss the interwoven themes of culture, science, mathematics, literature, history, and landscape in *Arcadia*. Afterward, dinners will convene in campus dining halls with the panelists, project leaders and members of the audience who sign up (898-5551).

For more on the Steinberg Symposium, visit the program's World Wide Web page at <http://www.sas.upenn.edu/sasalum/steinberg/welcome.html>. Unless otherwise indicated, all Steinberg Symposium events are free and open to the entire University community. For more information, contact Anita Mastroieni at 898-5262.



To the University Community

On November 1st, we will kick off Penn's Way '96, the University's charitable workplace campaign which enables Penn faculty and staff to support its partner organizations through payroll; deductions, checks or cash.

Penn's Way, now in its fifth year, has been tremendously successful—raising more than a million-and-a-half dollars in support of community organizations that serve those in need. This University-wide effort is proof indeed that Penn people do care about their neighbors.

Next week, you will receive your Penn's Way '96 guidebook in the mail. Please read it carefully. Then choose the organization(s) that you wish to support and return the response card in the envelope stamped "Confidential." It's a quick and easy way to show your support for others in need, and the most effective way to run a campaign of this magnitude.

The past success of Penn's Way has been due, in large measure, to the efforts of hundreds of Penn faculty and staff volunteers. To these dedicated people, we owe an enormous debt of gratitude. They have done a marvelous job in getting the word out about Penn's Way to the faculty and staff in our University family. This year you will not hear from a volunteer coordinator. Why? Because our volunteers have done such a great job in getting the word out, and because past campaigns have shown that Penn people do care and want to participate.

This year you are needed more than ever. Your gift, whatever the size, does matter. Together, we can make a real difference in the lives of those who are counting on us. If you do not receive your Penn's Way '96 guidebook by November 10, please call Banoo Karanjia at 898-9155 or contact her at karanjia@AI.BENHUR.

Thank you for your support of Penn's Way '96 and all that you do to make Penn and its neighborhood a great place to work and live.

Sincerely,

*Carol Scheman, Vice President
Government Community and Public Affairs
Co-Chair, Penn's Way '96*

*Ira M. Schwartz, Dean
School of Social Work
Co-Chair, Penn's Way '96*

1995 White Paper on Undergraduate Education

The Student Committee on Undergraduate Education



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Timothy Durkin
Alfred Wang

The Project Managers

Sharna Goldseker
Eugene Huang
Matthew Kratter
Satya Patel

Introduction

The Student Committee on Undergraduate Education first endeavored to discuss academic reform in 1965. Thirty years later, SCUE revels in the debate that has ensued, and is pleased to continue its involvement in the dialogue regarding undergraduate education. SCUE anticipates the outcomes of the current debate, in which education at Penn will evolve amid contemporary forces.

The Pennsylvania tradition of a foundation in the liberal arts, combined with current trends in global citizenry and interdisciplinary thought, necessitates the reexamination and refinement of undergraduate education. By nurturing a vibrant intellectual community of student and faculty scholars and further developing a distinctive Penn experience, the University has the capacity to realize the timeless vision of its founder, Benjamin Franklin. Moreover, by capitalizing on Penn's urban setting and its strengths in particular fields of study, diversity and research, the University has the potential to provide Penn students with an academic experience unsurpassed at the collegiate level.

Given these objectives, SCUE has constructed innovative models and has developed programmatic enhancements for the attainment of a complete educational experience. From curricular restructuring to residential reform, our suggestions for growth and change only begin to address an undergraduate's intellectual enterprise. We offer these recommendations as a continuation of the dialogue concerning academic reform which SCUE launched thirty years ago. It is our hope that these proposals will affect the reconstruction of a definitive Pennsylvania experience.

If after considering this paper you would like to provide comments, criticisms or suggestions, please submit them to the Student Committee on Undergraduate Education at 127 Houston Hall/6306 or via e-mail to scue@dolphin.upenn.edu. SCUE looks forward to participating in the ensuing dialogue and to continuing its tradition of leading academic reform.

For Appendices, please contact SCUE at 898-6945 or via e-mail to scue@dolphin.upenn.edu.

SCUE Kicks Off Design Your Education Week

The Student Committee on Undergraduate Education (SCUE) is sponsoring the first annual Design Your Education Week (DEW) from October 30th through November 3rd. DEW is an opportunity for undergraduates to discover the numerous opportunities available to them at the University and to begin thinking creatively about how to construct a coherent, unique Penn experience. Each day of DEW is devoted to a particular graduating class with the week concluding on Friday with a day for the entire undergraduate community. As a conclusion to DEW, a colloquium on undergraduate education will be held on Friday, November 3, from 2 p.m. to 4 p.m., in the Annenberg School Room 110. SCUE invites all members of the University community to come take part in this discussion, which will feature many members of the faculty and the undergraduate deans. A reception will follow in The Castle, located on 36th Street and Locust Walk. SCUE hopes to see all of you during Design your Own Education Week as your participation is a key to its success.

1995 White Paper on Undergraduate Education

Curriculum

The Penn Tradition

In 1791, the College of Philadelphia and the University of the State of Pennsylvania were merged to form America's first university, the University of Pennsylvania. In an era marked by profound social and political change, the University was confronted with the question of what role it would play in society as an institution of higher learning.

Benjamin Franklin had already composed an answer to this question and stated his vision in the essay, *Proposals Relating to the Education of Youth in Pennsylvania*: "The great Aim and End of all learning is an inclination joined with an ability to serve mankind." Over the past two hundred years, this commitment to citizenship has implicitly energized the University of Pennsylvania curriculum. While the civic ideal of citizenship is timeless, SCUE acknowledges that the notion of citizenship must evolve in response to a changing world order. Over time, Penn has become more than just a University of the State of Pennsylvania; it has become an internationally renowned university. Thus, as we move into the 21st century, SCUE affirms an ideal of citizenship which reflects the local, national and global scope of modern communities.

In its efforts to develop an education for an informed citizenry, Penn has recognized that many of the traditional divisions between academic disciplines are imperfect and potentially confusing for the student. The *One University* concept is rooted in the notion that knowledge is both holistic and interdisciplinary. While excelling in the teaching of its core disciplines, Penn has championed these ideals through the integration of programs across schools, departments and institutes at the University. Examples of these programs include History and Sociology of Science; Philosophy, Politics and Economics; Urban Studies; Management and Technology; the International Studies Program; and Cognitive Science.

Penn's continued emphasis on cross-disciplinary and integrative knowledge is a reflection of the coalescence of knowledge within society. The establishment of Penn as the quintessential research and teaching university is testament to the belief that great ideas can and should be useful to society at large. In addition, the integration of academic theory and practice has been a guiding principle for the University and its constituents. Through the pursuit and employment of knowledge, students learn to think critically about themselves and their society.

The Penn Sectors

SCUE offers the *Penn Sectors* as an embodiment of the ideals of citizenship, interdisciplinary study and thought, and application of theory in practice. The three sectors, Community, Society and Traditions, are meant to be the definitive, liberal arts-based centerpiece of the undergraduate academic experience. Each sector should consist of only four or five new, faculty-designed course offerings which emphasize writing, speaking, analysis, research, interpersonal skills and technology. The courses should also take advantage of Penn's strengths in disciplinary study, diversity and professional education. The three *Penn Sectors* would provide a holistic approach to learning in which students would be able to appreciate and understand the development and uses of knowledge. Confronting knowledge from local, national, and global perspectives would familiarize Penn undergraduates with social and cultural differences and lead to an understanding of the diversity within the University and larger community. The *Penn Sectors* would also provide a common intellectual experience for all undergraduates, contributing further to the development of a distinctive and cohesive Penn experience.

Faculty participation in the development of courses for the *Penn Sectors* is essential to the success of the curriculum. The *Penn Sectors* would challenge faculty to take collective responsibility for the education of all undergraduates. Courses designed and developed by faculty would have to be rigorous, stimulating, and integrative. By engaging undergraduates in these dynamic courses, the *Penn Sector* would foster interac-

tion between faculty and students. Additionally, team-teaching of the interdisciplinary material in *Penn Sector* courses would accentuate faculty commitment to undergraduate education at the University. For the *Penn Sectors* to be successful, faculty must be recognized and rewarded for their contributions to the life of the undergraduate mind.

The *Penn Sectors*, in conjunction with the unique academic programs of each undergraduate school, would create a truly innovative and distinctive Penn experience. By establishing the *Penn Sector* curriculum, the University would highlight its intellectual capabilities and the strengths of its distinguished faculty. Citizenship, interdisciplinary thought, diversity, and an urban setting all exemplify the Penn experience and are at the foundation of the *Penn Sectors*. In the tradition of Benjamin Franklin and the University of Pennsylvania, the *Penn Sectors* endeavor to provide a "complete education" for students.

Community

The purpose of the Community sector would be to teach students about the acquisition and application of knowledge through group analysis of local issues. From their first days at Penn, undergraduates would gain exposure to the innumerable resources that Philadelphia, one of America's oldest and largest cities, has to offer. Historical, cultural and democratic institutions such as the Philadelphia Museum of Art, Independence Hall, City Hall, the Historical Society of Pennsylvania, the Library Company of Philadelphia and the Philadelphia Stock Exchange would be invaluable assets in the undergraduate intellectual experience.

A Community course should be taken during the first semester of freshman year. The process of investigating community-based issues in small workgroups, early in students' academic careers, would demonstrate the real impact that abstract theories have on problems within Philadelphia. Confronting a local issue in small teams of faculty, graduate students, upperclassmen, and fellow freshmen would also facilitate intellectual discussion and community-building from the outset of the Penn experience. Through the Community course, students would acquire research skills, interpersonal skills and a social awareness that will carry them through their Penn career and the rest of their lives.

Each Community sector course would focus on a different aspect of society, enabling students to choose from topics which interest them. Course topics could include the environment, history, architecture and politics, among other realms of knowledge which can be brought to bear on local issues. All of these courses would emphasize the relationship between academic theory and applied research and instill an appreciation of Penn's surroundings.

Society

The objective of the Society sector would be to teach undergraduates critical thinking, interpretation and analysis by addressing living world issues from a global perspective. In order to broaden a student's ability to comprehend and synthesize disparate ideas and to think critically about them, Society courses would provide distinct cultural approaches to global issues.

A Society course should be taken during the second semester of freshman year. Through early exposure to various global societies, students would also learn to appreciate the plurality of society and the diversity of Penn. Society sector courses would utilize historical and cultural materials from three to four distinct regions of the world to uncover various approaches to the global issue at hand. Current media from around the world, such as art, literature, and popular news, would be used to further examine the issue from contrasting cultural perspectives.

Team instruction by outstanding faculty who specialize in particular topics would stimulate student interest and impart a clear understanding of an issue from varying viewpoints. Society course topics could include hunger, death, discrimination and urbanization. All Society sector courses would emphasize thinking, critical analysis and interaction between students and faculty.

Traditions

The intent of the Traditions sector is to teach students about the development and expression of thought through an introduction to American legal, political and economic ideology. Students would analyze the development of these notions throughout history and determine their application in modern day society. Upon completion of the course, students would be able to conduct critical analysis of issues, particularly the evolution and direction of national trends.

A Traditions course should be taken during the first semester of sophomore year. The evolution of Penn is closely tied to the history and traditions of the United States. Consequently, exposing students to the development of American ideology over time is important for understanding Penn's values and principles as an American university. The notions of American character and citizenry discussed in Traditions courses could stress Penn's social responsibilities as an institution of higher learning and as a member of the larger Philadelphia and United States communities.

Courses within the Traditions sector would focus on themes of pluralism, constitutionalism, capitalism and other aspects of citizenry. Emphasis on the evolution of theoretical approaches underlying the crucial aspects of American order would lead students to understand the application of these thoughts in modern day society and their direction for the future. In the process, undergraduates would learn to reason, communicate effectively and adapt to changes in thinking.

The Four Undergraduate Schools

The creation of a liberal arts curriculum common to the four undergraduate schools necessitates the evaluation and redevelopment of the curricula distinct to each school. The proposals below do not call for sweeping structural changes; SCUE attempts to build upon the strengths unique to each school and to the University experience.

The College of Arts and Sciences

The College's goal is to help students to become knowledgeable about the world and the complexities of today's society, aware of moral, ethical, and social issues, prepared to exercise intellectual leadership, and enlivened by the use of their minds.¹

In the spirit of Benjamin Franklin's commitment to a liberal arts-based professional education, the College offers undergraduates the General Requirement as a foundation for creative and critical thinking. While the philosophy underlying the General Requirement is consistent with the aims of Franklin, the existing six sectors fail to fully realize their objectives. SCUE introduces the *Penn Sectors* as a response to the current deficiencies in the requirement structure. Problems with the existing model also necessitate restructuring the General Requirement.

The *Penn Sectors* are writing-intensive liberal arts-based courses which emphasize the structure and organizing principles of modern societies in addition to the development of human thought. Implementing these sectors would achieve the objectives of the writing requirement and the first two sectors of the existing General Requirement. Thus, the Society and Tradition sectors would be incorporated into the *Penn Sectors* and History would be established as a distinct sector. Furthermore, to provide students with a thorough introduction to both the arts and the written word, the Arts and Letters sector of the current General Requirement would be divided into two separate sectors. Overall, students would take one course in each of nine sectors with a tenth course to be taken from any science-oriented sector or the Science Studies sector (see Appendix A for proposed changes).

While the General Requirement is reflective of the breadth of the liberal arts, SCUE is concerned that the approved courses do not always fulfill the original philosophy of the General Requirement and the objectives of the individual sectors. One reason that many courses within the General Requirement often fail to broaden the horizons of undergraduates is because of contrasting definitions of breadth. Breadth can be defined as an introduction to a discipline or area of study, or as the variety in methodologies used to address specific topics. SCUE feels that breadth should introduce undergraduates to realms of knowledge which would enable them to make informed decisions about their own education (for an in-depth discussion refer to the December 1993 SCUE White Paper on the General Requirement).

The College's effort to allow many departments to offer General Requirement courses, in combination with ambiguity in the definition of breadth, has contributed to an excessive number of recognized courses. The increase in courses which fulfill sector requirements has further diminished sector integrity. SCUE believes that courses within each sector should be reevaluated to ensure consistency with General Requirement and individual sector objectives.

The School of Engineering and Applied Science

Today's engineers are faced with the challenge of integrating increasingly complex technologies in modern society. SCUE proposes that the integration of the *Penn Sectors* into the SEAS curriculum and the creation of Engineering 101 (see below) would broaden a student's scope of knowledge (see Appendix B and C for proposed changes). The curriculum of the Bachelor of Applied Science (BAS) degree should be restructured to more accurately fulfill its original objective, providing liberal arts students with a technological background. Focusing on a greater commitment both to the *One University* concept and the integrative nature of technology, a revitalization of the SEAS curriculum will supply students with the skills needed to confront challenges in the 21st century.

Engineering 101

SCUE proposes Engineering 101 for first- or second-semester SEAS students. Engineering 101 would be a holistic introduction to engineering through the presentation of a single concentration each week, allowing students to make informed decisions about their education. Each lesson would familiarize students with a new engineering discipline, consequently guiding the first-year student towards a particular course of study. The format of each seminar would be determined by the faculty instructor for the class. Possible models include departmental colloquia developed for first- and second-year engineering students, a broad topical overview of a given discipline, the presentation of cutting-edge research, and the application of knowledge in a laboratory demonstration.

Ideally, Engineering 101 would be held in a seminar format, with fifteen to twenty students in each section. To accommodate all freshmen, sixteen professors (two professors from each department) would be assigned to Engineering 101. However, the professors would be rotated throughout the semester to introduce their respective departments to each Engineering 101 section.

The Bachelor of Applied Science

The Bachelor of Applied Science (BAS) program stresses breadth in technological concepts and liberal arts, and depth in an area of societal interest to the student.² Currently, the breadth of technological disciplines is considered by some to be loosely connected, inadequately preparing BAS students for confronting integrative technological issues. Though students often do acquire depth in a particular discipline, SCUE believes that the supporting elements of interpersonal communications and internationalization need increased attention in the BAS curriculum.

SCUE proposes the implementation of the *Penn Sectors* and Engineering 101 to improve the BAS curriculum. The *Penn Sectors* would build a foundation for the exploration of technological concepts by providing both an intensive writing experience and increased exposure to global perspectives. Furthermore, the *Penn Sectors*, in conjunction with Engineering 101, would combine technical and societal issues through an emphasis on the interdisciplinary nature of technology.

Increasing the number of free elective course units from two to ten, by partially replacing the existing distributional and depth requirements and increasing the course load, would provide BAS students with the ability to strengthen the liberal arts curriculum (see Appendix C for proposed changes). With additional free electives, SCUE recognizes that the BAS student would have the curricular freedom to pursue a foreign language option. Similar to the philosophy of the other pre-professional schools, a foreign language proficiency option would enable BAS students to become more adept at functioning in an increasingly global society.

The School of Nursing

The Nursing curriculum provides its undergraduates with a comprehensive introduction to the health care profession. However, a primary concern of Nursing students is that the Nursing curriculum is inflexible and does not allow for a broad enough liberal arts foundation. The existing liberal arts component of the Nursing curriculum combines the General Education Distribution with a writing and foreign language requirement. With the implementation of the *Penn Sectors*, SCUE aims to restructure this curricular framework. The intensive writing element within the three *Penn Sectors* would substitute for the existing writing requirement. Further, as the Nursing curriculum emphasizes scientific theory and applied science, SCUE feels that the Formal Reasoning & Analysis and the Living World sectors of the General Requirement are redundant. The removal of these two sectors and the writing requirement would free up three credit units for electives. The remaining three General Education Distribution credits would consist of the Arts, History, and Letters sectors (see Appendix D for proposed changes).

While SCUE does not advocate the elimination of the foreign language

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requirement within the Nursing School, we question the adequacy of the foreign language education available in the existing language courses (refer to the section on Foreign Language Proficiency). Freeing up the two foreign language credit units and the three credit units discussed above would provide, in addition to the original free elective credit unit, a total of six free electives for Nursing students. With increased flexibility within the curriculum, Nursing students would have the option of pursuing a full complement of foreign language classes leading to proficiency.

The Wharton School

The Wharton curriculum was restructured in 1991 to synthesize excellence in business education and a liberal arts foundation. The inclusion of the *Penn Sectors* within an expanded nine-course unit General Education Distribution would effectively accomplish this integration. Moreover, SCUE proposes a number of changes to the curriculum which would provide Wharton students with an educational experience reflective of an increasingly global society (see Appendix E for proposed changes).

The Business Education Requirement

The redundant nature of the material covered in Macroeconomics (Economics 2) and Monetary Economics (Finance 101) leads SCUE to recommend the elimination of the Macroeconomics course requirement. Furthermore, SCUE recommends the replacement of Microeconomics (Economics 1) with a course similar to Managerial Economics 601, the introductory economics course taken at the MBA level. By emphasizing applied concepts, Managerial Economics provides a solid foundation for understanding theoretical notions in a relevant business situation. Additionally, as explained above, the *Penn Sectors* include an intensive writing component which would eliminate the need for an English Seminar requirement.

Business Fundamentals

As independent entities, courses currently falling within the Business Fundamentals sector fail to address the growing interdisciplinary and international nature of business. To address this concern, SCUE recommends the introduction of Global Business 101. This team-taught course would expose Wharton undergraduates to the international environment in which businesses operate, highlighting business practice, law, and ethics in different regions of the world. In conjunction with the General Education Requirement, Global Business 101 would replace the existing Global Environment requirement. Currently, Global Environment is ill-defined and includes classes which may not fulfill the spirit of the requirement. Global Environment is currently defined to include courses concentrating on non-American topics after 1750. By providing a broad view of business schemata in the international environment, Global Business 101 would further the internationalization of the Wharton curriculum.

Business Depth

SCUE recommends following the MBA model by increasing concentration requirements from four course units to five course units to ensure expertise within one discipline. In combination with the increased rigor of Business Breadth (see below), Wharton students would graduate with both breadth and depth in business. Furthermore, SCUE recognizes that an increased credit load for a single concentration, in combination with the stiffening of the business breadth requirement delineated below, would make it difficult for students to complete more than one concentration. However, without the limitations inherent in dual concentrations, students would be free to diversify their curriculum.

Business Breadth

SCUE recommends increasing Business Breadth from three course units to four course units to ensure that the Wharton undergraduate is receiving adequate breadth in her course of study. As a further step to guarantee breadth, Business Breadth courses would not count within a student's concentration. This requirement would encourage students to diversify their business curriculum.

Business Environment

The Business Environment requirement functions as an introduction to multiple factors which affect the conduct of business in society. In their current form, the Organizational and Societal Environment requirements are redundant in content and hinder course variety. SCUE recommends the combination of the two requirements to eliminate the duplication of course material and to afford students greater flexibility in course selection. The Management & Technology curriculum currently utilizes this structure.

Research Capstone

The concept of further integrating research into the undergraduate curricula at the University will be discussed at length in the Research section of this paper. However, a research capstone for all Wharton undergraduates should be included in any curricular changes. The capstone

course would be a culmination of a student's experiences within the Wharton School and the University. The course would be broad in nature, incorporating disparate aspects of the business environment in order to bring focus and closure to a student's studies. Theories learned throughout the four undergraduate years would be applied in a research project. Ideally, that research would take place under the guidance of a professor within a student's department of concentration. The final product would then be presented to the Capstone class, offering closure to the group project experience as well.

Conclusion

The creation of the *Penn Sectors* would exemplify the University's continued commitment to a liberal arts-based education. With emphasis on citizenship, cross-disciplinary study, and practical application of theory, Penn can establish a curriculum unparalleled by other institutions of higher learning. The implementation of *Penn Sectors* would facilitate the development of an interactive community of faculty and undergraduate scholars. SCUE has considered the state of undergraduate education at the University at length and is certain that the *Penn Sectors*, in combination with curricular restructuring of each undergraduate school, would promote a meaningful intellectual experience.

Research

The University of Pennsylvania is one of the world's foremost research institutions, capable of offering its undergraduates many valuable skills and experiences through research opportunities. Comprehensive inquiry extends the learning process beyond a broad introductory level of knowledge, as research enables students to participate in the creation and application of academic theory. Students are asked to reach outside of the classroom setting to pursue an in-depth analysis of a question applicable to a given field of study. This process assumes that faculty members will participate in the development of a student's research and help initiate intellectual discourse that extends across the University community.

The State of Research

The College of Arts and Sciences

A number of departments within the College have research components in their major programs. SCUE has chosen to outline three examples of current research options within the undergraduate major programs of Psychology, International Relations and Communication.

- The Psychology Department requires majors to complete a research-based seminar or lecture course which familiarizes students with the means by which empirical data can be gathered, interpreted and conceptualized. These tools are applied in a final research project which is monitored by the professor and other students. Majors unable to register in a research course may complete an independent study under the supervision of a faculty member.²
- The International Relations (IR) program requires its majors to conclude their course of study with a senior capstone seminar. Students must select a thesis topic and work with the seminar leader to integrate the various disciplines which comprise the IR program.⁴
- The Communication major, offered through the Annenberg School for Communication, requires all majors to take a research course which was implemented this past fall. The class introduces students to social scientific methods and operational procedures for research design, data collection and analysis. Skills learned throughout the semester are incorporated and applied through the development of a class project. Additionally, the department offers a credit for students who receive approval to conduct a summer internship. Students who pursue this option are required to complete a 20 to 30 page response paper on the internship experience.⁵

The School of Engineering and Applied Science

The School of Engineering and Applied Science grants two degrees, the Bachelor of Science in Engineering (BSE) and the Bachelor of Applied Science (BAS). Both degree programs require their students to participate in research as a part of their education in the field of engineering. The BSE program requires a Senior Design Project in which students must conduct hands-on research to apply skills acquired within the few years of their education. The BAS program requires two course units of an internship or independent study which culminate in a one course unit Societal Project. The purpose of the project is to apply the theoretical tools learned in previous courses or during the internship or independent study experience.

The School of Nursing

The School of Nursing supports a philosophy of education which attempts to provide nursing students with a liberal base of knowledge and the skills with which to apply that knowledge in a professional health care environment. The school has incorporated a course entitled Research Methodology into the third year of the curriculum. This course teaches students how to evaluate professional research and apply this knowledge to the development of a student's

own research experiences. Fifteen clinical courses are required to acquaint students with modern research methods and to involve students in the daily application of nursing techniques.

The Wharton School

There are no research requirements that span the curricula of all students in the Wharton School. The Marketing concentration requires that students take a Marketing Senior Conference in which material from marketing courses and other courses within the business curriculum are integrated through consulting work for a Philadelphia business. A number of courses offered within the Management and Finance concentrations require research projects which reflect the application of theoretical principles. However, these courses are not designed as research courses and are not required of all students within the concentration. Some students within the Wharton School seek out research activities on an individual basis.

The Joseph Wharton Scholars Program enables students to engage in a two-semester thesis program. This option allows students to participate in and observe faculty research. The two semesters of work culminate with a presentation to a simulated Board of Directors and provides a realistic view of a business environment. Students become knowledgeable of research opportunities with faculty through class presentations and increased involvement by professors.

Implementing a Research Requirement

SCUE believes that all undergraduates at the University should be involved in the development and application of knowledge through the medium of research. While academic research has traditionally been confined to the laboratory or the library, a research requirement at the University should be broad in scope. The *Penn Sectors* would establish a research foundation in the Community sector course, yet research should also be a culminating activity which could include laboratory experimentation, library projects, data collection and analysis, community or service-learning projects, or course development. SCUE believes that this type of research activity should be required of all undergraduates. Ultimately, the University should consider student research in the process of designating honors.

In this vein, each department within the College and Wharton should create courses or capstone experiences that fulfill major and research requirements. While the current Engineering and Nursing School curricula require research, accessibility and awareness of research options should continue to be increased. Traversing the research path can be difficult for undergraduate students. Students will require guidance in their endeavors if their research is to be thorough and well-directed. Thus, to provide a support structure for research interests and to augment advising, the University should establish a support center for undergraduate research.

The center would provide a list of courses which would satisfy the research requirement within any of the major programs for each undergraduate school. In addition, a database of University faculty and their research interests would be available to all students on campus. PennXpertise and the Benjamin Franklin Scholars program both offer lists which index Penn faculty expertise and research opportunities. Unfortunately, these lists do not provide a comprehensive catalogue of all faculty research options and many students are unaware of their existence. All departments would be required to provide literature regarding this information in electronic and traditional forms at the center and elsewhere across campus. A listing of this nature would enable undergraduates to locate and select research projects suited to their majors and to locate professors most qualified to assist in a particular field. Similarly, the research support center would also connect undergraduates with graduate students, Philadelphia organizations, and international schools conducting research within their fields of interest.

The promotion of learning would be enhanced by the introduction of research into the curriculum. Involving students in independent or faculty research would enrich the intellectual life of all undergraduates. Intensive inquiry within a major would strengthen a student's understanding of his discipline and its worldly applications. The institution of a research requirement would benefit undergraduate education and further the development of a community of scholars.

Rhetoric

A thriving social and intellectual community is dependent upon the interaction among its members. For dialogue to continue beyond the bounds of the classroom, undergraduates at Penn must be able to communicate coherently and effectively, in both written and verbal contexts. Furthermore, the ability to speak and write definitively is valuable after a student's time at the University has ended. Modern American society is predicated upon the idea that its citizens are willing and able to voice their opinions. While the University has taken great steps towards improving the writing skills of its undergraduate citizens, the development of oratori-

cal skills is a relatively new notion. Accordingly, SCUE proposes a University-wide rhetoric program designed to provide the tools necessary to communicate effectively, Speaking Across The University (SATU).

The SATU Program

Modeled after the Writing Across The University (WATU) program and the successful Rhetoric Fellows program at Brown University, SATU is a rigorous programmatic option that will emphasize speech-making, debate, and other forms of individual and group verbal expression. Dr. Peshe Kuriloff, Director of WATU, has recommended that SATU be integrated into the existing WATU framework. SATU represents a logical next step in the development of WATU because of their shared commitment to improving the communication skills of Penn undergraduates. Launching SATU, within the structural framework of WATU, would build on the strengths of a successful University program and expand the University's resources to meet the needs of an evolving society.

The SATU Fellowship Program

Opportunities to become SATU fellows would be open to graduate or undergraduate students who have (1) successfully completed the requirements of becoming a WATU advisor, (2) acceptably performed as a WATU advisor for at least one semester, and (3) additionally completed a SATU training course. The additional training for SATU fellows would consist of sessions in oral communication.

Dr. Kathleen Jamieson, Dean of the Annenberg School for Communication, has agreed to teach a SATU training session as well as a possible rhetoric-intensive course to be available to all undergraduates. Dr. Kuriloff has also agreed to consider the possibility of modifying the current WATU training program to prepare students to be both WATU and SATU advisors. A complete training program would be developed with the assistance of Dr. Jamieson, Dr. Kuriloff, and University faculty and administrators in coordination with the Brown University Rhetoric Fellows program.

SATU fellows would meet with students in affiliated courses to improve their presentation skills. Students would attend practice sessions before each oral presentation, discussion or debate, receive constructive feedback and suggestions for improvement, and meet with fellows after the actual class presentation. In addition, SATU fellows would meet with professors throughout the semester to establish SATU guidelines.

Implementing Phase I: SATU in Seminar Courses

The rationale for first implementing SATU in small seminar courses is based upon the intended design of these sections. Seminars were created to provide students and faculty with a setting conducive to class discussion and participation. Interaction of faculty and students necessitates the ability to communicate clearly and effectively. SCUE believes that this intimate environment will provide an effective background from which to monitor and evaluate the addition of a SATU component.

SATU affiliation would require class participation and oral presentations to be considered in the grading of a student's work. Each course would be structured to include oral presentations. These presentations would be in the form of debates, group presentations, speeches, audio/visual projects, students teaching a lesson, or extended student-led discussion sessions. Oral projects would stress public speaking and the interaction of students and instructors.

Implementing Phase II: SATU in Lecture Courses/ Oral Communication Course

After SATU components have been installed in small seminar courses, the next phase would introduce SATU into larger lecture courses. Lecture classes throughout the University that require oral presentation and active class participation should be supplemented by SATU components in their recitation sections. Modeled after the existing WATU protocol, a recitation section in a SATU-affiliated course should be led by a SATU fellow, who would facilitate oral presentations in addition to the regular course requirements. The additional requirements of a student in a SATU-affiliated course would warrant an additional 0.5 credit unit similar to the credit awarded for WATU-affiliated courses. The creation of a SATU option in University lecture classes would allow students to pursue their rhetoric interests within the larger University curricula.

A new SATU oral communications course would be developed as an addition to the undergraduate curriculum. The course would instruct students in the fundamental principles of rhetoric and debate. The Annenberg School for Communication should be responsible for the creation and oversight of the course. Contributors to the course could refer to upper level English classes which emphasize student directed presentations.

Service-Learning

The University has established a tradition of advancing scholarship and social responsibility. Historically, University students, faculty, and

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administrators have been more than just a community of scholars. Penn and its constituents also have been devoted citizens of a larger community. Given these commitments, SCUE believes that Penn should integrate its social responsibilities with its academic objectives. By developing service-learning courses that would satisfy liberal arts requirements within the four undergraduate schools, the University would foster a culture which encourages students and faculty to integrate academic theory with service to the community.

The curricular structure of most universities has remained static in recent decades as a consequence of the continuing isolation of schools from their surroundings. In contrast, academicians at Penn have been taking the lead in applying scholarly theory to real-world dilemmas. As a research and teaching institution located in an urban setting, Penn is fortunate to have access to both the academic and material resources necessary for studying many of the problems that urban environments face today.

We prepare people for economic endeavor, for citizenship, and for many aspects of private pursuit that are enriched by appreciation of diversity and lifestyles and culture, of the aesthetic and the impressionistic....our teaching has a powerful impact on the economy, politics, and humane environment of urban life.⁶

Instilling a spirit of social-consciousness among students and faculty can only strengthen our contribution to society and enhance the Penn experience.

What is Service-Learning?

A service-learning curricular option is based upon the application of knowledge to contemporary issues. The combination of service and learning produces an awareness of one's self and one's environment only to be attained through service-based action. Persistent service-learning enterprises reinforce the relationship between the University and the surrounding community.

Penn currently offers a small selection of courses which fit the service-learning model. As demonstrated by these courses, the development of service-learning options is both feasible and valuable.

- Biomedical Science and Human Adaptability (Anthropology 210), taught by Dr. Francis Johnston, deals with the nutritional habits of children at Turner Middle School. Students in the course develop a procedure for evaluating growth, conduct substantive anthropometric research, and teach nutrition. The study of nutrition and human growth is applied to service in the community by helping to improve the nutrition of Turner Middle School children.
- American National Character (History 443), instructed by Dr. Michael Zuckerman, questions the existence of a national character and its applicability in solving problems within Philadelphia. Students in the course utilize volunteer experiences at University City High School to institute solutions and to comment on the study of a national character.

Anthropology 210 and History 443 should serve as models for departments and schools which attempt to formulate meaningful service-learning opportunities. In contrast, community service without a rigorous academic component does not constitute service-learning. Similarly, research which is not applied also fails to fulfill the objectives of service-learning courses. While these types of experiences are beneficial, tutoring, internships and purely academic courses, which do not integrate service-based action and scholarly learning, undermine the goals of service-learning courses.

Implementing a Service-Learning Option

A successful service-learning curricular option is dependent upon its availability and accessibility to both students and faculty. Service-learning courses should be presented within the framework of the General Requirement and the liberal arts components of the pre-professional schools. Each sector within the General Requirement should contain a service-learning course which fulfills the philosophy and objectives of that sector. Additionally, to encourage faculty involvement in these courses, service-learning should be recognized as a legitimate research opportunity. Increased interaction between faculty and students will enhance the intellectual and social community at Penn both inside and outside of the classroom. Service-learning also nurtures the relationship between the University and the West Philadelphia community, furthering the procurement of knowledge and the commitment to participatory service.

Foreign Language Proficiency

The University prides itself on being the first to develop a proficiency-based foreign language requirement. While some universities allow students to take a number of random course offerings, Penn concentrates on a sequence of language courses arranged to produce a proficient speaker. The University offers more than 100 languages on a rotating basis, and is supported by the Penn Language Center and Multi-Media and Educational Technology Ser-

vices (MMETS). All undergraduates except those in the School of Engineering and Applied Science are required to study a foreign language, with each school structuring the requirement in a distinct manner.

In an increasingly interconnected world, the ability to speak a language other than one's own has become a valuable tool. Advanced technology and the advent of a global economy have made it necessary for modern citizens to communicate in an international context. With these ideals in mind, there has been much introspection and evaluation on the part of the University to determine whether the current foreign language proficiency requirement is successfully achieving its original objectives.

The State of Foreign Language at the University

The foreign language departments at the University have resolved that students should not be allowed to take proficiency-level language courses on a pass/fail basis. Minimal effort expended by students to achieve a passing grade resulted in the declining quality of these classes. Even if students were successful in passing the course, most had not learned enough to pass the proficiency exam. Therefore, elimination of the pass/fail option was instituted this past fall to improve the overall quality of courses.

Although steps for improvement have been taken, foreign language courses are also poorly taught, often by graduate students who are fulfilling their grant requirements. While graduate students potentially have mastery over a given language, often they have not acquired classroom experience, and are unable to convey material to undergraduates. Additionally, course content focuses on grammar rather than on idiomatic expressions and conversational skills, which apply more directly to the objective of proficiency. If the goal for a student is to be able to converse cross-culturally in her professional life, then the language curricula must reflect this need as well.

Improving the State of Foreign Language at the University

SCUE has taken its own steps to evaluate the state of the foreign language requirement. While the rationale behind learning a foreign language is sound and the pursuit beneficial to an undergraduate's course of study, the means by which a student reaches those goals have proven unsuccessful. In their current form, foreign language courses and instruction fail to provide even basic language skills, thus wasting student time and energy. SCUE does not advocate the abolition of the language requirement, rather, SCUE emphasizes the need for improvement of the requirement's goals and implementation.

SCUE has found, as have the foreign language departments, that a lack of effort on the part of students decreases the quality of a course. This is a particular problem when students are placed in levels which are inappropriate given their ability. Many students register for classes based on which time slot fits best in their schedule, without understanding that certain sections are better geared to their capabilities. Additionally, many students take courses to fulfill the foreign language proficiency requirement rather than to gain an understanding of a language.

Learning a language can provide a deeper understanding and appreciation for the structure of all languages. By analyzing other languages, a student can improve the command of his native tongue. Furthermore, the application and learning of knowledge necessarily includes familiarity with the culture in which the language is spoken. Foreign language resources at Penn should be utilized effectively to enable students to develop an appreciation for languages and cultures.

Grading

The development of an intellectual community requires the existence of scholars dedicated to learning for the sake of learning. At the University, the growth of a true community of scholars is often prevented by an atmosphere of competition among students. Competition among Penn undergraduates results from the scarcity of above-average letter grades and the extreme emphasis placed on grade point average (GPA) by evaluators of a student's records. Though a healthy level of competition is necessary for a burgeoning academic environment, the intense competitiveness at Penn has been detrimental to the process of learning and academic inquiry. SCUE feels that the University can take discrete steps to ameliorate existing deficiencies within the current system.

These problems are compounded by the inability of grades to evaluate thoroughly and accurately all aspects of a student's course work. The existence of grade inflation and widely disparate grading patterns across professors, departments and schools undermines the present system's ability to represent relative student achievement. Currently, predetermined grading curves and discrepancies in grading methods among sections of the same course misrepresent a student's comprehension of subject matter. To create a system of grading capable of accurately representing academic growth and to foster an environment conducive to the discourse of intellectual ideas, SCUE recommends a series of changes to grading and the grade report system.

Improving the Transcript

For all students, the transcript is the primary record of academic work at the University. Accordingly, the transcript should clearly and accurately represent a student's scholastic history. The inclusion of more information regarding the comparative performance of an undergraduate in his courses must be noted on the transcript to provide sufficient basis for proper judgment of his academic record. This increased amount of information in regard to a student's grades and overall performance would be helpful in many arenas in which transcripts are used: graduate school admissions, employment candidacy, University-wide and departmental honors, and submatriculation.

The need for a more detailed transcript leads SCUE to suggest that the distribution of full letter grades (i.e. 'A', 'B', 'C', 'D', 'F') should be listed next to the grade on all transcripts and grade report forms (see Appendix F for transcript illustration). The mean class GPA should also be listed to provide transcript readers with a quick reference to relative achievement, and to account for plus/minus grading. Both the distribution and mean GPA provide a measure of a student's performance relative to that of the entire class, and should be updated one semester after the completion of the course to account for incomplete and grade changes. Both McGill University and Dartmouth College have implemented similar methods of denoting relative performance through the use of a median GPA. Harvard University is also seriously considering the institution of a comparable grade report policy.

Classes with enrollments of ten students or fewer should not have class mean GPAs or class grade distributions listed on the transcript for privacy reasons. Professors may also petition their school faculty review committee to remove their class from this grading system. Petitions should only be approved if the nature in which the class is taught seems inappropriate for such a grade presentation. For example, independent studies should not be included within these grade report guidelines. Classes that have enrollments of fewer than ten students or successfully petition out of the system should be recognized as such on the transcript.

The inclusion of an average of all class mean GPAs would be valuable for readers of the transcript. This cumulative mean grade point average (CMGPA) should be listed next to the student's cumulative and semester GPAs. Since students are compared to other students, largely based on their GPAs, the CMGPA would provide a normalized measure of comparison which reflects the difficulty of course work taken by a student. To ensure the use of CMGPA and to realize the benefits of greater evaluative information, SCUE further suggests that CPPS avoid offering student listings by GPA to prospective employers. If students list their GPA on resumes and other relevant forms used in CPPS services, CPPS should require the listing of the CMGPA in addition to the GPA.

Readers of a Penn transcript also may benefit from the inclusion of information not related to grades. Listing the name and position of instructors would provide evaluators with valuable information about the teaching of a course. Listing the names of professors would also increase faculty visibility outside of the University. The type of class (Lecture (L), Seminar (S), Laboratory (B), Independent Study (IS), etc.) that the professor taught should also be recorded next to each class as a means of determining the level of material and the format of the teaching offered within the course.

Grading Standards and Distributions

The need for comparable grading patterns across courses, departments, and schools requires faculty awareness of the grading distributions given by their peers. Each department should be provided with the distributions of mean grades for all departments within their school. Schools should prohibit professors from utilizing announced and predetermined curves, as they foster unhealthy competition and often fail to award grades based solely on merit. The availability of such grading information, in addition to the use of the mean class GPA and individual CMGPA, may help eradicate and clarify the wide disparities that presently exist among grading patterns.

Teaching Assistants

The events that take place within the confines of a classroom are the focal point of an undergraduate student's intellectual experience at the University. Within that context, the teaching quality of professors and teaching assistants (TAs) cannot be overemphasized. In order to engage students in the furthering of knowledge, the educator must demonstrate a commitment to stimulating, motivating, and involving students in their education. Similarly, the University must commit to reinforcing excellence in teaching by strongly basing tenure and award decisions on the quality of instruction. While top-level research is fundamental to the livelihood of an institution such as Penn, faculty must be encouraged to take ownership of the education of their undergraduates. Once an atmosphere of intellectual inquiry is fostered, students would be prepared to actively respond to the presentation of knowledge.

While ideally, the transmission of knowledge should be achieved through interaction between faculty and students, the reality is that many undergraduates receive their primary learning experience in TA-facilitated recitations or classes. As this is the case, it is necessary to clarify the role of teaching assistants at the University and to recommend improving the quality of their work with undergraduates.

The Role of Teaching Assistants

Teaching assistants have become an indispensable asset for assisting professors in their efforts to instruct and engage students. However, teaching assistants should not assume the responsibility of teaching on behalf of the University's primary educators. Rather, teaching assistants should reinforce material that is covered during lectures, help to clarify any points of confusion in recitation sections, and facilitate discussion of course-related topics. By attending class regularly and actively participating in the process of learning, teaching assistants would become complementary to the expertise of the University's faculty.

The Selection of Teaching Assistants

Across the University the selection of teaching assistants is achieved through various means. Undeniably, the quality of a teaching assistant should be defined by her grasp of the subject matter within a discipline and her ability to impart that understanding. Given this assumption, the appointment of teaching assistants should be based solely upon merit. While graduate students would seem to be more worthy candidates based on their additional years of study, undergraduates may be equally capable of facilitating the work of a professor.

Furthermore, TAs should be assisting in courses that are within their area of specialization for the University to capitalize on their experience. Many departments contain distinct areas of concentration within a broad discipline. Consequently, TAs who are accurately paired with their particular expertise would be best prepared to stimulate student interest and direct class discussion.

The State of TA Training

Currently, the School of Arts and Sciences offers a one-day, inter-departmental seminar consisting of eight different workshops. All new teaching assistants are required to attend three of the eight workshops available during the day. Topics of current workshops include Grading in the Humanities and Social Sciences, Leading a Discussion Session, Multiculturalism and Writing Back to Students.

The School of Engineering and Applied Science offers graduate student teaching assistants an optional, non-credit 17-hour Communications Workshop. Students are videotaped and advised on their presentation skills by an external professional.

Improving the Training of Teaching Assistants

Reevaluating the role of teaching assistants necessitates the enhancement of TA training programs. While teaching assistants may be well learned in their academic discipline, they may not be prepared to instruct others in a classroom setting. Therefore, all teaching assistants must take part in a rigorous training seminar which emphasizes all aspects of teaching instruction.

Although existing workshops prove helpful for new teaching assistants, the programs are not sufficient preparation for a new TA to lead the classroom experience. SCUE proposes centralized TA training programs to advise teaching assistants from all four schools. Following an introduction to teaching methodologies, TAs should be paired with their academic specialties and trained according to specific subject-related techniques.

Attendance at the existing workshops, which emphasize fundamental teaching skills, should be complemented by participation in newly developed workshops, which would concentrate on specific subject-related issues. The narrow foci of these workshops would prepare TAs for methodological issues which arise in daily teaching experiences.

While other graduate students may be well-versed in the nuances of their discipline, faculty who are adept at dealing with the dynamics of a classroom setting are best prepared to instruct new teaching assistants. In their training of TAs, faculty should utilize video taping as a method of evaluating and critiquing TA performance within a simulated classroom setting.

The Evaluation of Teaching Assistants

Evaluation of teaching assistants should continue beyond the training program. SCUE encourages professors to attend recitation sections held by TAs and to assess the TA's ability to impart knowledge. Mid-semester student evaluations should be implemented in all courses to determine whether the TA is able to communicate information to students. These evaluations would be returned only to the teaching assistant.

The Acknowledgment of Superb Teaching

Currently, the School of Arts and Sciences presents ten Dean's Awards for Distinguished Teaching by a Graduate Student. Nominations are

solicited from students and faculty, and grants of \$500 are awarded to outstanding TAs. The School of Nursing bestows one teaching assistant award at graduation, and the recipient's name is engraved on a plaque within the Nursing Education Building. The Wharton School annually presents one Wharton Undergraduate Teaching Assistant Award to an outstanding TA whose name is also publicly displayed. The increased recognition of distinguished teaching assistants within each undergraduate school should be expanded to encourage all TAs to aim for excellence.

Residential Living

The importance of residential living in the development of an intellectual and social community at the University cannot be underestimated. Life in the dormitory should exist as an extension of life in the classroom and should demonstrate to students that the pursuit of knowledge pervades all aspects of life. A student spends nearly as many waking hours in her living quarters as anywhere else on campus. The residence becomes an undergraduate's point of orientation, as she completes her daily activities and returns to her dorm to synthesize the day's discoveries. Life in the dormitory must reflect the need to pursue of the life of the mind.

Residence-sponsored programming such as lectures, readings and organized discussions could meet intellectual needs. Students engaged in various disciplines across the University would then have the opportunity to bring what they have learned back to their residential community. These programs would help students to understand their academic experiences and to share and build upon one another's ideas.

A dormitory should be configured to facilitate the overlap of academic disciplines and thought. Undergraduates of various personal and academic backgrounds should be joined by faculty and graduate students in a common living environment. The intermixing of different constituencies on campus would enrich the intellectual and social experience for all residents. Without question, the structural layout of residential facilities adds enormously to the living and learning experience. Spaces devoted to community interaction would foster dialogue among residents.

The State of Residences

At present, very few professors and graduate students choose to reside in undergraduate dormitories. The graduate students who do choose to reside with undergraduates are typically paid fellows. This practice is likely to be a vestige of an era when students feared the University's ability to play an *in loco parentis* role. To establish a community of scholars in which both faculty and students are encouraged to approach each other in an intellectual and social context, the role of the professor in residence can no longer be that of a watchdog. The currently assumed responsibilities of a resident faculty member or graduate student deter prospective volunteers and act as a detriment to interaction between students and faculty.

Structurally, one must consider the high rises as the University's major concern among all on-campus housing options. Perhaps 25 years ago, the high rises accommodated student housing needs. However, at present, the structures are driving upperclassmen off campus in search of a more comfortable and communal living environment. The high rises are socially isolating and architecturally dreary structures that do not facilitate intellectual dialogue or social interaction. While Penn's remaining dormitories are better suited to achieving an intellectual community, they are still in need of improvement. Both the structural layout and the appearance of these other residences encourages community building, yet none of the dormitories has achieved the success of college house systems at other universities.

Improving the State of Residences

The discussion concerning the creation of a collegiate or college house system has already been initiated. While the definition of the college house system has not yet reached consensus, SCUE feels that the implementation of any college house system at Penn should embody many of the ideals stated above. Within the new system, a residence should provide a geographical space for the development of an intellectual and social community. In the long term, architecturally gratifying buildings should be constructed as an alternative to the present high rise structures. Rather than erecting apartment towers, the University should design new residential facilities to be structurally designed as college houses within a collegiate environment. These structures should be conducive to the fostering of academic communities, where graduate and undergraduate students and faculty will wish to interact regularly.

In the short term, the University should consider converting to the college house system through a transitional phase. While new residential buildings are in the planning and development stages, the university should launch the creation of virtual college houses (for historical background refer to the *Vice Provost's Report on Residential Planning* and SCUE's *A Response to the Vice Provost's Report on Residential Plan-*

ning). With the formulation of a residential identity, students can begin to establish their own intellectual communities, unimpeded by the obstacles of inadequate housing and lack of faculty involvement.

Dining should be included as a community-building element. Each college house should designate a time and place for its members to congregate for meals. This arrangement will instill a sense of belonging to a particular community of individuals. The extension of the educational experience to a social atmosphere would enhance the process of scholarly inquiry and the quality of Penn's intellectual environment as a whole.

Ideally, the integration of undergraduates into the University community would commence upon a student's matriculation into Penn. One of Penn's greatest assets is the intellectual, socioeconomic, geographic, ethnic and behavioral diversity of its student body. Undergraduates should be able to learn from one another and better understand themselves in the hopes of constructing their own sense of learning. While special interest housing is beneficial to the union of living and learning, first year housing should introduce the diverse community of students to each other, and thus, begin an intellectual and social dialogue from the commencement of the Penn experience.

While the development of a college house system is in its early stages, SCUE advocates this concept and looks forward to being a partner in the discussion of its implementation.

Conclusion

The 1995 White Paper on Undergraduate Education provides recommendations which SCUE hopes will strengthen the definitive Penn experience. From curricular restructuring to residential living initiatives, the Committee has attempted to augment existing programs and launch discussion of innovative academic reform. In an effort to ensure a meaningful undergraduate experience, we have crafted our recommendations to enhance aspects of undergraduate life which involve the pursuit of knowledge. While the core academic experience resides within the classroom, the educational undertaking must pervade the University environment. Students, faculty and administrators must collectively share in the development of such an intellectual community.

As our suggestions necessitate an integrative approach to the undergraduate experience, the implementation of these ideas calls for a standing body to guide such reform. To achieve the ideals of *One University* and a unique Penn experience, Penn must address reform in a centralized manner. Undergraduate education must be furthered holistically, with the union of the Penn tradition of liberal arts and contemporary pre-professional education. Independent financial entities within the University should look beyond Responsibility Centered Budgeting and demonstrate a shared commitment to learning.

SCUE is pleased with the prospect of one committee which represents the needs of all undergraduate constituencies. The Provost's Council on Undergraduate Education (PCUE) seeks to assume this responsibility and will proceed in this capacity for at least the next three years. As an administrative body, PCUE has the authority to generate and implement academic reform, an operating power necessary for any committee charged with such a comprehensive mission. In order to build upon Penn's unique strengths and foster a truly intellectual community, the University must permanently establish an entity such as PCUE to maintain a regular commitment to the advancement of undergraduate education.

In the future, the University Trustees should consider the institution of a Board of Overseers for Undergraduate Education, similar to that of each undergraduate school. The Board would be comprised of alumni associate trustee members who would offer new perspectives on the undergraduate experience. The Overseers, in consultation with the Provost, the Associate Deans and various University constituencies, would formulate, discuss and evaluate ways in which Penn can strengthen undergraduate education in its entirety.

Independent of such bodies, the recommendations outlined in the preceding pages can facilitate the development of a definitive Penn experience. These ideas incorporate the University's strengths, traditions, and communities and also create areas for change. SCUE looks forward to participating in the implementation of our reforms and the enhancement of the undergraduate intellectual experience.

¹ "The Mission of the College of Arts & Sciences," *Undergraduate Academic Bulletin*, 1994-1996, 1.

² "Bachelor of Applied Science," *Undergraduate Academic Bulletin*, 1992, 48.

³ "Psychology," *Undergraduate Academic Bulletin*, 1994-1996, 44.

⁴ International Relations Major Requirements Handout, International Relations Office, 1994.

⁵ Communication Major Requirements Handout, College Office, 1994.

⁶ David Adamany, "Sustaining University Values While Reinventing University Commitments to Our Cities," *Teachers College Record*, Vol. 95, No. 3, New York: Columbia University, Spring 1994, 3.