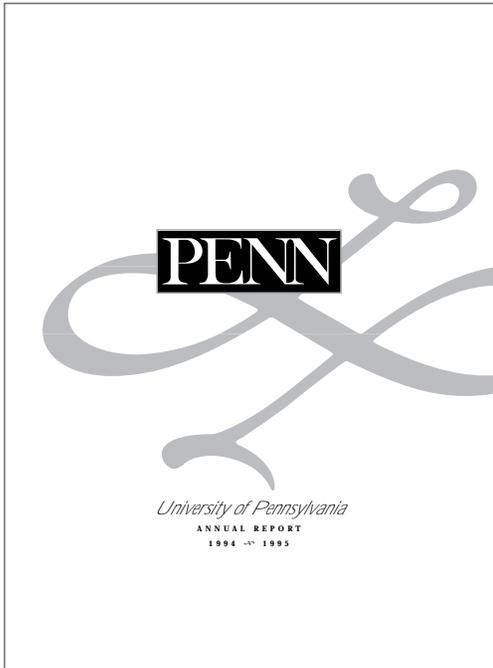


The Unity of Theory
and Practice: Penn's
Distinctive Character





President Judith Rodin's essay in these pages is reprinted from the *University of Pennsylvania Annual Report, 1994-95*, which also contains financial statements for FY 1995 along with a message from the Vice President for Finance, Stephen T. Golding, and five-year reviews of Penn's financial performance, fund balances and investments.

The 40-page, full-color *Annual Report* is available for examination in the Reference Department of Van Pelt-Dietrich Library and in the offices of the Deans of the Schools.

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Judith Rodin
President

We live in a pragmatic age. Pundits, politicians, and publics have little patience with claims of privileged status or even of authority. Along with every other profession and institution in our society, higher education, too, is being asked to justify itself, to document its usefulness to society, to demonstrate its ability to make critical strategic choices and to invest scarce resources wisely.

Some of these challenges have always been with us. In response, higher education leaders have long made the case that academic research and teaching are of direct and inestimable importance to the quality of our lives, to our national defense, and to the economic prosperity and happiness of our children. We will continue to assert and prove this point at the University of Pennsylvania.

But the pragmatic temper of our age is a symptom of deeper and more fundamental developments: The structure of our national economy continues to change dramatically. Historic employment patterns and social relationships are being radically altered. New technologies are changing the very nature of work, research, and education. The restructuring of corporations, government, and institutions is having powerful impacts on employees, customers, and clients. And the restructuring of our social and political lives poses challenges of conscience, commitment, and voluntary participation unanticipated in an earlier, gentler time.

Such fundamental changes require a more fundamental response from our nation's colleges and universities.

Few institutions of higher education are as well prepared as Penn to respond to this challenge, nor does doing so detract from our traditional academic missions of teaching, research, and service. Indeed, our founder, Benjamin Franklin, taught us that not only should we not be embarrassed by these pragmatic concerns, we should welcome them and value them in concert with the lofty and important pursuits of theoretical knowledge.

Today, Penn is building anew on that proud legacy.

For many years, Penn has stressed the interaction of theory and practice as an essential and valuable feature of our academic programs, our campus life, and our intellectual style. Indeed, today, we have come to regard the unity of

theory and practice as one of Penn's most important and distinctive characteristics.

Theory and practice are, as I said in my Inaugural Address, a part of Penn's "genetic material." Penn is deeply endowed with a commitment to education that is both intellectual and utilitarian. Penn desires to know and to teach, not only "why," but also "how."



In a joint Graduate School of Education/Wharton program, a student combines child development with workplace planning.

Thus, Franklin's legacy of robust pragmatism and disdain for pretense has fresh relevance for us today. Franklin saw far more clearly than any of his contemporaries that the classical inheritance of knowledge divorced from civic betterment or practical application was unsuited to the modern temper.

Though an able theoretician, Franklin saw early on the value of joining "theory" with "practice"—not only in meeting the special challenges of life on what was then still the American frontier, but on the frontiers of a nascent mercantile and industrial society of which his own business and technological endeavors were harbingers.

Franklin's "modern," post-Enlightenment world was an active world, as well as a contemplative one. And Franklin thought education should keep pace with this transformation. He thought knowledge should be for the body as

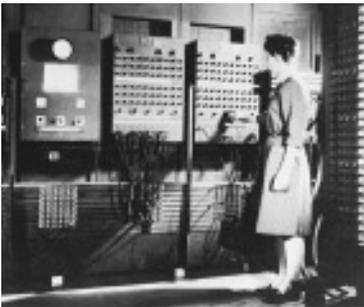


The Penn TOYS project of Dr. Daniel Bogen's bioengineering class builds toys for disabled children, such as this musical mat for children with cerebral palsy.

well as for the soul—that it should enable a graduate to be a bread-winner as well as a thinker, that it should produce socially-conscious citizens as well as conscientious bankers and traders.

So Penn has good and unique historical claim to the theme of theory and practice. From its very start, Franklin pushed for Penn to offer professional as well as scholarly studies. His famous statement, teach “every thing that is useful, and every thing that is ornamental,” has since inspired more than one presidential appreciation or curricular reform at Penn.

It has been that willingness to acknowledge the claims of pragmatic considerations, the willingness to put our knowledge to work, and the willingness to learn new theoretical insights from practical experience that have enabled Penn to be “first” in so many areas: the first American “university,” the first American medical school, the first business school, the first journalism curriculum, the first institute for the study of anatomy and biology, the first psychology clinic, to cite only a few.



The invention of ENIAC in 1946 founded the century's most significant new industry.

And then there was the event at Penn that was to alter forever the way we process information, acquire knowledge, and conduct business: the invention in 1946 of ENIAC, the world's first all-electronic, digital computer.

Today, as we move from the “modern,” industrial societies of the 19th and 20th centuries, to the “post-modern,” computer and information based, global society of the 21st century, this commitment to the unity of theory and practice has taken on even greater significance. The challenges of our “pragmatic” age cannot be adequately answered by pragmatism alone. Only theory and practice together can fully respond to the challenges of the 21st century.

Here on campus, we see the unity of theory and practice expressed in the work of thousands of faculty and students almost every day.

The most obvious way in which theory and practice are linked is in the direct application of theoretical knowledge to real-life problems and

“Every thing that is useful, and every thing that is ornamental.”



As part of the "Say Yes to Education" program, Dr. David DiGiallorenzo of Penn's School of Dental Medicine provides a free dental screening.

opportunities. This happens so often that we almost fail to notice it unless the examples are unusually dramatic or impressive.

Not that we lack impressive examples. Here are three: the development of pioneering gene therapy techniques by Penn's Professor James M. Wilson, the creation of a stone conservation program for the Lincoln and Jefferson Memorials by students from the Graduate School of Fine Arts, and the provision of critically needed dental care to the children of migrant farm workers by the School of Dental Medicine. At the same time, working with private industry on a number of other fronts, Penn is moving aggressively to secure the benefits of "technology transfer" for both the University and our surrounding community.



Preservation of the Lincoln and Jefferson Memorials is a project of students in the Architectural Conservation Laboratory of the Graduate School of Fine Arts.



Dr. James Wilson of the School of Medicine discusses cutting edge gene therapy research with a student.

At other times, the relationship between theory and practice is reversed, and practice becomes a means of learning theory and of gaining new theoretical insights.

For example, Annenberg School Dean Kathleen Hall Jamieson is working with undergraduates and graduate students on a project funded by the Ford and Carnegie Foundations to monitor campaign discourse and advertising during the upcoming presidential elections. Their work should allow ongoing comparisons between the current campaign and significant historical

benchmarks. From the close observation of real political practice will come new insights into the rapidly changing nature of political life as we approach the 21st century. Meanwhile, in Professor Daniel Bogen's bioengineering course, undergraduates are learning the special difficulties of engineering to meet specific human needs by designing special toys for handicapped children.

But the unity of theory and practice at Penn is more than simply a matter of applying theoretical insights in practical contexts or incorporating the lessons of practice into our theoretical knowledge. Theory and practice may be married in unpredictable ways in the present and future lives of our students and faculty. Indeed, many students and faculty come to Penn to immerse themselves in theoretical research or study, only to find, sometimes years later, that they have applied their education in unique and personal ways as they achieve success in business, government, or other "practical" fields of endeavor. Other students and faculty come to Penn to study or teach the worldly disciplines of management, finance, nursing, and engineering, only to have these "practical" subjects stimulate bursts of pure, theoretical insight. Penn welcomes both kinds of students and faculty—and the dynamic new world that is rapidly taking shape around them.

That is why the combination of theoretical and practical experience throughout Penn's curriculum is so important. Penn students have the unique



Undergraduates create a Campaign Discourse Quality Index in their study of political accountability in presidential elections.

opportunity to combine educational elements from all of our schools, particularly from the School of Arts and Sciences and the University's eleven other professional schools, all located together on a single campus.

This synergy creates opportunities to easily study social and psychological theory while learning the practical constraints on business decisions, to learn the nature of disease while engineering the biotechnical tools for its amelioration, to learn the history of architecture and design while putting that knowledge to work in the design of community gardens or the revitalization of the Philadelphia Navy Yard—opportunities that few institutions can provide as easily or as enthusiastically as Penn.

Within this institutional framework, we are also building on the groundbreaking efforts of Penn's Joseph H. Lauder Institute of Management and International Studies to demonstrate that no practical knowledge is adequate in our international age unless it is contextualized by the cultural, social, and historical dimensions of our global society. Penn has recognized the necessity of changing international studies from a single, isolated program to a fully



As Part of Wharton's new MBA curriculum, first-year students work in teams. The "Kanchanjanga Five" served as consultants to the non-profit Avenue of the Arts in Philadelphia.



Bedside teaching/ learning now draws on a growing body of nursing research.

integrated process of learning across all of our schools at both undergraduate and graduate levels. Indeed, so important is the topic to Penn's future, that the University's Board of Trustees has created a standing committee on internationalization. In the future, all of us, students and faculty alike, will gain, use, and communicate our knowledge in a single global community. We send Penn

graduates out into the world with a global perspective and a self-confident facility in putting their knowledge to work in an international context.

But merely combining and juxtaposing the practical and the theoretical in these ways is not enough. Penn has gone beyond combination to encourage their true integration in interdisciplinary courses and programs that link areas ranging from biology to engineering, economics to fine arts, languages to business, management to technology. Signature programs like Management and Technology, housed in the Wharton and Engineering Schools, consistently attract some of the country's most exceptional undergraduate students. Both practical insights and new basic theories flourish in such an interdisciplinary mix.

Finally, there are ways in which the complex interrelationships between theory and practice transcend any effort at neat conceptualization. One of those is the application of theory in service to our community—and the use of community service as an academic research activity for students. Nowhere else is the interactive dimension of theory and practice so clearly captured.

For more than 250 years, Philadelphia has rooted Penn in a sense of the "practical," reminded us that service to humanity, to our community, is, as Franklin put it, "the great aim and end of all learning." Today, thousands of Penn faculty and students realize the unity of theory and practice by engaging West Philadelphia elementary and secondary school students as part of their own academic course work in disciplines as diverse as history, anthropology, classical studies, education, and mathematics.

For example, Anthropology Professor Frank Johnston and his undergraduate students educate students at West Philadelphia's Turner Middle School about nutrition. Classical Studies Professor Ralph Rosen uses modern Philadelphia and fifth century Athens to explore the interrelations between community, neighborhood, and family. And History Professor Michael Zuckerman's students engage West Philadelphia elementary and secondary school students to help



Undergraduates in anthropology share their knowledge of nutrition with students at Turner Middle School in West Philadelphia.

them understand together the nature—and discontinuities—of American national identity and national character.



In their “Penn and Ink” project, Penn students teach creative writing to interested teens.

Increasingly, too, new interactive technologies are being used to link all the various phases of the life of knowledge—discovery, refinement, transmission, revision, application, and the stimulation of new insights—to give powerful new and unpredictable expressions to the unity of theory and practice.

Take for example, Julie Sisskind, a doctoral student in African studies, who, noting the dearth of electronic resources on Africa available on the Internet, created the largest information and graphics repository of information on Africa on Penn’s WorldWideWeb site. It has since been recommended as a resource by the Library of Congress. Then, before leaving for Africa to do her dissertation research, Julie trained her successor, Ali Ali-Dinar, another graduate student, who in turn has been giving training sessions to Philadelphia K-12 librarians and teachers in use of the database for their own classroom teaching (using modem pool access donated by Penn). So what began as a part-time job, and led first to the creation of a new scholarly resource, has now been turned to the direct benefit of students throughout the Philadelphia public schools.

Remarkable things like this are happening every day at Penn. They happen here because Penn refuses to separate theory and practice into separate domains. We refuse to isolate ourselves in one perspective or the other, but stand steadfastly in both, learning from experience, while testing our theories and insights in application and service.

Indeed, all of these linkages between theory and practice have one thing in common. In each, the faculty and students involved have refused to make sharp distinctions between theory and practice, between knowledge and application, between the life of the mind and the active life of commerce, community, health and human betterment. They have remained open to the interaction between theory and practice and to the inter-“play” that moves back and forth rather than in a single direction.



Health Corner, the brainchild of a doctoral candidate in the Nursing School, provides a Teen Clinic emphasizing preventative health care for local teens.

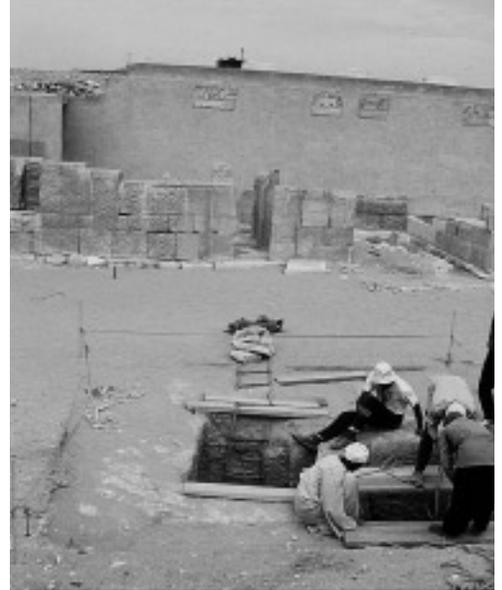
The noted architect and planner, Penn alumna Denise Scott Brown, has described this as one of the hallmarks of “professional” life: the life-long effort “to keep theory and practice together.”

That is exactly the sense in which Penn’s renown as a “professional” and “pre-professional” institution, together with excellence in the liberal arts, is emblematic of its special understanding of the unity of theory and practice: not the erroneous notion that professional life is simply the domain of the practical, a place where the “real world” concerns of commerce, law, health care, and design dominate to the exclusion of lofty, “academic,” or theoretical concerns, but the idea that—properly undertaken—both theory and practice are professional activities, intended to enhance the quality of human life and best able to do so when kept together in close connection with each other.

Penn was the first to take this approach to professional training and professional life. And in its commitment today to the unity of theory and practice,

Penn recognizes that “keeping theory and practice together” is the essential ingredient of education, research, and service as we train the “professionals” of the 21st century.

Today, Penn continues to lead the way in uniting theory and practice. As we reinvest human and financial resources in our core missions of education, research, and service—through thoughtful and strategic academic planning, through administrative restructuring, and through careful and attentive “best practices” management—we are ever mindful of the challenges of this pragmatic age and the exciting opportunities it presents.



A graduate student observes the excavation of a burial shaft during the 1995 excavations of the tomb of Ihy at Saqqara, Egypt.


Judith Rodin
President

