

Almanac

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The 224th Commencement: Cheers and Tears

There were smiles and not a few tears as the graduates rose to sing the Alma Mater: *Come all ye loyal classmen now, in halls and campus through...*

The voices wavered, weak and tentative as the words to *The Red and Blue* were begun. Then, somewhere in the back of Convention Hall, the voices gained momentum. Perhaps it was the mention of Harvard and Yale—those perennial archrivals—that swelled those voices with pride. Whatever it was, the Hurrahs! echoed from the rafters.

Inside

- World communications: Decisions for the eighties, page 4.
- Farhat designs imaging radar, page 7.
- Study defines international social progress, page 10.
- University announces patent policy, page 12.

And with the song's ending, the 224th Commencement of the University of Pennsylvania was over.

The commencement exercises, Sunday's Baccalaureate Service at Irvine Auditorium and Monday's ceremony at the Philadelphia Civic Center, were much like others. What marked this commencement for those in attendance was a particularly distinguished group of honorary degree recipients and stirring speeches delivered by two of those recipients.

Honorary degrees were this year awarded to *New Yorker* cartoonist Charles Addams; Lord Noel Annan, international educator and vice chancellor of the University of London; former Nigerian president Nnamdi Azikiwe; Reginald Jones, chairman of the board of General Electric Company; Sol M. Linowitz, Washington, D.C. attorney and currently U.S. representative to the West Bank Autonomy Talks; author, educator and University professor emeritus Jerre Mangione; author James Michener; Phila-

delphia architect Robert Venturi and award-winning physicist Chien-Shiung Wu.

The baccalaureate address was given by Michener, the commencement address by Annan.

The Commencement Address

"Members of the class of 1980, why did you go to this great university?" Annan asked, and then provided a few answers.

The first reason, he suggested, was the acquisition of knowledge. "However much the map of learning changes you will find yourself at sixty living off at least some of the intellectual capital that you acquired when you were twenty. The kind of things you thought important now, the conflicts, arguments [and] beliefs which you held, or against which you reacted, will mark you for life as belonging to the class of 1980," he observed.

Although we may not remember all that we have acquired, the act of acquisition is (continued on page 2)



The Lord Annan, O.B.E., honorary degree recipient and commencement speaker, addresses the Class of 1980.

Cheers and Tears

(continued from page 1)

perhaps more important, Annan said, for in doing so we have learned "to make mental efforts under criticism.

"That is what we in Europe so greatly admire in the American college education," Annan said, "the way in which graduate and undergraduate schools alike you are encouraged to express your views and question those who teach you. And they in turn come back at you and train your intellectual muscles as if you were on a trapeze. You are taught to make mental efforts and come to conclusions under the criticisms not only of your teachers but also of your contemporaries."

Thus Annan believes a great university "teaches" students to acquire arts and habits of thought. "You acquire the art of entering quickly into another person's thoughts. You learn the habit of submitting to censure and refutation, and you in your turn learn the art of expressing your assent or dissent from other people's thoughts in measured terms."

Additionally, Annan noted, a great university should encourage one to "spread light, not heat. It asks you to be polite when you assert. And these are habits and arts of behavior which will help you whatever you intend to do in life."

By attending a great university, Annan observed that the class of 1980 had been exposed to the "life of the intellect," and he encouraged them not to let "the demands of your job, your social life and your family totally submerge your concern for what you

studied here."

In closing, Annan turned away from commencement and the glories of a great university to address world affairs. In a direct reference to the crisis in the Middle East and the wavering European support for U.S. actions against Iran, Annan spoke encouragingly of British support for the United States.

Speaking as a member of the British Parliament, Annan exhorted the audience "never to forget the admiration with which we in Britain regard America. When the chips are down—and they are down now—we stand by you as allies should.

"Do not be too greatly disturbed by insults howled by a mob of religious fanatics. Do not speak of being humiliated. No gang of ruffians can humiliate the United States," he said.

"We ask that America, as all countries must, make a cool, ruthless, hard-headed assessment of where her interests in the world lie, because we know that if you get that assessment right, we in Britain will find that our interests coincide with yours," Annan said. "The only thing that could ever make us anxious would be if we were to detect a lack of nerve in America.

"Your resourcefulness, your energy, your enjoyment in meeting a challenge, will not fail you now. For to this resourcefulness America adds a yet greater quality: generosity of heart. This generosity of heart, this warmth, this desire for friendship and your sense of justice are the qualities which endear America to us in Britain."

Those closing, encouraging words were greeted with a standing ovation. —C.A.V.

The Baccalaureate Address

James A. Michener's baccalaureate address did not cower under its responsibility to focus on the future of the University's graduates. The parents, alumni and graduating students crowded into Irvine Auditorium for Sunday's services heard the author forthrightly confront the problems of adult decision making in an increasing complex world.

Michener began his address by referring to Hugh Williamson and Thomas Mifflin, both graduates of the University and members of the original Constitutional Convention. Michener noted that during their undergraduate years these men could not possibly have known that "they would be called upon to lay the groundwork for a new society," yet, it could be hoped that the problems and possibilities of the world's great civilizations had been alluded to in their education. Michener gave this idea contemporary significance by hoping that the courses of study pursued by this year's graduating class included some speculation on the immortal problems that continue to perplex mankind.

This thought, and its relevance for the graduates formed the theme for Michener's entire speech as he pointedly remarked that each "will confront every ethical problem of which philosophers and historians have spoken." The traps inherent in moral decisions symbolize an inescapable route in life.

(continued on page 3)

Almanac

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A University alumnus carries the banner for the Class of 1939 in the Parade of Classes. More than 2000 alumni returned last weekend.

(continued from page 2)

Michener then cited two vastly different sets of criteria for judgment: the Ten Commandments and the modern systems of laws and values. The commandments, he commented, "represent the thinking of rural men and women at the dawn of man's history." But, Michener discussed them as a fundamental set of guidelines that still have universal application despite their religious context. He used specific examples for each law to indicate their relevance in his own and other contemporary professions.

The commandments, he feels, form a foundation for deciding upon individual behavior under the laws and values of current society. Michener did not simply pose this conflict as another trial of adult life but presented his own beliefs about preparing for the impending moral choices. Michener sees college as an opportunity to provide for the alternatives before they present themselves. He stressed that rewards often come undeservedly late and that they can be complicated by the decisions every individual will have to face. One must have great fundamental beliefs in order to face the pressures of social change, and college, Michener believes, is the time to build the basis that will cope with the changes and enable "an honorable survival." —V.V.P.

Excerpts from the Honorary Degree Citations

Charles Addams
Cartoonist

Creator of a lugubriously humorous world all his own, Charles Samuel Addams has become, for legions of fans and fanciers, not so much a legend in his time as a component of his haunted, haunting images—a figment of his own imaginings. A proof that pictures speak louder than words, his frequently captionless cartoons have long been enjoyed and retold, and include a couple of portraits of College Hall....

The Trustees of the University of Pennsylvania, aware that he may be watching them and that he has found material here in the past, nonetheless welcome the return to campus of Charles Samuel Addams. Richly deserving of recognition for the finite time he did here at Pennsylvania in the thirties and the infinite pleasure he has given to generations of monster-lovers ever since, this noted—if not notorious—member of the University Family is now slated to receive from their hand the honorary degree, Doctor of Fine Arts.

The Lord Annan, O.B.E.
Vice Chancellor
University of London

Chronicler and analyst of "the life and times" of the British intellectual aristocracy of the past, Noel Gilroy Annan has assumed their mantle in the present, furthering their ideals, and upholding their efforts to ensure a future for intellectual institutions....

Interweaving, in his writings, the history of ideas with the biography of great men and women from the Victorian era on, Lord Annan provides continuity through his own dedication to service as well as to style. Like the thinkers of Clapham and Bloomsbury, with whom he is so familiar ... he, too, has written widely for the learned as well as "the intelligent public at large"...

Sharing with Churchill the advantages of an American mother, and a birthday with One yet more illustrious, Noel Gilroy Annan transcends his climes and his time through his influence as educator and man of letters. For his contributions as a member of the Board of Overseers of our Faculty of Arts and Sciences in particular and to the world of education and letters in general ... the Trustees of the University of Pennsylvania proudly award the Lord Annan, O.B.E., the honorary degree, Doctor of Laws.

(continued on page 15)

Conference Participants Ponder World Communications Agenda

Nearly 600 communications experts and leaders from dozens of countries around the world attended the international conference on *World Communications: Decisions for the Eighties*, to set the agenda for this decade's communications priorities. The conference was held last week at the Annenberg School of Communications.

In the opening session, Dean George Gerbner described the conference as a "summit meeting of leaders from almost 70 countries to examine issues, to make policy decisions, to define, refine and order issues."

The conference consisted of keynote sessions where world leaders presented the views of the Western countries, the Eastern Bloc, and Third World countries. In other general sessions speakers shared key issues and positions with all participants.

The policy-makers, scholars and managers of communications systems also attended specialized panels which exposed a variety of research and policy considerations such as transnational data systems, telecommunications policy developments and the "new international information order." Then task groups encouraged the working participants to discuss, deliberate and evaluate the information. At the concluding session last Wednesday afternoon participants presented recommendations and attempted to set the agenda for the 1980s.

Keynote of Three Worlds I

The first session of keynote addresses featured the Western nations' perspective, especially that of the United States. John Reinhardt, director of the U.S. International Communication Agency and former U.S. Assistant Secretary of State for Public Affairs, suggested that everyone "suspend our parochial concerns in the interests of the overriding issue facing us ... the issue of human survival in an increasingly interdependent world."

"Only through an open communications system can we begin to hope for a stable world. The alternative is national tribalism, economic protectionism, and social isolation—each of which feeds on ignorance of our common needs and of the prospects for meeting them," Reinhardt said.

Referring to the accelerated pace of the telecommunications expansion in the Third World, he suggested that it is not enough to react to such developments but "we must anticipate these changes." Reinhardt went on to explain that a major part of the conference's agenda involves addressing the reality of isolated areas with inadequate communications networks and the need to alleviate them.

At the two most recent UNESCO General

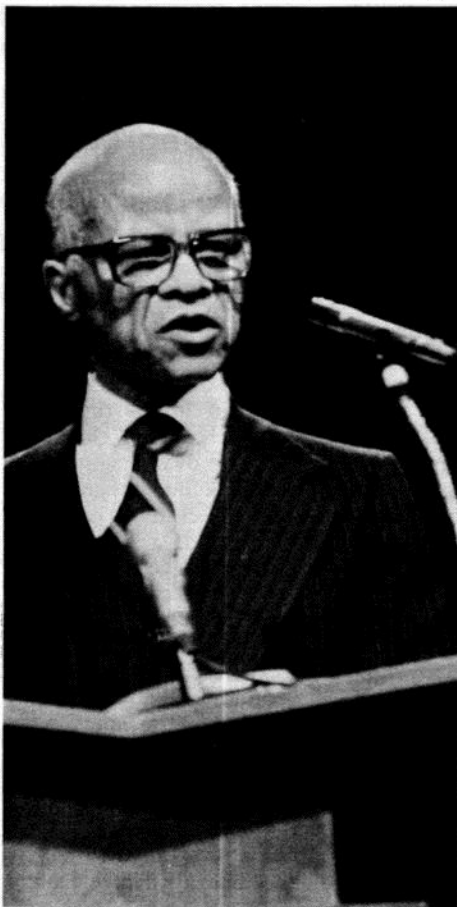
Conferences Reinhardt served as head of the American delegations and he outlined a series of specific actions for accelerating communications development in Third World countries. The actions included assistance to communications training institutions; experimental rural communications programs using satellites; a new program to assist developing countries to plan for and to meet their communications needs.

Reinhardt stressed that while governmental assistance has its place, the cooperation of industry and financial institutions at local and international levels is also necessary.

The challenge for the next decade, according to Reinhardt, will be to fit the "diverse, overlapping, often contradictory national approaches into a world system." Despite several hopeful precedents that are encouraging indicators of the ability to meet global challenges there is a new attempt to limit communications development and information flow.

"The proposed restrictions are based on a delusion: the delusion that an elite can lead us to the truth by controlling the information available to us.... But it has never been true—and there is even less reason to believe

Reinhardt says we must anticipate changes.



it now in the new age of expanding access to information resources for everyone," Reinhardt emphasized.

Another perspective was provided by John McLucas, executive vice president for International Communications and Technical Services, Communications Satellite Corporation (COMSAT), a private, profit-making institution created under an Act of Congress and given a broad international policy role.

"In my opinion," said McLucas, "government functions best when directing, regulating or refereeing change as it occurs throughout society. On the other hand, corporations excel at creating those specific innovations judged likely to be economically viable."

McLucas projected that "the '80s may be a decade of continuously rising energy and raw materials prices, of ever more difficult international economic negotiations, and of heightened north/south political tensions. While we as communicators are largely powerless to affect these broad trends, we must work to contain political tensions surrounding the development of world communications."

The challenge before private entrepreneurs and public servants is to devise practical arrangements for institutionalizing and sharing the expanding resources of information and communications," McLucas concluded.

The third spokesman from the U.S. was Elie Abel, the Harry and Norman Chandler Professor of Communication at Stanford University. As a journalist, he has been a national and foreign correspondent for *The New York Times*. He was a member of the MacBride Commission which issued a final report which concludes "that perhaps two thirds of mankind is, in present circumstances, deprived of access to modern communications and that a great deal needs to be done to bring these peoples of the poorest developing countries into contact with one another and with the great world that lies beyond their national horizons."

Abel believes that the only constructive solution for the Third World leaders to reduce dependence upon foreign sources of information is to "increase the capacity for effective communication at every level." He stressed the need for "more voices, not fewer."

The MacBride Commission report opposes censorship, licensing of journalists and information autarky, while favoring multiple channels of information, access to countries and sources within them. Some of the Commission's suggestions include creating and developing national news agencies

(continued on page 5)



John McLucas describes the challenges facing corporations and governments.



Elle Abel suggests that Third World countries reduce their dependence on foreign sources of information.

(continued from page 4)

where they do not now exist; utilizing radio to leap over the literacy barrier; developing local newspapers and providing preferential treatment for Third World users of international telecommunications.

"If we have learned anything from the MacBride experience it is that the yearning for free expression is not an exclusive peculiarity of Western liberals. I recall the shattering testimony of a Third World colleague, who explained to us one afternoon why journalism in his country had become the most dangerous of callings. Dozens of journalists, he said, were giving up their work because they had discovered that printing the truth was more dangerous than printing lies. Honest reporting, in short, led to prison and in some cases, to death. It is a lesson, a compelling lesson, for all of us," Abel concluded.

Keynote of Three Worlds II

This session shifted the focus to the Eastern/Soviet Bloc presentations. The first socialist perspective was contributed by Walery Pisarek, director of the Press Research Centre and head of journalism at Jagiellonian University, Krakow, Poland, who dealt with people "doing things or affected by events covered by newspapers," especially Poles who are the subject of foreign news.

After completing a study of a series of comparative content analyses of the press in developed capitalist countries and socialist countries, Pisarek concluded that the contents of all important newspapers have some common features. Differences are evident in the amount of space devoted to political and economic news, attitudes towards the same events and the amount of space devoted to smaller countries.

Pisarek's study determined that "the socialist press has been more interested in Poles than the Western press; then again newspapers of the two big powers are less interested in Poles as compared with the newspapers from other countries."

Zoltan Jakab, head of department, Mass Communication Research Center, Hungarian Radio and Television, provided additional remarks on the Eastern European perspective. Despite the decline in high level international communication during recent months, Jakab said that he believes it is still realistic to exchange ideas about long-term problems. "The common, fundamental and essential interest of mankind—detente—should be served by the maintenance and development of contacts and cooperation, by thinking through the problems to be solved together, with foresight," he said.

Jakab suggested that "the question should be asked whether the type of society which the people of a developing country want should shape their choice of media, or whether the people should allow the society

(continued on page 6)

Conference Ponders World Communications Agenda

(continued from page 6)

to be shaped by the alleged inevitability of technological progress in communication."

Jakab said that the assessment of national, local, institutional and individual communication and information needs should precede selection of communication technologies.

"The desired equality in cooperation with the developed countries has the same precondition as the reduction of dependence on the hardware-manufacturing national monopolies, and as the economic viability of the alternative technologies. This precondition is rather difficult, because it is none other than close cooperation among the developing countries which belong to the same region and have cultural political ties with each other, the pooling of the economic means and expert staff which they have available for the purpose," Jakab explained.

Keynote of Three Worlds III

The final session of keynote addresses focused on the views of Third World countries. The first paper was presented by

Mustapha Masmoudi, ambassador and permanent delegate of Tunisia to UNESCO, who called for a new world information order. He said that it is essential to persuade the world opinion that the problems are global, that the world is interdependent in its diversity; that there is a solidarity among men and that the solutions of reconciliation serve the interests of all.

Another perspective was presented by Sarath L.B. Amunugama, secretary, Ministry of State Responsible for Information, Sri Lanka and former chair of the State Film Corporation of Sri Lanka.

There has been an increasing awareness of mass media in developing countries since the 1970s, he observed. "While the use of mass media is by no means evenly spread in the Third World, and certainly not comparable to media use in industrially developed countries, policy makers in developing countries are increasingly conscious of the manipulative use of media in achieving their goals."

Amunugama said that "it is clear there is a growing gap in media resources and services between the developed and the developing countries. This gap has in fact widened in the last two decades." There is a great disparity regarding the amount of media equipment and program material between developed and developing nations.

"The Third World must be given the opportunity of developing its own media capacity so that it could not only service its own culture and society but also facilitate a more equitable global exchange of informa-

tion," explained Amunugama.

The task of the Third World, as Amunugama sees it, is "to strengthen its own resources and skills so that a genuine and equitable dialogue with the powers that have hitherto dominated the political, economic, cultural and information fields may begin."

Paul A.V. Ansah, director, School of Journalism and Communication, University of Ghana and president of the African Council on Communication Education presented yet another view from a Third World country. Ansah discussed *World Information Distribution: Mutual Responsibilities of Developed and Developing Nations*.

Ansah said, "If the decade of the seventies constitutes a period of identifying the problems and provoking critical self-examination, the eighties should be a period of finding concrete solutions and working out mechanisms for implementing them."

According to Ansah, there is a "need for a basic change of attitudes on both sides." He said, "Western media organizations ought to recognize that it is time to go beyond the episodic and superficial to dig deeper in order to present a fairer and more balanced picture of events in developing countries to their clients and readers.... Third World leaders ought to recognize that as long as they create nearly impossible conditions in which both local and foreign correspondents can operate freely ... only incomplete and distorted accounts of their development efforts emerge to the local people and outside world."

In conclusion, he added, "Sensitivity to the particular needs and aspirations of the various political communities is an essential prerequisite if any advance can be made beyond the point reached so far."

The final presentation at the Third World session came from Fernando Reyes Matta, director, Division of Communications Studies, Instituto Latinoamericano de Estudios Transnacionales, in Mexico. His paper was entitled *Communication and Participation: Principal Decisions for the '80s*.

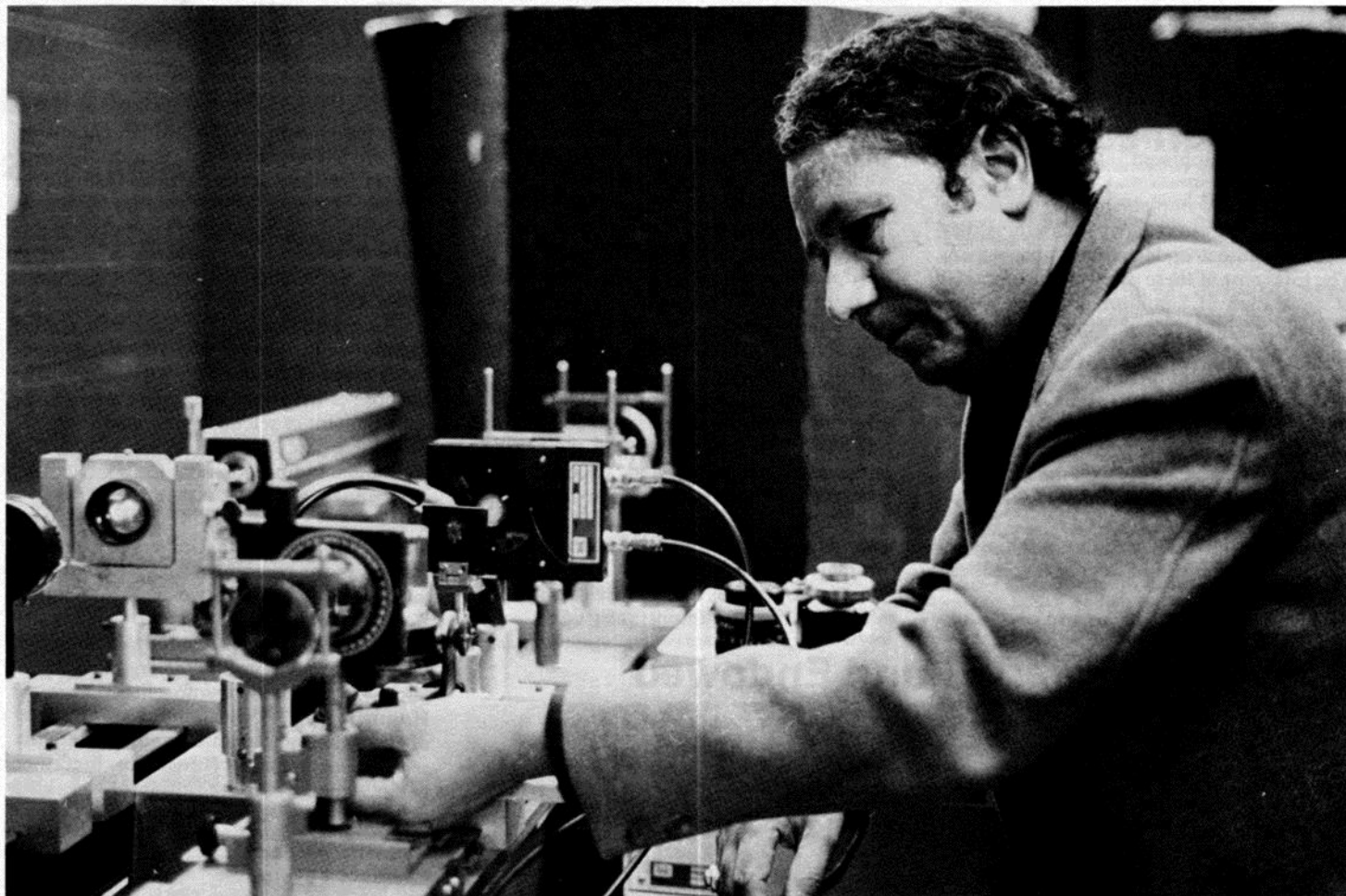
The four fundamental areas which require decisions for the '80s, as perceived by Reyes Matta are 1) decisions to make information a public service; 2) decisions to develop a new area of social right; 3) decisions to promote effective participation in communications and 4) decisions to humanize technology.

He explained, "Technology can either be an essential tool for democratizing communications or it can constitute an instrument used to increase authoritarianism. And, in our opinion, this is the fundamental choice which must be made in order to decide upon the nature of national and international communications for the coming decade."

With the perspectives of the Three Worlds presented, discussed and defined the participants continued meeting to examine more specific topics and ultimately to frame an agenda of Decisions for the Eighties.

—M.F.M.





Professor Farhat at work in lab.

Farhat Designs 3-D Imaging System

Professor Nabil Farhat, electrical engineering, is looking into the future of radar and what he sees, literally, is another dimension: three-dimensional imaging radar.

Farhat has been working with his students on a system which could be operating in just a few years. Although it uses readily available technology, it is based on a new imaging principle.

Such a principle would allow an operator to see distant objects in three dimensions, no matter what the weather. Unlike conventional radar screens, which give the operator a flat picture on the surface of the screen, Farhat's system could provide the picture perspective. By moving his head from side to side the viewer could see slightly different aspects of the object. This gives the sensation of seeing a truly three-dimensional image.

The high three-dimensional resolution obtained with such a system might make it possible to identify aircraft and satellites by their shape. This is not possible with present systems, which show objects only as spots of light.

An obvious use for such a system would be high resolution microwave "photography" of space satellites.

Currently photographs taken through telescopes are blurred by the atmosphere, but the atmosphere barely affects microwaves, so microwave images would be clearer.

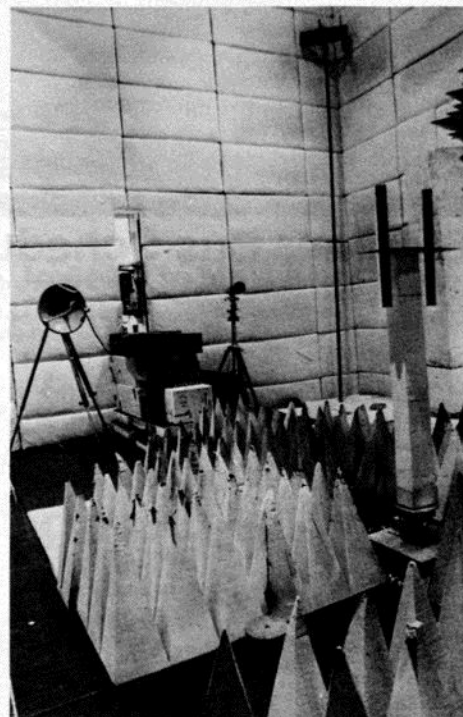
Such photographs might be useful if a satellite were damaged and scientists needed to know the cause. In addition, microwave photographs could be increasingly helpful as satellite use for telephone and television transmission increases.

Microwaves, very short radio waves, are similar to those used to relay telephone messages. They bounce off the satellite and are received by a widely dispersed array of special receivers forming a very large microwave lens which is similar to a telescope lens.

Information carried by the microwaves is reflected from the object, gathered by the receivers, stored in a computer and sorted out into a series of rapidly changing "projection holograms," which are used to form a dynamic three-dimensional image.

In designing the system Farhat noted that bats and dolphins are apparently quite good at discerning fine detail in their environment.

(continued on page 15)



Three-dimensional imaging radar laboratory at the University's Moore School Graduate Research Center.

Social Work Seeks \$1.1 Million

The University's School of Social Work, which has experienced a tremendous enrollment increase in the past five years, launched a major development effort earlier this month.

The goal is to implement programs in the areas of research, student fellowships, new faculty positions and facilities improvement. The total cost of these programs is estimated at more than \$1.1 million, and they will be funded through term contributions as well as endowments.

The new development effort is part of an ongoing program, but it is hoped the immediate goals will be realized within the next five years to coincide with the school's 75th anniversary.

The School of Social Work is one of the oldest institutions of its kind in the nation, and during the last decade its teaching and research capabilities have grown considerably in scope.

One immediate goal is to add new faculty

positions and to broaden the base of teaching and research expertise. This is necessary because the student body has grown by 50 percent during the last five years while the school's faculty has remained at a constant size.

A sharp cutback in federally funded student stipends has made fellowship support another important goal. And although 20 research studies are currently underway, the school is anxious to finance basic research for which external support is not initially available.

The remaining goals of the development effort are to add more classroom, conference and office space to cope with the school's expanded enrollment and to establish a research technical assistance center to provide specialized consultation to investigators and institutions conducting research on major social work issues. Such a center would also serve as a national clearing house on innovative and important studies.

Louis B. Schwartz Fund Endowed

The Law School Class of 1955, upon the occasion of its 25th Reunion, has endowed a gift of \$25,000 to the school, establishing the Louis B. Schwartz International Conference Fund.

One goal of the conference would be to gather leaders, Law School and University faculty, prominent local lawyers, and state and local government officials for the purpose of discussing problems of international significance.

Dean James O. Freedman expects "that the Law School would sponsor such a conference at regular intervals, perhaps every year and certainly every second year.... Each conference would focus upon a topic of

concern, such as international sales agreements, international control of money and banking, taxation of foreign income, the significance of the common market, international rules with respect to aliens, or the role of international tribunals."

The Conference honors Louis B. Schwartz, Benjamin Franklin and University Professor of Law. Schwartz, an alumnus of both the Wharton and Law Schools, has been Professor at the Law School for 34 years. He has written extensively in the fields of both Criminal Law and Antitrust Law, and has contributed in an advisory capacity to federal agencies and government committees in these areas.

Penn People

Professor Amos B. Smith, III, chemistry, has won a five-year award from the National Cancer Institute of the National Institutes of Health (NIH). Smith's research in the synthesis of organic chemicals may some day make it possible to synthesize a group of natural anti-tumor agents called sesquiterpenes and diterpenes.

The award, called the Research Career Development Award, will enable Smith to focus more of his attention on research. The purpose of the award is to enhance the career development of scientists like Smith who are working in areas related to health and who have outstanding potential for contributing independently to that research.

Daniel Hoffman, the University's poet in residence was recently awarded the Memorial Medal of the Magyar P.E.N. Club in Budapest, Hungary.

The Magyar P.E.N. Club, the Hungarian branch of the international organization of poets, essayists and novelists, honored Hoffman "for his outstanding translations of Hungarian poetry into English and for his services in making Hungarian literature better known in the English-speaking world."

David Rayon, Jr. has been named associate administrator for personnel management at HUP. Rayon, who joined HUP in 1976, has 14 years of experience in the health care management profession.

He is a graduate of Morris College in Sumter, South Carolina, and is vice-chairman of the Board of the West Philadelphia Mental Health Consortium.

Summer Bus Schedule

A courtesy bus operated by the Office of Transportation and Communications, provides evening transportation around campus and nearby West Philadelphia. Passengers are required to show University or HUP identification cards upon boarding the bus, which departs from Houston Hall at the following times:

4:30 p.m.	8:50 p.m.
5:10 p.m.	10:10 p.m.
5:55 p.m.	10:45 p.m.
6:40 p.m.	11:15 p.m.
7:30 p.m.	11:50 p.m.
8:05 p.m.	12:30 a.m.

The bus makes regular stops along the following route:

PennBus



33rd & Walnut	43rd & Baltimore
33rd & Market	46th & Springfield
36th & Walnut	48th & Springfield
38th & Walnut	47th & Baltimore
39th & Spruce	47th & Pine
40th & Baltimore	44th & Pine
42nd & Baltimore	44th & Spruce
42nd & Chester	42nd & Spruce

Starting with the 5:55 p.m. run, the bus follows the same route but will deviate from it, upon request, to leave riders at off-campus residences. Persons wishing to return to campus after 5:55 p.m. from West Philadelphia residences should call 243-7297 to schedule a pickup. The bus operates Monday through Friday all summer, starting June 1. There will be no service on July 4.

Recreation Hours

In an effort to support the University's energy conservation program, please be advised, effective Saturday, June 24 the hours of operation for Gimbel and Hutchinson Gymnasiums will be as follows:

Summer Hours:

Monday through Friday, noon to 7 p.m.
Saturday and Sunday, closed

The Department of Recreation will also observe the following holidays:

Memorial Day:

Monday, May 26 all buildings closed

Independence Day:

Friday, July 4 all buildings closed

Gimbel Gymnasium will be closed August 4-15, while Hutchinson Gymnasium will be closed August 18-29.

Please note building entrances are closed at 6:30 p.m. and all activities terminated at 6:45 p.m. The department will resume regular hours on September 8.

On Campus

May 24-June 14

24, Saturday

Sports: Men's heavyweight crew rows against Cornell for the Madeira Cup at Cornell; men's outdoor track competes in the IC4A's through Sunday at Franklin Field.

Theatre: The Philadelphia Gay Cultural Festival presents Philadelphia Tommi Avicolli's new play, *Judgment of the Roaches*, at 8 p.m. at the Christian Association Auditorium. Admission is \$2. For more information call 386-1610.

27, Tuesday

Seminar: The Respiratory Physiology Seminar presents Dr. Philip Kimbel, Department of Medicine, The Graduate Hospital, Philadelphia on *Experimental Emphysema: an Oxidant-Induced Model* at Physiology Library, 4th floor, Richards Building, 12:30-1:30 p.m.

28, Wednesday

Lectures: The University Museum presents an informal talk and tour concerning Biblical archaeology, 1-1:45 p.m., beginning inside the main entrance of the museum. For more information call Ext. 4015.

The University Museum hosts Donald Avery, Department of Engineering, Brown University, on *Ritual and Technology: Complex Iron-Smelting in Africa* at 4 p.m. in the Rainey Auditorium, University Museum.

29, Thursday

Lecture: The University Museum hosts Edward Brovanski, Assistant Curator of the Department of Egyptian and Ancient Near Eastern Art, Museum of Fine Arts, Boston, on *Cosmetic Arts and Costume Jewelry in New Kingdom Egypt: 1558 B.C. to 1058 B.C.*, at 5:30 p.m. with a reception following the lecture. Admission: \$3. For more information call Ext. 4026.

Sports: Men's Heavyweight crew competes in the IRA through Saturday at Syracuse.

31, Saturday

Film Workshop: A free workshop on independent film is presented by International House, in association with the Afro-American Historical and Cultural Museum, 1-4 p.m. *The Independent Filmmaker and Commercial TV: A View from the Inside* will be conducted by Roy Campanella, Jr., producer-director and programming executive with the CBS Entertainment Division. Call Judy Schatz at 387-5125, Ext. 201 to register in advance.

Recital: A benefit concert sponsored by the Chinese Benevolent Association for refugee education fund features a song recital by Violet Chang with Peter Helm at the piano. The concert, which begins at 7:30 p.m., is in the Rainey Auditorium, University Museum. Donation: \$5, student; \$3, child; \$1, patron; \$20 or more per couple. For tickets and information call 329-8467.

2, Monday

Colloquium: The Department of Materials Science and Engineering and the Laboratory for Research on the Structure of Matter present Dr. D. J. Gooch, Central Electricity Research Laboratories, Leatherhead, England on *Creep Crack Growth in Low Alloy Ferritic Steels* at 2 p.m. in the LRSM Auditorium.

Sports: Sailing competes in the Nancy Fowle Women's Champs through Friday at the University of Michigan.

3, Tuesday

Colloquium: The Department of Materials Science and Engineering and the Laboratory for Research on the Structure of Matter present Dr. D. J. Gooch, Central Electricity Research Laboratories, Leatherhead, England on *Metallurgical Research in the U.K. Electricity Supply Industry* at 2 p.m. in the LRSM Auditorium.

5, Thursday

Sports: Men's Outdoor track competes in the NCAA meet through Saturday at the University of Texas.

6, Friday

Continuing Education Courses: The psychiatry department sponsors *Psychiatry in the 80s* through Sunday in Atlantic City. Contact Marion Malakoff at 662-2849 or 227-2847 for more information.

7, Saturday

Film Workshop: International House, in association with the Afro-American Historical and Cultural Museum present a workshop on independent film conducted by Musindo Mwinyipembe, a producer of *Blacks Britannica*. The topic is *How Filmmakers Can Work With Community Groups*. The workshop will take place at International House, 1-4 p.m. It is free of charge and advance registration is required. Call Judy Schatz, at 387-5125, Ext. 201.

10, Tuesday

Sports: The sailing team competes in the Dinghy Champs through Saturday against M.I.T. and Harvard.

14, Saturday

Film Workshop: International House, in association with the Afro-American Historical and Cultural Museum present a free workshop on independent film conducted by Ben Caldwell, director of *I and I* and *The Nubian*. The topic is *Why Black Filmmakers Should Change the Form of Filmmaking*. Advance registration is required for the workshop which will take place at International House, 1-4 p.m. Call Judy Schatz, at 387-5125, Ext. 201.

Continuing Exhibits

Fleeting Gestures: Treasures of Dance Photography in the ICA gallery opening June 14 through July 27.

Salih Memecan Cartoons in the University City Science Center, Monday through Friday, 9 a.m.-5 p.m. through June 11.

The Shadow Catcher: E. S. Curtis in the University Museum, Tuesday through Saturday, 10 a.m.-5 p.m., Sunday 1 p.m.-5 p.m., through July.

Memorypieces/Photocollages: Frances Storey in Hoover Lounge, Vance Hall. Daily through May 24.

Greek Images and Wedgwood Ceramics in the University Museum, Tuesday through Saturday, 10 a.m.-5 p.m., Sunday 1-5 p.m., through August 31.

Graduate School of Fine Arts presents painting and sculpture by its class of 1980 in the gallery of the Institute of Contemporary Art, Tuesday through Saturday 10 a.m.-5 p.m. and Sunday noon-5 p.m. through May 25.



Cosmetic Artifacts from Ancient Egypt, on exhibit in the University Museum are the subject of a lecture, Thursday, May 29.

Cosmetic Arts and Costume Jewelry in New Kingdom Egypt: 1558 B.C. to 1058 B.C.

Eye make-up and moisturizers, perfumes and jewelry are the key to the fashion of 4000 years ago, not only the styles of today. The infinite variety and use of cosmetics and jewelry in ancient Egypt will be discussed by Edward Brovanski on Thursday, May 29 at 5:30 p.m. at The University Museum.

Brovanski, assistant curator of Near Eastern and Egyptian Art at the Boston Museum of Fine Arts, will speak on *Cosmetic Arts and Costume Jewelry in New Kingdom Egypt, 1558 B.C. to 1058 B.C.* Brovanski will focus on the importance of cosmetics and jewelry to the ancient Egyptians, thought to be the first civilization to use cosmetics. He will illustrate his lecture with slides of cosmetic containers and

jewelry, wall paintings and papyri showing scenes of actual use.

Scholars know that in ancient Egypt both men and women used eye makeup for health benefits as well as beauty. Kohl, the Egyptian equivalent of modern eyeliner, was applied to prevent the eyes from drying out in the glare of the Egyptian sun. Oil and ointment were considered so valuable that they were among the first items stolen from the tomb of Tutankhamun. Perfumes were an everyday indulgence.

The unisex look was also in vogue in 1500 B.C. Many varieties of elaborate jewelry—earrings, bracelets, rings and neckpieces—were worn by both sexes.

Study Defines International Social Progress

The world may be heading toward major political, economic and military confrontations between rich nations, which control much of the globe's wealth, and poor nations, which contain most of its population and natural resources.

The turmoil in Iran, the formation of OPEC, the block voting of Third World countries in the United Nations may only be samples of what is to come, says Professor Richard Estes, social work.

Now completing a major research project on the quality of life in 107 nations, Estes is developing a means of measuring social progress around the world and determining whether the world's governments are providing for the needs of their people.

So far, his results indicate a growing gap between the rich nations of North America and Western Europe and the poor nations of Asia, Africa and Latin America.

His research also shows:

- The United States ranking only 19th in the quality of life for its people because of poor social services and discrimination against minorities.

- The success of communist regimes in quickly providing social services in developing nations, accomplished at the expense of political freedom.

- An alarming increase in the number of dictatorships during the last 10 years.

In determining the quality of life—or national social vulnerability, as he calls it—Estes considered 39 political, economic, social, health and geographical factors such as political stability, civil rights, economic growth, literacy, mortality rates, welfare programs and natural disasters. The study will cover a 10-year period ending in 1978-79; he expects to finish collecting data shortly and to complete a book on his findings.

Estes has collected statistics from the United Nations, the Organization for Economic Cooperation and Development in Paris, and several sources of political events information. However, he was not able to gather world-wide statistics on crime because people are jailed for political reasons in many countries and therefore, crime statistics are politically sensitive.

Estes has also visited 31 nations to gain a qualitative perspective on living conditions and he will travel through Asia this summer.

One major exclusion from the study was China because insufficient data was available. Even without China, which contains 20 percent of the world's population, Estes' project covered about 75 percent of the world's population represented by the 107 countries studied.

"I would say the world's situation has improved slightly since 1968-69, but we're declining in some areas and the gap between rich and poor is widening," Estes said.

For example, in some poor countries life expectancy is only 40 years, infant mortality rates are 10 to 20 times greater than those of wealthier nations, health care and educational opportunities are poor, political regimes are unstable and much of the population is living on the edge of starvation.

Countries with the lowest quality-of-life ratings tend to be low in most individual categories and have overall situations that are worsening. Most of the countries in Africa, Asia and Latin America rated low, but the lowest were all in Africa: Ethiopia, Uganda, the Central African Republic, Chad and Niger.

Recent events may have worsened the quality of life in Democratic Kamouchea (formerly Cambodia), where masses of people reportedly face starvation and in Iran, where hundreds of thousands reportedly are unemployed. However, it may be another year before statistics are available on those situations.

Because Estes' research can pinpoint areas of human need, it could serve as a basis for international relief efforts.

"Organizations that could benefit from it are the United Nations and public and private relief and development organizations such as the American Friends Service Committee and the Red Cross, organizations that have to make decisions about where to provide aid," he said.

However, based on his research Estes warns that if the world's wealth isn't more evenly distributed, the industrialized West could face serious problems in the future.

"The standards between rich and poor are so great it appears as if these people live on different planets," he said. "My own view is that this will lead to increased confrontations—economic, political and military confrontation—between rich and poor.... The poor are demanding a greater share of the wealth. Maybe, we're heading toward a great military confrontation."

Since the rich and the poor also tend to vary in race and religion, conflicts might take on the appearance of race wars or holy wars as they have in Rhodesia, Iran and the Middle East.

Differences exist not just between countries but also between different groups within the same country, and that's one reason the United States ranked 19th in quality of life behind Western European countries such as the Netherlands, Denmark, Norway, West Germany and the United Kingdom.

"The largest single problem depressing the American figures, I would say, is the racism in this country," said Estes. "It's as clear as can be and is reflected in chart after chart. The figures for whites compare favorably to Western Europe, but add figures for minori-

ties and the total figures decline."

For example, in the United States from 1950 to 1971 the infant mortality rate was 17.1 for whites and 30.3 for blacks; life expectancy was 6.5 years less for blacks; and unemployment was three times greater for blacks.

"The United States' ability to generate wealth is its one claim to fame, but it's a laggard in social services," said Estes. "We're 75 to 100 years behind Western Europe. We have no family policy, no youth policy, no elderly policy, no minorities policy. We are one of the few major-market countries in the world with no national health care."

The United States has two other major types of problems: a high number of natural disasters and related deaths, which is attributable to the country's size, and a high crime rate, which was not included in the quality-of-life ranking but would have lowered it further.

The United States did rank well ahead of the Soviet Union, which was 34th. While the Soviets scored well on social programs, their economy has been deteriorating since 1969 and is being supported by wealthy Eastern European countries, Estes said. Communist bloc countries such as Hungary, Bulgaria, Romania and Czechoslovakia did not rank far behind the United States on the scale.

"One of the appeals of the communist system to developing countries is how quickly they can get social programs established, things like housing, food and health care," said Estes. "The price the people pay is their political freedom. An alarming number of people are living under military dictatorships and it has increased in the last 10 years."

In 1971, 38 percent of the world's population lived under a military dictatorship or a civilian government backed by the military. In 1977 the figure could be conservatively estimated at 46 percent, Estes said. During that period the number of countries with dictatorial forms of government jumped from 41 to 65.

Estes says the explanation is relatively simple: when given a choice between food and freedom, people facing starvation will choose to feed their families.

—Virgil Renzulli

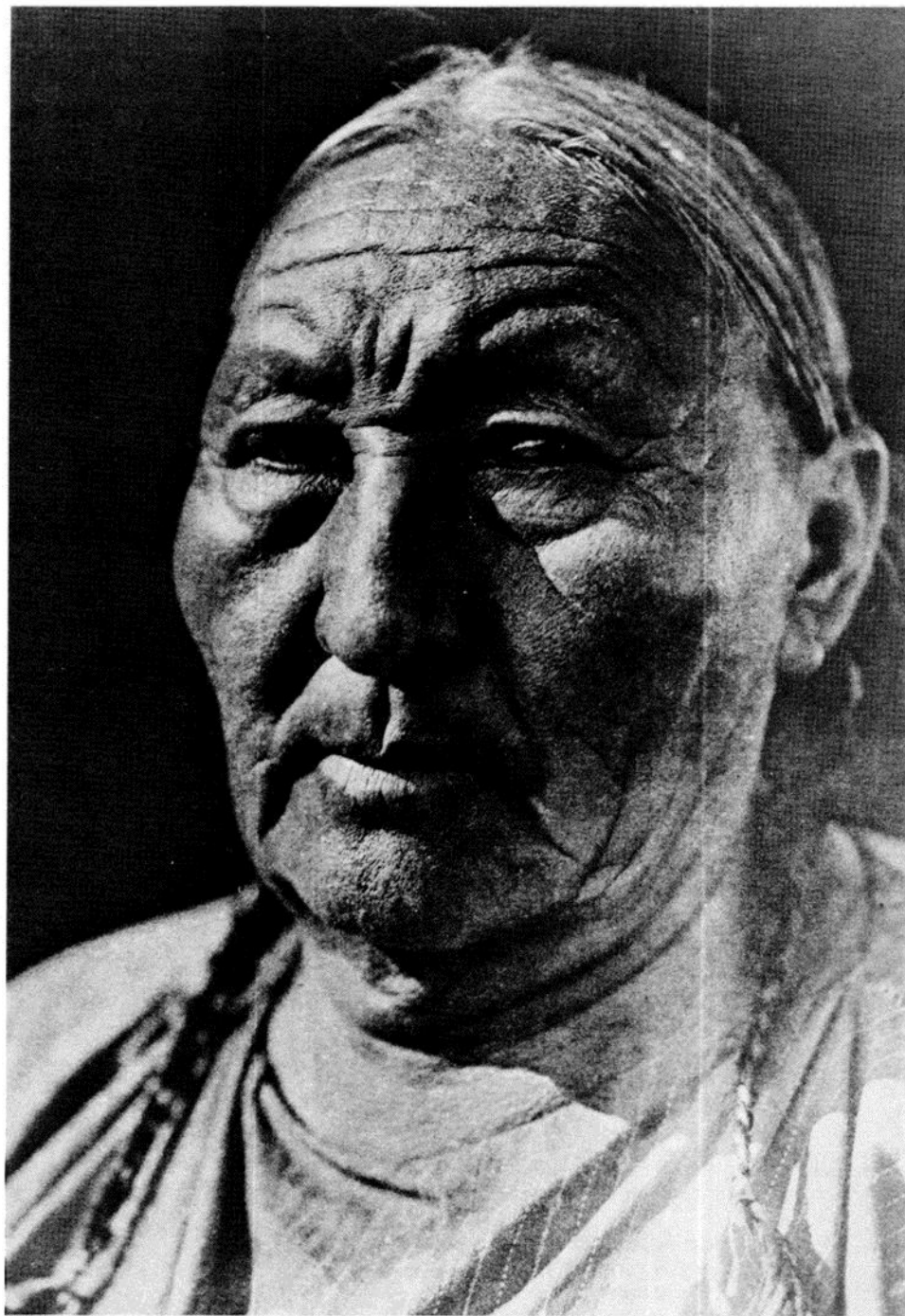
Correction

In the list of promotions in the May 15 *Almanac*, Dr. Kenneth A. Foland's promotion in the Faculty of Arts and Sciences should have been listed as follows:

- Dr. Kenneth A. Foland to associate professor of geology.

The bullet indicates that the faculty member received tenure.

The Shadow Catcher: Photographs by E.S. Curtis on Exhibit at University Museum

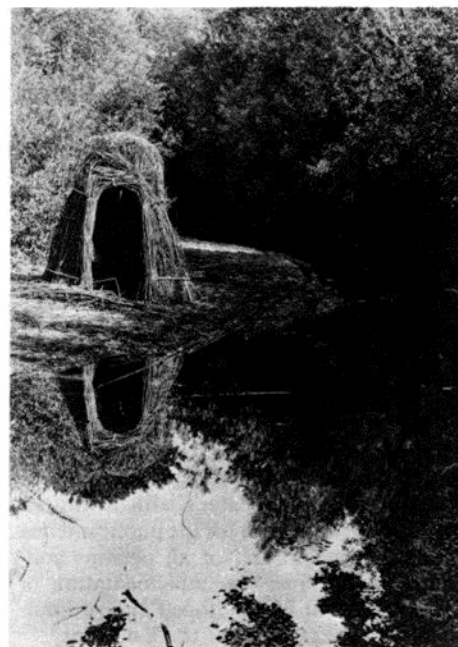


The Shadow Catcher: E. S. Curtis, 1905-1929 is currently in the University Museum's Pepper Gallery. The Shadow Catcher exhibition displays photogravures by the great E. S. Curtis with Indian artifacts that relate directly to the artifacts seen in the photogravures.

Both artifacts and photogravures are from the museum's own collection, which include Curtis' monumental publication, *The North American Indian*. The exhibition continues

until August 1. The museum is open Tuesday through Saturday, 10 a.m.-5 p.m. and Sunday 1 p.m.-5 p.m.

A glimpse from the exhibition: Woista-Cheyenne Woman, above; Fishing Camp, Lake Pomo, top right; A Chief's Daughter-Skokomish, bottom right.



Patent Policy Announced

In the Research Investigators Handbook published by the University in 1977, the following general patent policy of the University is included.

Patent Policy of the University of Pennsylvania

The Trustees have declared it to be the policy of the University of Pennsylvania that any invention or discovery which may result from work carried out on University time or at University expense by special grants or otherwise is the property of the University. Patents on such inventions or discoveries may be applied for in any country by the University in which case the inventor shall assign his interest in the patent application to the University. The University will exercise its ownership of such patent, with or without profit, with due regard for the public interest as well as the interest of all persons concerned. Procedures for implementation of this policy shall be developed and promulgated by the President of the University.

The Handbook¹ goes on to add: In stating the patent policy of the University of Pennsylvania the Trustees have made use of the expression "the public interest." In implementing the announced policy this expression is interpreted to include (1) the stimulation of support of basic and applied research, (2) the stimulation of investment to develop inventions or discoveries to the point where they become generally available to the public, and (3) the stimulation of prompt disclosure of scientific information. Except where otherwise stated, the patent policy and these procedures apply to all members of the staff of the University whether fully or partially affiliated.

In implementing this policy, these steps will be followed:

Provost's Statement Mandates End to Sexual Harrassment

The Equal Employment Opportunity Commission recently issued interim guidelines on sexual harassment on the job which clarify the duty under federal law of employers to eradicate such behavior. The guidelines emphasize that prevention is the best tool for the elimination of sexual harassment and encourage employers to take all steps necessary to prevent sexual harassment from occurring.

As an employer, the University seeks to insure that the workplace is free from harassment. As an educational institution, the University's commitment to eradicating sexual harassment goes beyond the EEOC guidelines.

Sexual harassment, like harassment on the basis of race, color, religion or national origin, has long been recognized to be

- The internal research foundation I proposed some years ago and included in the Program for the Eighties, will be instituted by the beginning of the fall term.

- The research foundation will be an internal office within the University chaired by the President with the Provost as Vice Chairman; the Vice Provost for Research will serve as executive officer of the foundation.

- There will be a division of royalties between the University and the investigators, using a sliding scale which is attached.

- The University's share of the returns from patents will go to the research foundation and be used in such ways as to further research and scholarship, research facilities and equipment, research-related graduate education and involvement, when appropriate, of undergraduates in faculty research programs. On occasions, and they should be of the rarest kind, the President, the Provost and the Trustees may find it justifiable to use the resources from the research foundation for other academic purposes than those noted above.

- Each year the foundation which will be made up of administrators and faculty (the Senate Committee on Consultation will review the yearly proposals for membership on the foundation) will report on its substantive and financial achievements to the Trustees of the University.

Scale for Distribution of Patent Revenues Accruing to the University²

Royalties or other income received by the University from patent revenues will be distributed as follows:

- a) 50% of the first \$200,000 net patent revenue will be distributed to the inventor(s);

- b) 25% of the next \$800,000 net patent revenue will be distributed to the inventor(s);

- c) 15% of the net patent revenue of the next \$4,000,000 will be distributed to the inventor(s);

- d) 10% of the net patent revenue of all subsequent returns will be distributed to the inventor(s).

Net patent revenues are defined as revenues from patents retained by the University after payment of expenses associated with the preparation, filing, marketing, exploitation or defense of the patent.

For patents managed by a patent management organization, only the University's share of patent revenues, after payment of other significant expenses, will be considered to be net patent revenues.³ All patent revenues from patents managed by a patent management organization will be subject to the terms of the agreement between the University and the patent management organization.

Distribution of patent revenues from patents arising from sponsored research will be subject to the terms of the grant or contract, as negotiated between the agency and the University.

Martin Meyerson, President

¹ The Handbook also includes other patent information useful and necessary to research investigators.

² This scale applies only to patent revenues accruing on patents filed after April 28, 1980.

³ Questions regarding division of the foregoing revenues among inventors where there are patents to multiple inventors, patents to different or overlapping inventors, and multiple patents to a single inventor, and all other questions of interpretation of these guidelines, will be referred to the Vice Provost for Research.

Deaths

Anne Bezanson, emeritus professor and former director of the industrial research unit of the Wharton School, died February 4. She was 99.

Bezanson joined the University faculty in 1922 as a lecturer, and was appointed special lecturer and director of the industrial research unit in 1923. She rose to associate director of the unit in 1925, and became a research professor in 1929. Bezanson was appointed professor emeritus and director of the industrial research unit in 1934.

She was awarded an honorary doctorate by the University in 1951.

Bezanson is survived by several nieces and nephews.

Eugene V. Girardi, a retired custodian, died on April 22. He was 67.

Girardi came to the University in 1963 and retired in 1977. He is survived by his daughter, Elaine.

Vartan Gregorian, Provost

Opportunities

The following listings are condensed from the personnel office's bulletin of May 15. Because of the delay occasioned by printing schedules, these listings should not be considered official. Some positions may no longer be available.

Bulletin boards at several campus locations list full job descriptions. New listings are posted every Thursday. Bulletin board locations are: Franklin Building: outside personnel office, Room 130; Towne Building: mezzanine lobby; Veterinary School: first floor, next to directory; Leidy Labs: first floor, outside Room 102; Anatomy-Chemistry Building: near Room 358; Rittenhouse Lab: east staircase, second floor; LRSM: first floor, opposite elevator; Johnson Pavilion: first floor, next to directory; Logan Hall: first floor, near Room 117; Social Work/Caster Building: first floor; Richards Building: first floor, near mailroom; Law School: Room 28, basement; Dietrich Hall: first floor, outside E-108.

For further information, call personnel services, Ext. 7284. The University is an equal opportunity employer. Where qualifications include formal education or training, significant experience in the field may be substituted. The two figures in salary listings show minimum starting salary and maximum starting salary (midpoint). Some positions listed may have strong internal candidates. If you would like to know more about a particular position, please ask at the time of the interview with a personnel counselor or hiring department representative. Openings listed without salaries are those in which salary is yet to be determined.

Administrative/Professional Staff

Accountant I (2694) \$10,375-\$14,375. No longer accepting applications.

Administrative Aide (B175) \$11,400-\$15,800.

Administrative Coordinator (B0390) monitors budget; identifies potential source of funding; develops grant proposals; coordinates program evaluation; serves as staff to advisory committee; develops teaching programs; coordinates relationships with other departments and family practice residencies (college degree; 3 years experience in health care administration) \$14,850-\$20,550.

Assistant Area Director for Operations and Maintenance (B0386) \$10,375-\$14,375.

Assistant Comptroller \$27,125-\$38,225.

Assistant Director (2831)

Assistant Director Alumni Relations II (02907) \$14,850-\$20,550.

Assistant Director of Annual Giving II (2870) \$14,850-\$20,550.

Assistant Director of Residential Living (02912) \$11,250-\$15,850.

Assistant Director of Textbooks (2887).

Assistant Editor (B0400) prepares authors' manuscripts for press; organizes sources from field excavations (knowledge of editorial procedures; specialist in classical archaeology; prior experience in publications) \$10,375-\$14,375.

Assistant to Associate Dean (3036) maintains close liaison with all graduate groups and chairmen; advises of new or proposed changes in FAS policies; organizes regular department reviews of graduate programs; collects data; writes reports and correspondence; supervises FAS endowed fellowships (good organizational abilities; writing abilities and budget experience preferred) \$10,375-\$14,375.

Assistant to Chairman II (2990) \$11,250-\$15,850.

Assistant to Director (03054) responsible for student advising, program planning, symposium planning, supervises budget and program's personnel; acts as intra- and inter-campus liaison (college degree or equivalent experience, writing, management, program planning and personnel relations experience) \$11,250-\$15,850.

Associate Development Officer II (3039) responsible for planning, administration and implementation of hospital annual giving programs and other capital programs related to the health field; organizes direct mail annual giving program; analyzes results; reprograms appeals (college degree; 3 years experience in public relations, institutional fund-raising or direct mailings) \$16,125-\$22,725.

Associate Development Officer III (2541) \$18,625-\$26,250.

Associate Director of Athletics (2710) \$21,450-\$30,225.

Athletic Trainer (3045) responsible for prevention, immediate first aid, treatment and rehabilitation of athletic injuries; acts as trainer for football, soccer, basketball, lacrosse (licensed physical therapist; 1 year training experience in major sports; prefer NATA certification) \$11,250-\$15,850.

Building Superintendent (2945) \$12,900-\$17,850.

Business Administrator

Business Administrator II (2991) \$11,250-\$15,850.

Business Administrator IV (02983).

Career Counselor (2631) \$12,900-\$17,850.

Coordinator of Comprehensive Care Education (03017) \$14,200-\$19,625.

Data Communications Administrator (2959) \$14,850-\$20,550.

Deputy Director (02651)

Director of Program (B0318) \$14,850-\$20,550.

Director of Upperclass Admissions (2752) \$12,900-\$17,850.

Editor (2905) \$16,125-\$22,725. No longer accepting applications.

Editorial Director (B0401) responsible for acquisitions; works with faculty editorial board; supervises editorial department; seeks title subsidies (5-10 years experience in scholarly book publishing in high managerial position; extensive contacts in academic and scholarly book publishing communities and in the private fundraising sector) \$21,450-\$30,225.

Electrical Engineer III (03012) \$17,725-\$25,000.

Executive Director of Administrative Affairs/Student Services (03033) \$28,325-\$39,950.

Foreman, Repair and Utility (2689) \$12,900-\$17,850.

General Counsel (02972).

Junior Research Specialist (10 positions) \$10,375-\$14,375.

Manager of Operations (02949) \$10,375-\$14,375.

Programmer Analyst I (B0360) \$12,900-\$17,850.

Programmer Analyst II \$14,850-\$20,550.

Senior Programmer Analyst (B0371) \$17,725-\$25,000.

Programmer II (3003) \$9,275-\$11,800.

Project Manager (2433) \$16,125-\$22,725.

Project Manager (2 positions) \$16,125-\$22,725. No longer accepting applications.

Regional Director of Admissions (2592) \$14,850-\$20,550.

Research Specialist I (B0334) \$11,250-\$15,850.

Research Specialist I (B0296) \$11,250-\$15,850. No longer accepting applications.

Research Specialist III (A682) \$14,850-\$20,550.

Research Specialist IV (B0223) \$18,625-\$26,250.

Research Specialist IV (B0397) conducts and performs thorough high level biomedical research; counsels and advises assistants and collaborators; prepares appropriate reports and manuscripts (doctoral degree and 10 years professional research experience in laboratories; evidence in authorship; total familiarity with specialized scientific research work) \$18,625-\$26,250.

Superintendent of Construction and Repairs (2690) \$14,850-\$20,550.

Staff Dentist (B0384) \$28,325-\$39,950.

Staff Writer II (2979) \$12,900-\$17,850. No longer accepting applications.

Part-Time Positions— Administrative/Professional

Permanent Employee (B0290) Hourly wages.

Temporary Extra-Person (B0288) Hourly wages.

Support Staff

Administrative Assistant (B0335) \$7,975-\$10,150.

Administrative Assistant (B0339) works with University budgets; reconciles accounts; assists with proposal budget preparation; secretarial functions (accounting background; excellent typist; ability to organize) \$7,975-\$10,150.

Administrative Assistant I (6 positions) \$7,975-\$10,150.

Admissions Assistant (2889) \$7,975-\$10,150.

Assistant to Loss Prevention Specialist (03053) assists

in performing and understanding internal audit; assists in individual shoplifting cases; assists in training staff members; aids in visual security; holds security seminars (high school graduate; 3 years experience in retail security procedures; ability to document cases) \$6,825-\$8,725.

Bookstore Cashier (3047) operates electric cash register for receipt of cash and checks; keeps records; assists in clerical functions (high school graduate; aptitude for clerical work) \$6,750-\$8,600.

Bookstore Clerk (2927) \$5,500-\$7,000.

Bookstore Clerk I (3046) communicates stock level information to appropriate buyer; responsible for pricing, stocking, arranging, presentation of merchandise, helping customers; takes inventory (college graduate or equivalent work experience; 1 year experience in retail sales) \$6,300-\$8,000.

Clerk III (2954) \$6,875-\$8,750.

Computer Operator (03025) \$7,975-\$10,150.

Coordinating Assistant (2977) \$8,625-\$10,950.

Coordinator of Student Permanent Records (3014) \$8,625-\$10,950.

Custodian (7 positions) Union wages.

Data Control Clerk (03029) \$7,975-\$10,150.

Electrician I (2794) Union wages.

Electrician Union Wages.

Electrician Technician II (B0344) \$9,650-\$12,225.

Engineer Union wages.

Herdman (2 positions) \$5,500-\$7,025.

Instrumentation Specialist (02820) maintains, repairs, and constructs lab apparatus and various analytical instruments; assumes responsibility for preventive maintenance of medieval equipment in old, neglected building (mechanical aptitude; electronic experience) \$13,750-\$17,525.

Intermediate Draftsperson \$8,575-\$10,850.

Junior Accountant (2 positions) \$7,975-\$10,150.

Library Clerk Union wages.

Maintenance person (3001) Union wages.

Manager, Rathskeller (B310) Hourly wages.

MCST Operator (2482) \$7,425-\$9,450.

Project Budget Assistant (2 positions) \$7,975-\$10,150.

Pipefitter (2 positions) Union wages.

Psychology Technician I (B0366) \$9,650-\$12,225.

Programmer I (B0356) \$9,275-\$11,800.

Records Assistant (2939) \$7,975-\$10,150.

Research Bibliographer I (2973) \$7,975-\$10,150.

Research Laboratory Assistant I (3 positions) \$7,575-\$9,600.

Research Laboratory Technician I (B0381) \$7,575-\$9,600.

Research Laboratory Technician II (3 positions) \$8,575-\$10,850.

Research Laboratory Technician II (B0391) conducts basic biochemical and physiological research (B.S.; 3 years experience; familiar with use of small animals for research) \$8,575-\$10,850.

Research Laboratory Technician III (12 positions) \$9,650-\$12,225.

Research Laboratory Technician III (2 positions) responsible for varied and complex lab analyses; assists investigators in advanced research laboratory procedures (college degree; biology and chemistry experience); assists with large and small animal research; uses electronic and analytical instruments; prepares and cares for animals; obtains experimental data (college degree in life sciences; 3 years laboratory experience) \$9,650-\$12,225.

Secretary I (3 positions) \$6,375-\$8,100.

Secretary II (20 positions) \$6,875-\$8,750.

Secretary III (29 openings) \$7,425-\$9,450.

Secretary, Limited Service (2984) excellent manuscript typist for faculty and staff (familiarity with social science manuscript style; typing at least 70 wpm) Hourly wages.

Secretary/Technician, Word Processing (2809) \$7,975-\$10,150.

Secretary, Word Processing (B0355) \$7,975-\$10,150.

Student Medical Records Assistant (3044) responsible for maintenance and operation of files; opens and sorts incoming mail; processes applications for financial aid; supervises and trains work-study students; assists with evaluation of financial need (clerical aptitude; high school graduate; excellent phone manner) \$7,975-\$10,150.

Supervisory Herdsman (B0308) \$9,125-\$11,675.

Store Cashier (2 positions) \$5,900-\$7,525.

Nineteen part-time support staff positions are listed on campus bulletin boards.

HUP Sponsors Rehab Conference

The Computer Science Program of HUP's Physically Handicapped Training Center will host the second annual conference of the Association of Rehabilitation Programs in Data Processing on May 22 and 23 at the University City Holiday Inn.

The conference will include an equipment exhibition of innovative data processing devices useful for industries, organizations, and campuses serving those handicapped visually or by other disabilities. The exhibition will be from 9 a.m. until noon in the Holiday Inn.

Dr. William Erdman, II, chairman of the hospital's physical medicine and rehabilitation department and a faculty member of the University of Pennsylvania School of Medi-

cine, will serve as the conference host.

Keynote speakers are Dr. Robert Leopold, professor of psychiatry at the University and deputy director of the Hospital's physical medicine department; and Ralph Pacinelli, regional director of the U.S. Department of Education Rehabilitation Services Administration.

The ARPDP is a federation of computer programming training courses initiated by IBM and the Projects With Industry section of the Rehabilitation Services Administration. Its purpose is to promote communication between and establish guidelines for new and existing programs. To date, there are 13 ARPDP programs in existence and six more in the development stages.

Professor Scouten Retires

Professor Arthur H. Scouten, English, officially retired from the University on April 23 following a special final lecture. Scouten, 70 years old, has taught at Pennsylvania for 34 years.

Born in Kapropita, British East Africa, Scouten earned a Ph.D. from Louisiana State University in 1942, and began teaching English at Pennsylvania in 1947.

A distinguished scholar of the Restoration (literature from the late 17th century) and the 18th century stage, he has written or contributed to eight books and more than 70 articles and reviews. He also edited the multi-volumed *The London Stage* and *The Revels History of Drama in English*.

While at Penn, Scouten was the recipient of the John Guggenheim Fellowship in 1954; was made an honorary Doctor of Literature,

Thiel university, in 1966; and was also a member of the National Council of the A.A.U.P. from 1966 to 1967.

One of Dr. Scouten's many noteworthy contributions to his field was helping find, in 1973, *The Country Gentleman*, a lost restoration comedy written by Sir Robert Howard and George Villiers, Second Duke of Buckingham.

The play, written in 1669 and lost for more than 300 years, was originally banned for its scandalous attack on a member of the court of King Charles.

Professor Scouten and Professor Robert D. Hume, Cornell University, discovered the play in the Folger Library, Washington D.C. It was released by the University Press in 1976 and was produced by New York's Classic Theater in 1978.

Research Deals with Treating Anorexia

Dr. Gary Van Den Broek has won the Beta Chapter Phi Zeta Award. Van Den Broek won the research prize in 1979 with his paper dealing with an aspect of treating anorexia, a feeding disorder. The study dealt specifically with decreased secretion in the fourth stomach of sheep treated for anorexia with two drugs, Elfazepam and 9-Aza-Cannabinol. The paper was published in *Pharmacology, Biochemistry, and Behavior*, a monthly scientific journal published in New York.

The research, which was sponsored by Clifton Baile, professor of nutrition at New Bolton Center is part of a larger effort to develop ways of treating anorexia in various animals.

Before coming to the University, Van Den Broek earned a master's degree at Penn State University and studied at the University of Wisconsin for a year.

His award-winning research was conducted during a summer Van Den Broek spent at New Bolton Center as one of a small number of scholarship students selected for the Summer Scholars program of the School of Veterinary Medicine.

Following his graduation, Van Den Broek plans to begin practicing veterinary medicine near Allentown, Pa.

Phi Zeta is the national honor society of veterinary medicine, and the Beta Chapter, formed at the University, was the second in the society's history.

The Beta Chapter Award is given to a senior student at the School of Veterinary Medicine who has the highest academic standing among those students who earned a Phi Zeta Research Prize during their tenure at the school.

Weight Watchers Meet

All HUP and University employees are eligible to join a University-sponsored Weight Watchers program. Classes are set for Monday afternoons, 4:30 p.m.-6 p.m. in the Orthopedic Conference Room of the White Building at the Hospital.

Weight Watchers is a carefully designed program of eating and behavior modification combined with weekly class attendance. A person must have to shed at least ten pounds to enroll in the program. Classes are open, and a member may drop the program when desired.

Initial membership costs \$11, and each class is \$5. Weight Watchers recommends that those considering the program consult with a physician before starting on the plan.

For more information, call 662-3181 or stop at Gibson 1, HUP.

'Almanac' Publication Schedule

This is the last weekly issue of *Almanac* for the current academic year. For the summer months, *Almanac* will be published the second Thursday of each month, hence June 12, July 10, and August 14.

Except for the calendar, all information for publication must be received by the *Almanac* office by 4 p.m. Monday for each Thursday's *Almanac*. Information for the calendar must be received one week prior to the desired date of publication.

Employment Office Changes Office Hours

Beginning Monday, May 19, the Employment Office of Personnel Relations will close on a trial basis at 3 p.m. on Mondays and Fridays to complete the weekly job postings. Regular hours will be kept on Tuesdays, Wednesdays, and Thursdays.

A recorded message giving general information and office hours will be available at all times on Ext. 7284.

Farhat Designs System

(continued from page 7)

Although they use sound waves instead of microwaves, the principles by which they discern the details are the same as those in microwave imaging.

One of the most interesting clues that bats and dolphins provided was that of "frequency diversity," the new imaging principle in the system. Their shrill sounds change frequency (or pitch) often, making the echoes richer in information.

Building this information-gathering capability into his system, Farhat had the microwaves—under computer control—sweep rapidly across a number of frequencies, like tuning across the dial of a radio. Using multiple frequencies made it possible for him to reduce the projected cost of the microwave lens dramatically.

"What we have done," he said, "is find a way of taking ten receivers and distributing them very far from one another over an area that defines the extent of the microwave lens. Frequency diversity makes it possible for these ten receivers to do the work of thousands of single frequency receivers distributed more or less uniformly over the same area."

This reduces the cost of the lens from an estimated \$50 million to about \$100,000 and in addition provides the three-dimensional imaging capability.

The idea of forming three-dimensional images by frequency diversity is now being extended by Farhat to the imaging of "passive" objects, such as stars. "Instead of illuminating the object with variable frequency microwaves—naturally. These natural emissions might be used to form a three-dimensional image," he said.

"The information gathering process at the receivers would now be different from that in systems using active illumination," he added, "but the data sorting and processing remains roughly the same and there would be no need to bounce microwaves off the object."

Other emerging features of "passive three-dimensional imaging" should be of particular interest in radio astronomy because stars and other celestial bodies emit a wide range of frequencies, including microwaves. By sorting out these waves properly, scientists using giant proposed terrestrial and space-born radio telescopes might form images of the heavenly bodies with unprecedented clarity.

Farhat has worked extensively with holograms and microwaves. At the University's Moore School Graduate Research Center, he has pioneered the field of microwave holography and electro-optics, which are concerned with forming and interpreting microwave and acoustical images.

Excerpts from the Honorary Degree Citations

(continued from page 3)

Nnamdi Azikiwe

First President, Federal Republic of Nigeria
Former Chancellor, University of Lagos

The father of Nigerian nationalism and chief architect of his country's independence from British rule, Nnamdi Azikiwe has played a dominant and diverse role in its history ever since he returned to Africa as a graduate from the United States. A founder, member and leader of Nigeria's first country-wide political party, Premiere of the Eastern Region, and Member and President of the Senate, he accomplished his "stiffest earthly assignment" in 1960 when he became the first indigenous Head of State of the Federal Republic of Nigeria ... He has continually promoted education in his nation of eighty million, serving as chairman of the Council of the University of Nigeria and Chancellor there and at the University of Lagos. His belief in youth, unity, cultural integrity and the New Africa find expression in his philosophy of the Nigerian personality....

As the world celebrates the twentieth anniversary of Nigerian independence of which he was a prime mover, following a recent return to civilian rule and constitutional democracy for which he worked so long, the Trustees of the University of Pennsylvania proudly welcome the return of Nnamdi Azikiwe, Owelle of Onitsha, statesman, scholar, and eminent alumnus, and recognize the honor he does the University in accepting from their hands the honorary degree, Doctor of Humane Letters.

Reginald H. Jones

Chairman and Chief Executive Officer
General Electric Company

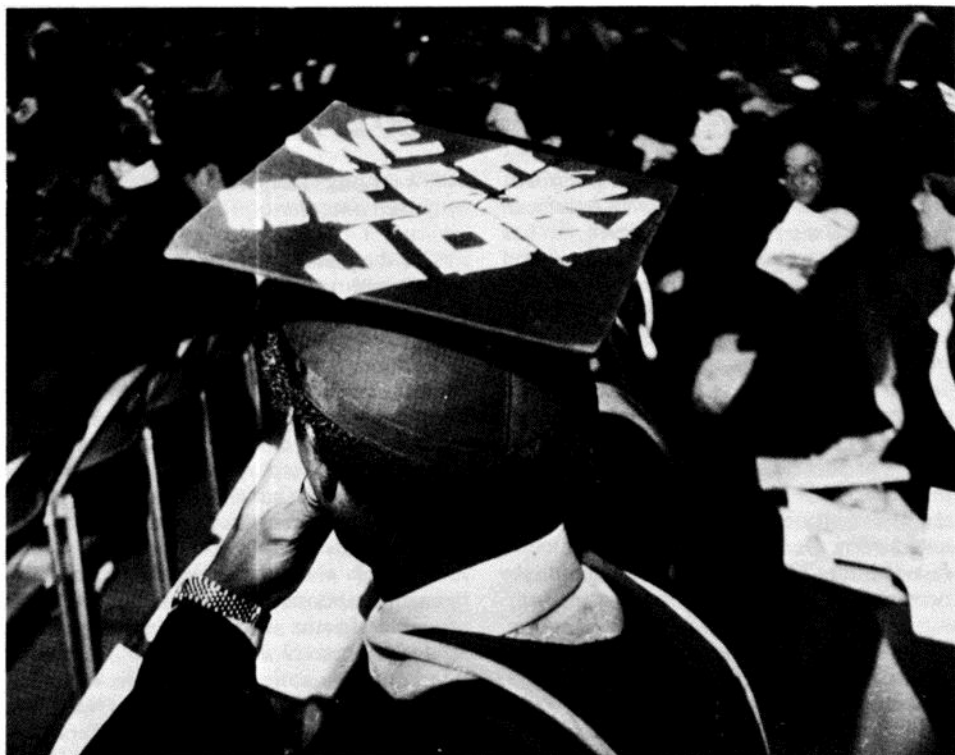
On a trail that has led from Stoke-on-Trent to Trenton, New Jersey, by way of the College, the School of Education, and the Wharton School of the University of Pennsylvania, Reginald Harold Jones has proceeded through marketing, manufacturing and finance to a position of eminence as chief executive officer of the General Electric Company, one of the largest corporations in the United States.... Expert in management as in economic and monetary policy, he is equally concerned with expanding opportunities for people, with the nation's human as well as its financial assets.

... The Trustees of the University of Pennsylvania claim and acclaim him as one of their own and take great pride in awarding Reg Jones, mentor and friend, the honorary degree, Doctor of Laws.

Sol Linowitz

Former Chairman, Xerox Corporation
Former Ambassador to the Organization of American States

A lawyer and businessman who has become a diplomat and troubleshooter of presidents, Sol Myron Linowitz continuously finds challenges that draw upon his vast array of talents. A founder and former chairman of the board of Xerox Corporation
(continued on page 16)



Graduate expresses sentiment on mortarboard while attending commencement exercises.

Excerpts from the Honorary Degree Citations

(continued from page 15)

tion, he became Ambassador to the Organization of American States and the United States representative on the Inter-American Alliance for Progress. He has combined practice in an international law firm in Washington with charges as co-negotiator of the Panama Canal Treaties and chairmanship of the Presidential Committee on World Hunger. Interrupting his latest assignment as Ambassador-at-Large for Middle East negotiations, he returns here today from talks on West Bank autonomy.

A humanist who gives his times to universities, a violinist who is Trustee of the John F. Kennedy Center for the Performing Arts, he has been adept at conducting business and negotiations—and everything else but the Philadelphia Orchestra. Aware that he has said “no” to presidents but consented to become a member of the Board of Overseers of the Faculty of Arts and Sciences, the Trustees of the University of Pennsylvania express their appreciation to Sol Myron Linowitz, and welcome the opportunity of delivering to him in person the original, not a Xerox copy, of the honorary degree, Doctor of Laws.

Jerre Mangione
Author

Choosing to live by a *nome di battaglia* rather than write under a *nom de plume*, Jerre, alias Gerlando, Mangione has recorded the uniquely varied experiences of a lifetime in novels, autobiography, and social history, meting out *Life Sentences for Everybody* in his brilliant portrayal of his contemporaries.

If the years of the Depression and the War, and, underlying each, the ethnic experience have supplied the raw material for this works, his own personality as *homo scribens* provides them with their unity. An American in Italy and a *paesano* in America, he has bridged the gulf between countries and cultures in the bestseller *Mount Allegro* and the autobiographical *An Ethnic at Large*. Visiting Sicily in search of relatives, roots, and *canelloni*, he has encountered both the *fascisti* he inveighed against in the thirties, and, more recently, the *pacifisti* he celebrates in *The World Around Danilo Dolce*.

... For this year's award to an emeritus professor, his colleagues and admirers at the University of Pennsylvania have nominated Jerre Gerlando Mangione and commended the Trustees for offering him the honorary degree, Doctor of Letters.

James A. Michener
Writer

Travelling all over the United States before the age of twenty and traversing the

globe since then from West to East, and from the Outer Hebrides to Capetown, James Albert Michener has successfully combined a taste for adventure in far-off places with a facility for study of remote times and civilizations. A prolific writer as well as a voracious reader and an itinerant with “itchy feet,” he has recreated his experience and distilled the lessons of his life in more than twenty-five major works of fiction and nonfiction...

In James Albert Michener, the Trustees of the University of Pennsylvania greet a geographical neighbor, and salute an historical expert, who is this year's Baccalaureate speaker. With pleasure and with pride, they bestow the honorary degree, Doctor of Humane Letters, on an artist and a teacher who, according to good classical precedent, has brought information and pleasure to a readership of millions: *Aut prodesse volunt aut delectare poetae*.

Robert Venturi
Architect

A cult figure in a business suit, an anti-hero in a domain where the Architect is Hero, Robert Venturi has incorporated the dicta of his *Complexity and Contradiction in Architecture* in his work and his style. True to his stated pleasure in paradox as well as inclusiveness, he has produced theories considered both revolutionary and reactionary, buildings at once artful and unpretentious, an architecture that is Pop-inspired...

In recognition of his manifold contributions to architectural theory and the built environment, and cognizant that he may, on the whole, prefer billboards to design boards, the University's Board of Trustees now ask Robert Venturi, sometime professor of architecture at Pennsylvania, to receive their decoration, the honorary degree, Doctor of Fine Arts.

Chien-Shiung Wu
Pupin Professor of Physics
Columbia University

In a line of scientific doubters with the courage to challenge and test established theory identified with natural laws, Chien-Shiung Wu has added to our understanding of those laws through contributions to nuclear physics and, in particular, her experimental evidence disproving the parity principle. ... she has triumphed over obstacles and demonstrated exceptions to man-made natural laws, becoming, in the process, the seventh woman elected to the National Academy of Sciences, as well as the first to be president of the American Physical Society.

A member of the Academia Sinica of China and an honorary Fellow of the Royal Society of Edinburgh, she has received a Chia Hsin Achievement Award, the Comstock Award of the National Academy of Sciences, and the National Medal of Science. The Trustees of the University are proud to add their greatest tribute by presenting Chien-Shiung Wu with the honorary degree, Doctor of Science.

Long Term Disability Plan Approved

The Long Term Disability Board, after eighteen months of study, has approved a revised LTD Plan to be effective July 1, 1980; the revised plan has been reviewed by the Personnel Benefits Committee.

Many of the changes in the plan document are clarifications of existing procedures, alterations necessary to bring the plan into conformance with the Age Discrimination in Employment Act, and modifications in language to be consistent with the requirements of the Employee Retirement Income Security Act. Other changes result from the concern of the board for providing rehabilitative employment.

Revised plan documents and summary plan descriptions will be published as soon as feasible. In the meantime, the significant plan changes are as follows:

1) A new appeals procedure including review by the head of the Health Evaluation Center of the Hospital of the University of Pennsylvania and the full Disability Board has been added.

2) The ceiling on monthly income from the Disability Plan and other disability income sources has been raised to \$2500.

3) The procedure for reporting total annual income has been clarified to require an annual filing of a copy of a claimant's 1040 form with the Personnel Benefits Office.

4) The definition of disability has been changed from “inability of a covered participant to discharge his or her normal University duties in a satisfactory manner” to “inability of a covered participant to engage in any occupation appropriate to the person by reason of education, training, and experience.”

The purpose of this change is to allow for rehabilitative employment for a disabled member of the staff who is still able to perform productive work for the University but cannot resume his or her former duties.

Douglas Dickson
Director of Personnel Planning and
Secretary to the Board