

Almanac

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Educational Options for Spring

With the start of preregistration Monday, six new topics in the College of Thematic Studies have been proposed along with six new Freshman Seminars and the first undergraduate offering of the Annenberg School (Communications 420: Sources of the Modern Cinema).

Faculty and staff who counsel students can find full course descriptions of these and other new offerings at the College Office. Formal clearance by appropriate Faculties was still in progress as *Almanac* went to press.

Freshman Seminars

Man, Energy and Environment by Drs. Manfred Altman and John D. Keenan; *Appetites and Aversions* by Dr. and Mrs. Paul Rozin; *The Cycling and Chemical Elements in the Ecosystem* by Dr. Daniel O'Kane; *Urban Analysis* by Robert Douglas; *The Japanese and American Experience* by Dr. Barbara Ruch and Thomas Winant; and *Themes in Spanish Literature: Occult Arts. Don Juan, Democracy* by Dr. Augusta Foley are open to all undergraduates but preference is given to freshmen. Class limit is 15 except in Spanish, 12.

Thematic Studies

Systems Study: four courses that introduce the fundamentals, then treat social and economic systems, systems of a region, and biological and physical systems.

Health and Society: twelve courses include planning, health care delivery, law and medicine, ethical and existential issues, death and dying, responsible human genetics, philosophic and scientific basis of medicine, social and psychological origins of disease and emotional states and disease.

Energy Management: four courses are foundations; society and its physical environment; economics of energy; and energy utilization technology.

COUNCIL ON UNDERGRADUATE EDUCATION

The Eilers Committee on the Reorganization of the Faculty has called for "the establishment of a Council or Board of Undergraduate Education, consisting of several elected faculty members representing each school offering undergraduate programs" and "advisory to the Vice Provost for Undergraduate Studies."

The Council will be set up in two stages. First, the elected faculty members will be chosen by the various undergraduate schools. Second, these faculty members will decide how the Council should be widened or strengthened to include other constituencies or interested groups.

The deans of the undergraduate schools are now accepting nominations from their own schools for membership on the Council. Faculty members wishing to make nominations should send them to their deans by November 21. Council members will be elected by the various schools in the following numbers:

- College of Arts and Sciences: two representatives
- College for Women: two representatives
- College of Engineering: one representative
- Wharton School: two representatives
- School of Allied Medical Professions: one representative
- School of Nursing: one representative

Women's Studies: law, linguistics, biology, economics and demography, Oriental studies and film join the less unexpected history, psychology, and sociology course to total twelve offerings.

Creativity: aesthetics, fine arts, architecture, music and a reading/writing workshop focus on eight aspects of the creative and re-creative processes.

Culture of Business and Industry: fifteen courses range from the management of diverse things (oceans, athletics, health care, prisons, the cultural and performing arts) to relations between business and public, business and government, and other topics; guest faculty from outside and inside Penn join Wharton faculty in teaching.

AMERICANA

is one of the

Things to Do

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NEWS IN BRIEF

TAIT MCKENZIE : NOVEMBER 11

The Lloyd P. Jones Memorial Gallery housing sculpture of the late Dr. R. Tait McKenzie will be dedicated Saturday at 11:30 a.m. It is an indoor/outdoor gallery on the first floor of the Gimbel Gymnasium at 37th and Walnut Streets. It is the gift of the family of Lloyd Peniston Jones, an engineering graduate of the Class of 1907 who died last year.

Mr. Jones's son, Francis, will take part in the unveiling of some 67 works in bronze, plaster and wood done by Dr. McKenzie, a Canadian-born surgeon who came to Penn in 1904 to head its new Department of Physical Education and who used his sculpture to illustrate anatomy lectures.

AFFIRMATIVE ACTION: A-1 REGULATIONS ISSUED

Provost Curtis Reitz and Vice President Paul Gaddis have issued a joint memorandum on "Compliance With University Affirmative Action Policies in Recruitment and Hiring for Administrative and Professional Positions." The October 10 memo calls for a documented search process for all new and existing positions using predominantly A-1 funds, except those filled through the consultative committee process.

Among the required procedures will be the filing of notice at Personnel of all vacancies; internal advertisement of vacancies for at least seven days; and the use of a new two-page Statement of Compliance which asks inclusion of resumes of the best female and minority candidates considered.

The memorandum states that "no personnel action is complete, and no commitment is to be made to a candidate," until

(Continued on page 8)

GRANTS

SOS GRANTS: NOVEMBER 30

No faculty need apply for this particular National Science Foundation grant, but should pass the word to their students. The Student-Originated Studies program is designed to provide funds for student-led research on problems of immediate relevance to the community. Applicants must submit a proposal to examine "yet-unanswered questions of a scientific or technological nature," along with a budget plan. There are 98 fields of study which are to be combined for an interdisciplinary or multidisciplinary project. Student groups of not less than five members (nor more than twelve) spend ten or twelve weeks, usually during the summer, to work on projects. Though the research is conducted entirely by students, a faculty advisor acts as the group's liaison with the university administration. This advisor should be "available upon call, but studiously avoiding the volunteering of advice when none is asked for . . ."

Students should submit their proposals before November 30. Awards will be announced in March. For further information: Joel Kinley, Office of Research Administration, Ext. 7295.

RESEARCH CAREER DEVELOPMENT AWARDS

The National Institute of Health offers Research Career Development Awards to young scientists with outstanding research potential for careers of independent research in the sciences related to health. Candidates must have at least three years of relevant postdoctoral experience and be less than 40 years of age. Awards are made for a period of five years during which time NIH will contribute up to \$25,000 per year towards the awardee's salary. Deadlines for receipt of applications are December 1, May 1 and September 1. For application forms: Office of Research Administration, Ext. 7293.

SPONSORED RESEARCH

A Summary of Contracts and Grants for Research and Related Activities Received by Faculty Members During September 1972

PUBLIC HEALTH SERVICE: *K. Engelman* (Medicine) "Altered Adrenergic Function in Essential Hypertension" \$46,511 . . . *N. Haugaard* (Pharmacology) "Cardiac Metabolism and Function" \$45,820 . . . *A. Beckman* (Physiology) "Responses of Thermosensitive Cells to Biogenic Amines" \$19,106 . . . *K. Blasie* (Johnson Fdn/Biophysics) "Structure and Function of Biological Membranes" \$22,382 . . . *C. Breedis* (Pathology) "Differentiation During Progression to Malignancy" \$28,841 . . . *R. Brinster* (Animal Biology) "Veterinary Medical Scientist" \$96,280 . . . *J. Brody* (Medicine) "Acquired Hemolytic Anemia of Lymphocytic Leukemia" \$21,597 . . . *M. Cohn* (Johnson Fdn/Biophysics) "NMR Studies of Macromolecules and their Interactions" \$49,908 . . . *M. Cohn* (Johnson Fdn/Biophysics) "220 MHz NMR Spectrometer Facility" \$62,270 . . . *D. Cooper* (Harrison Surgery Research) "Aerobic Hydroxylases in Steroid and Drug Metabolism" \$52,510 . . . *M. Cross* (Animal Biology) "Blastocyst Expansion" \$42,222 . . . *R. Davies* (Animal Biology) "The Energy Source for Contraction of Muscle" \$39,918 . . . *W. Donawick* (Clinic Studies) "Heart Transplantation and ALS Treatment" \$45,018 . . . *R. Easterlin* (Economics) "Rural Fertility Decline in North America" \$108,056 . . . *S. Englander* (Biochemistry/Med) "Physical Studies of Biological Macromolecules" \$57,749 . . . *J. Ferguson* (Biochemistry/Med) "Biochemistry of Sperm and Other Reproductive Tissue" \$45,591 . . . *R. Gelman* (Psychology) "Studies in Cognitive Development Number Concepts" \$26,036 . . . *E. Gersh* (Animal Biology) "Chromosome Structure and Genetic Function" \$29,684 . . . *H. Goldfine* (Microbiology) "Structure and Function of Bacterial Lipids" \$44,168 . . . *N. Gonatas* (Neurology) "Ultrastructural Basis of Neuropsychiatric Disease" \$64,565 . . . *W. Karakawa* (Research Med) "Immunohistochemistry of Staphylococcal Antigens" \$41,303 . . . *S. Kim* (Pathology) "Experimental Neuropathology in Tissue Culture" \$42,027 . . . *J. Lash* (Anatomy) "Analysis of Chondrogenesis" \$65,150 . . . *C. Lee* (Johnson Fdn/Biophysics) "Subcellular Respiratory Functions of Cardiac Muscle" \$42,635 . . . *M. Litt* (Chemical Engineering School) "Physico-Chemical Properties of Tracheal Mucus" \$20,708 . . . *J. Marsh* (Biochemistry/Dent) "Biosynthesis of Plasma

Lipoprotein" \$29,028 . . . *L. Mela* (Surgery/Neurosurgery) "Altered Mitochondrial Function in Shock" \$24,492 . . . *A. Morrison* (Animal Biology) "Cortical-Thalamic Relationships" \$32,627 . . . *H. Morton* (Pathology) "Involvement of Mycoplasma in some Types of Arthritis" \$33,544 . . . *A. Nemeth* (Anatomy) "Induction and Development of Liver Enzymes" \$19,917 . . . *M. Papadopoulos* (Physiology) "Prenatal and Postnatal Pathophysiology of Tissue Oxygen Transport" \$30,358 . . . *D. Patterson* (Clin. Studies) "Hereditary Defects in Cardiovascular Developments" \$73,831 . . . *R. Root* (Medicine) "Human Phagocyte Function in Health and Disease" \$24,581 . . . *D. Rowlands* (Pathology) "Pathology of the Immune Response During Ontogeny" \$41,806 . . . *K. Tsou* (Harrison Surgery Research) "Cytochemical Substrates Related to Cancer Chemotherapy" \$68,095 . . . *D. Voet* (Chemistry) "The Structures of Nucleic Acids and Related Molecules" \$24,645 . . . *M. Wachter* (Economics) "Births, Marriages and Labor Force Participation in the U.S." \$24,783 . . . *A. Weber* (Biochemistry/Med) "Troponin Action in Cardiac and Skeletal Muscle" \$63,077 . . . *D. Wilson* (Pathology) "Immunologic Aspects of Aging and Neoplasia" \$48,397 . . . *B. Zweiman* (Medicine) "Immune Mechanisms in Humans Receiving Azathioprine" \$18,460 . . . *J. Aronfreed* (Psychology) "The Development of Children's Naturalistic Concepts" \$36,288 . . . *C. Hamilton* (Physiology) "Regulation of Food Intake" \$11,391 . . . *A. Harris* (Linguistics) "Objective and Subjective Components of Grammar" \$75,873 . . . *F. Irwin* (Psychology) "Some Parameters of Decision Making" \$17,588 . . . *L. Luborsky* (Psychiatry) "Factors Responsible for Change through Psychotherapy" \$31,185 . . . *M. Seligman* (Psychology) "Learned Helplessness and Depression" \$59,575 . . . *E. Stellar* (Inst. Neurolog. Sci.) "Neurological Mechanisms Underlying Behavior" \$245,545 . . . *J. Wishner* (Psychology) "Examination of 24000 Case Records, 1896-1963" \$6,288.

DEPARTMENT OF TRANSPORTATION: *D. Boyce* (Regional Science) "Lindenwold High Speed Line: Parking Lot Impact Study" \$10,000.

NATIONAL SCIENCE FOUNDATION: *W. Bonner* (Johnson Fdn/Biophysics) "The Molecular Basis of Energy Transfer in Higher and Lower Plants" \$30,000 . . . *B. Paul* (Towne School) "Dynamics of Variable Configuration Machines" \$64,707 . . . *E. Howrey* (Economics) "Spectral Estimation and Analysis of Stochastic Economic Systems" \$56,500 . . . *W. Isard* (Regional Science) "Analysis and Models of Economic, Political and Social Distributions Over Space and Time" \$68,100 . . . *H. Primakoff* (Physics) "Theoretical Physics" \$35,600 . . . *S. Ross* (Economics) "Inflation and Unemployment" \$65,800 . . . *P. Sanday* (Anthropology) "A Diffusion Model for the Study of the Cultural Determinants of Differential Intelligence" \$19,000 . . . *B. Storey* (Johnson Fdn/Biophysics) "Molecular Mechanism of Energy Conservation in the Mitochondrial Membrane" \$7,000.

COMMONWEALTH OF PENNSYLVANIA: *M. Allam* (Vet. Med. School) "Poultry Diagnostic Clinic" \$17,500 . . . *R. Gibboney* (Education School) "Educational Change Strategies for Urban and Rural Schools in Pennsylvania" \$48,239 . . . *H. Levin* (Sch. of Social Work) "Seminar for Technical Personnel in the Field of Aging" \$11,263.

Private Foundations, Research Organizations and Associations, and Industry

AMERICAN HEART ASSOCIATION: *M. Civan* (Physiology) "The Electrical Effects of Active Sodium Transport" \$12,100. **ESSO COMPANY:** *H. Wallace* (Surgery/Neurosurgery) "Evaluation for Mixtures of Fluorocarbons" \$7,750. **FORD FOUNDATION:** *W. Malenbaum* (Economics) "Health Population and Economic Growth in Poor Lands" \$37,038 . . . *J. Margolis* (Fels Institute) "Urban Public Economics Committee" \$39,000 . . . *D. O'Kane* (Grad. Sch. of Arts & Sciences) "Program to Improve the Efficiency of Doctoral Studies in the Humanities and Social Sciences" \$620,000. **NOYES FOUNDATION:** *C. Garcia* (Ob/Gyn) "Family Planning and Preventive Teenage Sex Education" \$23,500. **PENNWALT CORPORATION:** *J. Puschett* (Medicine) "Studies of Zaroxolyn" \$16,310. **TRI-COUNTY CONSERVANCY OF BRANDYWINE:** *A. Strong* (Inst. for Environmental Studies) "Environmental Protection Ordinances" \$6,453. **UPJOHN COMPANY:** *P. Kuo* (Medicine) "Effect of U-26, 597A on Serum Cholesterol and Triglycerides" \$3,000. **WORLD HEALTH ORGANIZATION:** *F. Lief* (Animal Biology) "Studies on Annual Influenza" \$800.

Summary: Contract and Grant Awards July 1972 through September 1972: 195, totaling \$11,598,004.

THE COUNCIL

COMMITTEES FOR 1972-73

The Committee on Committees has completed its work toward constitution of the 1972-73 committees of the University except for omissions as noted below. Still to be announced is the make-up of the Committee on Open Expression, which is not constituted by the Committee on Committees.

The new chairman of the Committee on Committees is Dr. S. Reid Warren Jr., Associate Dean for Undergraduate Education at the College of Engineering and Applied Science. Its faculty component includes Drs. Phillip E. DeLacy (Classical Studies); David R. Goddard (Biology); E. Gordon Keith (Finance); and Paul Korshin (English). Douglas R. Dickson, Director of Student Information and Planning, served as an administration member of the Committee, with William G. Owen, Secretary of the Corporation, as liaison member.

Bookstore

Chairman: Charles D. Graham (Metallurgy and Materials Science)

Faculty: Frank P. Brooks (Medicine)
Larry P. Gross (Communications)
William T. Kelly (Marketing)
Ervin Miller (Finance)
Nancy K. Zumwalt (Classical Studies)

Administration: Jean M. Green, Head of Ordering Section,
Van Pelt Library
James J. Eyster, Jr, Associate Director of Residence

Students: Jo-Anne Kaplan (CW '74)
Timothy Daniels (Education)

Budget

Chairman: John N. Hobstetter, Associate Provost

Vice Chairman: John C. Hetherston, V.P. for Facilities
Management and Construction.

Faculty: Martin J. Aronstein (Law)
Marshall E. Blume (Finance)
Lawrence R. Klein (Economics)
Eugene R. Nixon (Chemistry)
Ned B. Williams (Microbiology, Dental Medicine)

Administration: Robert D. Dripps, V.P. for Health Affairs,
observer
Paul O. Gaddis, V.P. for Management
Harold E. Manley, V.P. for Business and Financial Affairs
Curtis R. Reitz, Provost and V.P.

Staff: James E. Davis, A.E.C. Intern; Charles F. Farrell, Comptroller; John J. Foote, Assistant to the Associate Provost; Bruce Johnstone, Executive Assistant to the President; John Pyne, Director of Budget Administration

Students: Paul Masson (W '74)
Kenneth Rilander (Wharton Graduate Division)

Community Relations

Chairman: Robert Leopold (Community Medicine)

Faculty: Helen O. Dickens (Ob-Gyn)
Seymour J. Mandelbaum (City Planning)
Dorothy A. Meredith (Nursing)
Ann R. Miller (Sociology)

Administration: Stuart H. Carroll, Assistant Vice President for Development and Public Relations
Andrew T. Sullivan, Director of Community Services

Students: Susan Goodlearner (CW '74)
Henry Hunter (Wharton Graduate)

Conflict of Interest

(Subcommittee of Faculty Affairs and Research)

Chairman: Joseph F. Bordogna (Electrical Engineering)

Faculty: William S. Blakemore (Surgery)
Kenneth Goldstein (Folklore)
Fred Kempin (Business Law)
Lee D. Peachey (Biology)

Administration: Shirley H. Smith, Business Administrator, Pathology

Students: Howard S. Kaufold (W '75)
Lawrence Abunaw (GSAS, Economics)

Disability Board

Chairman: Lloyd W. Daly (Classical Studies)

Faculty: Paul W. Bruton (Law)
William T. Fitts Jr., (Surgery) *observer*
E. Gordon Keith (Finance)
Reinout P. Kroon (Mechanical Engineering)
Julius A. Mackie (Surgery)
Robert L. Mayock (Medicine)
Harry F. Zinsser (Medicine)

Educational Policy

Chairman: Vincent H. Whitney (Sociology)

Faculty: Stella Botelho (Physiology)
Peter Conn (English)
Richard S. Dunn (History)
Charles E. Dwyer (Education)
Henry Hiz (Linguistics)
Lawrence R. Klein (Economics)
Howard Lesnick (Law)
Richardson R. Pettit (Finance)
Martin Seligman (Psychology)
Ralph Showers (Electrical Engineering)

Administration: James D. Shada, Director of Student Financial Aid

Students: Laureine Knight (CW '73)
Peter Nardy (Graduate Education)
Albert Tammany (Wharton Graduate)

Facilities

Chairman: *To be appointed.*

Faculty: E. Farnsworth Bisbee (Civil Engineering)
Walter D. Bonner (Biology)
Marilyn E. Hess (Pharmacology)
Robert F. Lucid (English)
John W. McCoubrey (History of Art)
Peter Shepherd, Dean of the Graduate School of Fine Arts

Administration: John C. Hetherston, Vice President for Facilities
Management and Construction, *ex officio*
Edwin M. Ledwell, Director of Residences
Ruth V. Powers (Engineering Research)

Students: Axel Steuer (GSAS, Religious Thought)
Niel Vogel (Law)
Two undergraduates to be elected.

Faculty Affairs

Chairman: Henry Wells (Political Science)

Faculty: James J. Diamond (Education)
Bernard R. Gerber (Biology)
Kenneth Goldstein (Folklore)
Alan C. Kors (History)
Morris Mendelson (Finance)
John D. Minyard (Classical Studies)
Covey T. Oliver (Law)
Felice Perlmutter (Social Work)
Sohrab Rabii (Electrical Engineering)
Dwight B. McNair Scott (Animal Biology)

Students: Vince Taormina (C '74)
Randall McFarlane (Law)

(Committees continued on page 4)

Faculty Grants and Awards

- Chairman:** Edwin Mansfield (Economics)
- Faculty:** Maria Z. Brooks (Slavic Studies)
Knut Krieger (Chemistry)
Thomas Naff (Near East Studies)
Craig Thompson (English)
Richard F. Schwartz (Electrical Engineering)
Edward M. Peters (History)
Wilfried T. Weber (Pathobiology)
- Administration:** Regan Scurlock, Director of Research Administration, *ex officio*

Honorary Degrees

(Subcommittee of Faculty Affairs)

- Chairman:** Dwight B. McNair Scott (Animal Biology)
- Faculty:** Richard A. Easterlin (Economics)
Kenneth D. George (Education)
Joseph S. Gots (Microbiology)
Robert Maddin (Metallurgy and Material Science)
John S. Morgan (Social Work)
Donald Voet (Chemistry)
Andre von Gronicka (German)
- Students:** Laurie Geisler (CW '74)
Olin C. Johnson (Education)

Implementation of University Policy in Conduct of Research Programs

(Subcommittee of Research)

- Chairman:** Alan Heeger (Physics)
- Faculty:** Bernard F. Cataldo (Business Law)
Alfred P. Fishman (Medicine)
John G. Miller (Chemistry), Chairman,
Research Committee
Ludo Rocher (Oriental Studies)
- Student:** Norman Pressman (Graduate Biomedical Engineering)

Laboratory Animal Care

- Chairman:** Eliot Stellar, Director of the Institute of Neurological Sciences
- Faculty:** Benjamin G. Brackett (Obstetrics and Gynecology)
Isaiah J. Fidler (Pathology, Dental Medicine)
Charles Gallistel (Psychology)
- Administration:** Rex E. Cross, Director of the Division of Laboratory Animal Medicine
Stanley N. Wampler, Assistant Vice President for Medical Affairs for Animal Care
- Student:** Gordon B. Stull, DVM (Graduate Molecular Biology)

Library

- Chairman:** Richard S. Woods (Accounting)
- Faculty:** William Brennen (Chemistry)
Derk Bodde (Oriental Studies)
Richard L. Rowan (Industry)
James L. Rosier (English)
Arnold W. Thackray (History and Sociology of Science)
David Van Zanten (History of Art)
Engineering representative to come
- Administration:** Richard De Gennaro, Director of Libraries, *ex officio*
Richard Sloane (Law), Law Librarian
- Students:** Philip Berwick (C '73)
Jay Lippincott (C '74)
Richard G. Alvey (GSAS, Folklore)

Parking

(Subcommittee of Facilities)

- E. Farnsworth Bisbee (Civil Engineering)
Julius A. Mackie (Surgery)
Joseph P. Burke, Director of Parking
- Student to be designated by Chairman of Facilities Committee.*

Research

- Chairman:** John G. Miller (Chemistry)
- Faculty:** Joseph Bordogna (Electrical Engineering)
Maria Z. Brooks (Slavic Studies)
Charles E. Dwyer (Education)
Alan Heeger (Physics)
Edwin Mansfield (Economics)
Ludo Rocher (Oriental Studies)
Jason Rosenblatt (English)
Henry Sloviter (Surgical Research)
Wilfried Weber (Pathobiology)
Marvin E. Wolfgang (Sociology)
- Students:** Jonathan Anolik (C '74)
Campbell Scott (Grad. Physics)
Joseph Scott Smith (Wharton Graduate)

Student Affairs

- Chairman:** Clifford H. Jordan (Nursing)
- Faculty:** Mark J. Dresden (Iranian Studies)
Daniel D. Perlmutter (Chemical Engineering)
Mark Sagoff (Philosophy)
Charles A. Thrall (Sociology)
- Administration:** Caren W. Blazey, Assistant Dean of the College for Women
Alice F. Emerson, Dean of Students
Stanley E. Johnson, University Chaplain
Robert H. McCollum, Director of Intramural Athletics
- Students:** David Herring (W '75)
Michael A. Sandberg (C '75)
Diane Willing (CW '73)
Vincent P. Conti (GSAS, History)
Faris R. Kirkland (GSAS, History)
Robert Mangel (M '74)
Sherrie Raiken (Law)

Student Fulbright Awards

- Chairman:** Frank Bowman (Romance Languages)
- Faculty:** Jean V. Alter (Romance Languages)
Holden Furber (History)
G. Arthur Mihram (Electrical Engineering)
Franklin R. Root (Marketing)
Paul F. Watson (History of Art)
- Administration:** Camella D. Wilson, Assistant to the Director of South Asia Regional Studies
James B. Yarnall, Director of Fellowship Information and Study Programs Abroad, *ex officio*

Student Health Advisory Committee

- Chairman:** Edward C. Raffensperger (Medicine)
- Faculty:** Fred Bass (Community Medicine)
- Administration:** Paul F. Schrode, Medical Director of Student Health, *ex officio*
Robert D. Dripps, Vice President for Medical Affairs, *ex officio*
- Students:** John B. Cohen (C '73)
Susan Silverman (Nursing '73)
Frank Ewald (C '73)
John F. Aldridge (M '73)
Sharon P. Simson (Graduate Sociology)

Undergraduate Admissions and Financial Aid

Chairman: Norman Oler (Mathematics)

Faculty: Jean V. Alter (Romance Languages)
Andrew R. Baggaley (Education)
Raymond S. Berkowitz (Electrical Engineering)
Nancy B. Ellis (Occupational Therapy, SAMP)
Robert F. Evans (Religious Thought)
Edwin Hartman (Philosophy)
James J. Ross (Philosophy)
Wayne F. Worrell (Metallurgy and Materials Science)

Administration: Nancy R. Leach, Vice Dean of the College for Women
Conrad D. Jones, Associate Dean and Director of the Advising Program
Margo P. Marshall, Director of Residential Programs for the Vice Provost for Undergraduate Affairs
Peter T. Seely, Dean of Admissions and Financial Aid, *ex officio*
James E. Shada, Director of Student Aid, *ex officio*

Students: David Kaplan (C '75)
David Lloyd (W '74)
Thomas C. Schaffer (W '74)
David Wiedemer (C '73)
James F. Galbally (Graduate Education)
Charles P. Rogers (Wharton Graduate)

University Committee on Personnel Benefits

Chairman: Robert Zelten (Insurance)

Faculty: Jacob M. Abel (Mechanical Engineering)
Stanley W. Cohen (Physics)
Lucienne Frappier-Mazur (Romance Languages)
Robert M. Lumiansky (English)
Covey T. Oliver (Law)
Svi Rin (Hebrew Studies)

Administration: A. Charles Adams, Business Manager, Psychiatry
Jane G. Bryan, Reference Dept., Van Pelt Library
Manuel Doxer, Business Manager, College
Fred C. Ford, Director of Personnel Studies, *ex officio*
Gerald L. Robinson, Executive Director of Personnel Relations
George B. Peters, Associate Treasurer, *ex officio*

A-3 Assembly: Marion L. Hearn, Supervisor, Machine Shop, Physics Department

University Committee on Recreation and Intercollegiate Athletics

Chairman: Ralph C. Preston (Education)

Trustees: Julian S. Bers
Robert P. Levy
James M. Skinner Jr.

Faculty: Richard R. Beeman (History)
Stuart W. Churchill (Chemical Engineering)
John S. de Cani (Statistics and Operations Research)
Howard E. Mitchell, Director of the Human Resources Center
Brooke Roberts (Surgery)

Alumni: H. Hunter Lott Jr.
Anthony S. Minisi, Esq.

Administration: Alice F. Emerson, Dean of Students
Stanley E. Johnson, University Chaplain
Peter T. Seely, Dean of Admissions and Financial Aid
Fred A. Shabel, Director of Intercollegiate Athletics

Students: Eric Erdheim (C '73)
Jonathan Levin (C '75)
Felicia Omaregie (Graduate Sociology)

Ex Officio: Jean B. Crockett, Chairman of the Faculty Senate
Martin Meyerson, President of the University
Curtis R. Reitz, Provost and Vice President

PRESIDENT'S CONFERENCE

The President's Conference meets periodically at the President's call, to serve as a clearinghouse for information and more recently to act as a forum for debate on issues of concern to the University as a whole. Its membership has student and faculty components drawn from the University Council, augmented by representatives of the administration and employee organizations.

Joel Conarroe	University Ombudsman
Jean Crockett	Chairman of the Senate
Richard DeGennaro	Director of Libraries
Robert D. Dripps	Vice President for Health Affairs
Alice F. Emerson	Dean of Students
Edward Everett	Vice President for Facilities Management and Construction
Paul O. Gaddis	Steering Committee of Council
George Gerbner	Vice President for Management
John C. Hetherston	Dean of the Annenberg School
John N. Hobstetter	Vice President for Facilities Management and Construction
Stanley E. Johnson	Associate Provost for Academic Planning
Lawrence R. Klein	Chaplain of the University
Harold E. Manley	Chairman, Academic Planning Committee
Martin Meyerson	Vice President for Business and Finance
Linda Neshamkin	President of the University
William G. Owen	Graduate-Professional Student, Member of the Steering Committee of Council
Edward Peters	Secretary of the Corporation
Marion Pond	Associate Professor and Member of University Council
Charles Price	Head of Grammateis Organization
Curtis R. Reitz	Moderator of the University Council
Gerald L. Robinson	Provost and Vice President
James H. Robinson	Executive Director of Personnel and Labor Relations
Sidney Rodenberg	Director of Equal Opportunity Office
Donald T. Sheehan	Dean of the School of Allied Medical Professions
Peter Shepherd	Director of Public Relations
William E. Stephens	Dean of the Graduate School of Fine Arts
E. Craig Sweeten	Dean of the College
Humphrey Tonkin	Vice President for Development and Public Relations
Margaret Weyand	Vice Provost for Undergraduate Studies
Nancy Zumwalt	Head of the A-3 Assembly
	Assistant Professor and Member of University Council

Observers

Staff of the President, the Provost and Vice President, and the Vice President for Management:

Francis M. Betts, III	Dean of Admission and Financial Aid
Myrtle Rice	Director of Recreation and Intercollegiate Athletics
Carolyn R. Gehring	Editor, <i>Daily Pennsylvanian</i>
Frances S. Hardy	Editor, <i>Pennsylvania Voice</i>
Maritza Shamlian	Manager, Radio Station WXPB
Donald S. Murray	Editor, <i>Pennsylvania Gazette</i>
Donald M. Stewart	Editor, <i>Almanac</i>
Bruce Johnstone	
James Davis (ACE intern)	
Robert M. Zemsky	
Arnold Thackray	
Scott Lederman	
Peter Seely	
Fred A. Shabel	
Chat Blakeman	
Hazel Harber	
Jim Rogers	
Anthony A. Lyle	
Karen C. Gaines	

Why The A/V Media Fail

by E. C. van Merkensteijn

About two decades ago, educational involvement with the audio-visual (A/V) media began, starting with the use of television in schools of medicine. It was discovered that a TV camera could gain a view of an operation many times closer and clearer than that of even the nearest student, and that the camera could share this view with countless other observers. Dental medicine quickly followed suit and successfully experimented with videotape for delayed playback and single-concept filming, the latter being the practice of taping one idea, theory, or concept, or operation, and letting it stand as one unit of information. In short order, language departments had language laboratories, music departments developed music-listening libraries, art departments collected slides and films, English wanted poetry and drama readings and films. The involvement with the media expanded.

Funding for these capital projects just seemed to happen. Language laboratories were primarily financed by the Federal Government in the hope of interesting more students in language learning. Other academic disciplines usually labeled as the humanities found fund-raising successful because, with concrete media facilities which represented "tangible progress," they offered the same appeal to funding groups and foundations as the production-oriented sciences with their laboratories and research projects. The total dollar value of each grant was not great, but many departments in many schools did get enough to start using the media, as there is abundant evidence on the campus of the University of Pennsylvania. Within most of the new buildings, such as the Graduate School of Education, each room houses some sort of A/V equipment, at the minimum an overhead projector.

As a result of piecemeal acquisition over two decades a great deal of A/V equipment is available on campus—but is it used? In many cases, the answer is no. Walk into rooms with equipment in them and you will find these tools pushed into corners, covered with chalk dust and dirt. The primary obstacle is the lack of knowledge on the part of the potential users as to the proper utilization of the equipment. The formal preparation of teachers generally offers scant information on teaching methods and curriculum developing using A/V media, although the new teachers' instructional roles are intended to include use of the media, particularly in new secondary schools. Another obstacle is the lack of suitable educational materials. This resource shortage is a factor in slowing the demand for media use by the teacher. The teacher cannot be expected to create his own new materials when the demands of classroom teaching and administrative duties are so time-consuming. Even when material is made available from a publishing house, the need for revision and adaptation to the curriculum is a burden with which few teachers want to be saddled. A materials development boom is needed soon if our considerable collective investment in A/V equipment is to show a return.

Cost, though often cited as such, is not the primary obstacle to better media use, for several reasons. If a proposal could be developed which achieves the desired educational objectives, the priority structure for expenditures would rapidly alter so that the proposal could be funded. Then, if the

effectiveness of media could be evaluated and it could be shown that the objectives are in fact being met, continued financial support would be ensured. The use of media in education is stagnating through natural resistance to innovation, not because of the cost of the hardware or software. Despite this, cost is still a ready excuse to avoid involvement.

With the past irregular growth of A/V use, and with the present resistance to further commitment, the media have contributed to educational objectives in a restricted and inconsistent fashion. Isolated and experimental programs have proven their value within limited educational environments, but major changes and massive implementation for innovative programs are not forthcoming, no matter how realistic and practical their approach. Why? It seems to me that (the problem of funding and the well-known inertia of the educational establishment aside) the element of human involvement is the underlying issue. The A/V device is only the extension of the person using it, the servomechanism of the teacher. It is useful only insofar as the teacher is skillful in manipulating the machine and exploiting its educational potential. It is subject to the weakness and caprice of the operator. As long as teachers experience negative feelings towards the A/V media, the media cannot be serviceable.

A People Problem

Fear of failure affects many teachers when approaching A/V equipment for the first time. Teachers hesitate to use technical devices because they do not understand them and do not care to demonstrate their ignorance; an attitude stemming from less-than-adequate formal training experience in the teacher colleges and schools of education. The complexity of buttons and meters on typical A/V equipment is formidable, and the temptation to avoid the machines after the first encounter is strong. Apprehension also presents itself in the case of job security. Many teachers are anxious that the machines will replace them in their teaching role. They have transferred the experience of labor versus automation on the assembly lines to their own case. The fallacy of this anxiety seems so manifest as not to require a disclaimer. The role of the media is not to replace the teacher; it is a tool to free the teacher from some of the drudgery accompanying the reinforcement of cognitive learning.

The trend toward elitism is a paradox to the media, but it is an unfortunate fact of human behavior deriving from the individualist competition inherent in our culture. Such individualism undercuts the democratizing tendency of the media. The successful use of the media by the teacher is, regrettably, not always shared with others for imitation and utilization, unless personal demands such as public recognition of originator, copyright and patent transfer costs, and so forth are complied with. In a day when the teacher who possesses the needed technological skills can command a greater salary and auxiliary benefits (such as space, equipment, staff and operational funds), the teacher has created a small empire within the system from which he will be little disposed to relinquish control. These circumstances inhibit

the de-specialization of the A/V media which will be necessary if the media are to play a meaningful and a profitable role within the educational system.

The one definite fact which I have learned through my experience with A/V communication is that it is not a panacea for all of the ills plaguing our educational system. As we attain greater sophistication with the A/V media, however, the potential to assist in the process of learning increases proportionately. The people principally concerned with the A/V media constitute three basic groups, which represent the three main views on the media in education: *the faculty*, who are generally concerned with its impact on teaching methods; *the students*, who benefit by more relevant learning procedures; and *the administrators*, who seek economies. How best to achieve meaningful communication between teacher and student is always of concern to the faculty. Oral transmission in lecture halls and smaller discussions in seminar rooms are traditional methods whose efficacy and practicability are now for the first time being challenged. Much time that is devoted to exposition and repetition of course content, while necessary, could be better spent on those higher-priority activities that call for interaction between students and teacher, rather than on the one-way transmission from teacher to students. Many rote tasks of the classroom can be delegated to the A/V media. The students' interest in more individualized learning programs and more attention from the faculty can also be served by the machines. The machines, by freeing the teacher from time-consuming drill exercises, for example, leave more time for interaction at the individual and small group level. On the other hand, the present demand on the part of the university and college administrators for austerity at all levels means that these media proposals will be carefully scrutinized before they are implemented. Any proposed project will have to be highly productive per student served, and as many students as possible will have to be served.

The conflict between these viewpoints is more apparent than real. I think the problems can be resolved by making some empirical and normative assumptions about the media.

1.) Administrators feel that A/V media ought to be centralized in order to achieve economies and maximum use of equipment and materials. They claim that this does not need to mean rigid and cumbersome controls, which the faculty and students fear and wish to avoid. More centralized control can avoid expensive duplication, unproductive expenditures, and wasteful use of the media. As the University of Pennsylvania typically demonstrates, great amounts of equipment are scattered over the campus, much of it unused and in disrepair. More profitable would be an A/V center structured somewhat like the library. To the faculty who have used the media in some form before, it is already an instructional tool. Of much greater concern to them are the practical problems of logistics and maintenance; the latter are best managed centrally.

2.) Today's college students have grown up in an audio-visual age with pocket transistor radios and a TV or two at home. Their use of the A/V media for entertainment and for propaganda is fully exploited. This can easily be expanded to include the academic learning experience; in fact, it had better be, if the fruits of academic learning are to vie in impact and vividness with what the students have already learned via the A/V media. The students' readiness for greater acceptance of media use is principally that they are A/V literates, while many faculty and administrators are still in the traditional reading-literacy age. This fact seems to resolve both student and teacher conflicts. The teacher who seeks more meaningful communication with the student will find it in a combination of personal teaching and attention to the affective needs of the student and of the use of the A/V media, a mode

thoroughly understood by the student. The student who demands less mediated ("packaged") learning will find that the teacher has more time for him individually.

The university structure in our society provides a reservoir of established ideas and a wellspring of new ones. The Federal Government, the largest unified force in our society, supports this view by means of its research grants and Congressional funds assigned to higher education. The universities themselves are proud of the diverse educational resources they offer: the faculty, the libraries, the laboratories, the on-going projects, and the students. These resources are their capital assets.

Such an environment offers the solid foundation for higher education to exploit A-V resources to their potential. In a day when the claim is put forth that everyone who wants to can go to college, the result is a crowded classroom, a condition, augmented further by the draft and the American economy's inflationary spiral and unemployment. The A/V media offer alternatives. Institutions should collect, catalogue, and create more A/V resources, just as they do more printed documents. Media resources, just as printed resources, offer means for greater individualization and independent research and study. When a speaker comes to campus to address a class, closed-circuit television can bring the speech to many more students in overflow rooms or even allow the speech to be replayed via video-tape at some later date. Paradoxically, the very symptoms of the problems confronting the educational system are proffered as excuses for not making use of the A/V media. The crowded classroom is put forth as an apology for not further de-personalizing the educational process by introducing A/V techniques. Such excuses betray a misunderstanding of the purposes and possibilities of the machines.

Resistance to the use of A/V media in education stems from a complex of issues which I have tried to articulate in these remarks. Developing conflicts of awareness and value patterns working at cross purposes emerge as the real failure of the media heretofore. I conclude with an overview of the position of the A/V media in education and some strategic objectives for converting the failure of the media to success.

Trial of Time

That the use of A/V media has only recently become an issue to concern educators, unlike the traditional recognition of the value of books and other printed resources, means that its value has not yet been proven by time. The trial of time is a measure which educators prefer to apply as a basis for acceptance of new ideas and techniques. But there has to be a beginning somewhere, and in the beginning some artificial guidance will be needed to help launch educational media into a trial period. Institutions may, for example, expand the motivation of their faculty into working with the media by expanding the "publish or perish" dictum to include the recognition of faculty involvement with tapes, slides, film and other material as being equal to publishing in print.

Human resistance to the media is a more challenging obstacle. Initially, the key to acceptance will be training of teachers in the use of audio-visuals. This must be included in their professional training programs, and credit could be offered for media internships as well as for practice-teaching stints in public schools. As individuals come to accept the media for what they are, institutions will gradually and naturally do the same. Time, of course, is the dominant factor, but by introducing these and other expedients, the natural process can be speeded up.

The author is Director of the Language Laboratory at the University and works closely with Dr. Arthur Humphrey on the Audio Resources Committee of the University Development Commission.

THINGS TO DO

Americana. Trustee Robert Dechert's collection includes reports from the Jesuit Mission to Canada (1633), accounts of the Gold Rush, and rare maps of the New World. Rare Book Room at Van Pelt Library through December 8.

Inside Philadelphia: Selections from Private Collections: Drawings, paintings and sculpture that prominent Philadelphia collectors have chosen to own. ICA Gallery November 11 through December 19.

Man of La Mancha. Penn Players musical, Prince Theatre, November 8-12, 8 p.m.

Penn Contemporary Players. Barbara Haffner, 'cello; Bonnie Stumacher, flute and Allan Pollack and George Reeves, piano, perform Crumb's *Vox Balaenae* and works by Carter, Debussy and Jordan, University Lutheran Chapel, November 8, 8:30 p.m.

Another Part of the Forest. Lillian Hellman's play about a post-Civil War Southern family directed by Ilona Gerbner, Annenberg Auditorium, November 9-11, 16-18, 8 p.m. General admission: \$2.50; free with University ID.

Hellman Film Program. Studio Theatre, Annenberg Center, 8 p.m. Free.

Toys in the Attic (1963), November 7

The Little Foxes (1941), November 13

Watch on the Rhine (1943), November 14

These Three (1936, later *The Children's Hour*), November 20.

Another Part of the Forest (1948), November 21.

Another Part of the Forest: A Case Study in Social Upheaval. Panel discussion led by John Shover, Annenberg Auditorium, November 10, 10:30 p.m.; Harrison House, November 11, 10:30 p.m.

Lillian Hellman. The playwright discusses her work, Annenberg Auditorium, November 10, 4 p.m. Limited seating, free tickets at Annenberg Center box office, Ext. 6791.

Island of the Blue Dolphins. Children's film about American Indians, University Museum, November 11, 10:30 a.m.

Viola Farber Dance Company. Zellerbach Theatre, November 12, 2:30 p.m. Ticket information: Ext. 6791.

Televised Violence: The Flaw from the Fortieth View. Annenberg Colloquium with Eli Rubinstein, vice chairman of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior and professor of psychiatry at the Medical School of the State University of New York at Stony Brook, Colloquium Room, November 13, 4 p.m.

Women and Drama. Gretchen Wood, Assistant Professor of English, will moderate a panel discussion about women in Hellman's work and in drama in general. Panelists include Ilona Gerbner, Sandra Grilikhes, Cynthia D. Larimer, and Cynthia Secor, Annenberg Auditorium, November 17, 10:30 p.m. Rap session with panelists, Harnwell House upper lounge, November 18, 10:30 p.m.

CONFERENCES

Following is a summary of conferences scheduled in University facilities in November through the University Conference Office. To arrange others, contact Director Paul Rubincam, Ext. 6843.

NINETEENTH ANNUAL NORTH AMERICAN MEETINGS OF THE REGIONAL SCIENCE ASSOCIATION

Contact: Dr. Walter Isard, Ext. 8411 November 9-12

TENTH ANNUAL MEETING OF THE PEACE SCIENCE SOCIETY (INTERNATIONAL)

Contact: Dr. Walter Isard, Ext. 8411 November 12-14

PARENTS DAY

Contact: Mary Ellen Cianfrani, Ext. 8445 November 17-19

CONFERENCE ON AGING

Contact: Rev. Gerard McCaffrey, PI 5-3211 November 26-28

NEWS IN BRIEF continued

a Personnel Action Form and the Statement of Compliance are accepted by the Personnel Office.

The Executive Director of Personnel Relations or his designee is responsible for approving compliance forms; he may seek the advice of the Equal Opportunity Office.

"All positions must be offered to the candidate best meeting the qualifications specifically relevant to that job," the memorandum concludes. "Following the principle of the Resolution passed by the University Council on June 22, 1971, and the Provost's Memorandum of September 15, 1971, it shall be the policy of the University in filling administrative and professional positions to give special consideration to women and minority persons when all other relevant considerations fail to provide a basis for clear choice among the top candidates."

PROGRESS AWARD: ARTHUR HUMPHREY

Dr. Arthur E. Humphrey, Dean of the College of Engineering and Applied Science, has been named the 1972 recipient of the Professional Progress Award in Chemical Engineering.

The \$1000 award, given annually by the American Institute of Chemical Engineers for significant contributions to the science of chemical engineering, carries an invitation to deliver the Institute's annual professional progress award lecture.

The presentation will be made at the AIChE's Annual Meeting in New York November 27. Dr. Humphrey's lecture will be "Is There a Place for Bioengineering in Our Profession?"

TOPICAL STUDIES: A UNIVERSITY REARRANGED

"Carving up the catalogue horizontally by topic, rather than vertically by discipline, reveals new connections among familiar offerings and gives credence to Penn's claim that it is one of the most diversified universities in the country," says Dr. Humphrey Tonkin of a new booklet, *Topical and Interdisciplinary Studies*, issued by his office. Originally meant for undergraduate students, the booklet is also available to faculty and staff; call Ext. 6081.

FACULTY INPUT TO SCUE

This year the Student Committee on Undergraduate Education is canvassing faculty in its data-gathering. Faculty members are asked by the Office of Undergraduate Studies to return by this week a questionnaire which includes questions on teaching methods and innovations, and the type of student who might find a given course appealing. The answers will be part of SCUE's Academic Advising Program file. (Later this year, students receive the evaluation form that is used to create the SCUE Course Guide.)

RESOURCES FOR WOMEN: OFFICE NOW OPEN

Starting yesterday, the Faculty Tea Club has established a Resources for Women office on campus to serve as an information center for job placement, child care, continuing education and counseling. The office, in the Tea Club room of the Faculty Club, is open on Monday, noon-3 p.m. and Wednesday and Thursday, 9 a.m.-noon. Telephone: EV 6-1825, Tea Club extension; after November 15: Ext 5537.

ALMANAC: 515 Franklin Building, Ext. 5274

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