

'72-'73

# notre dame report

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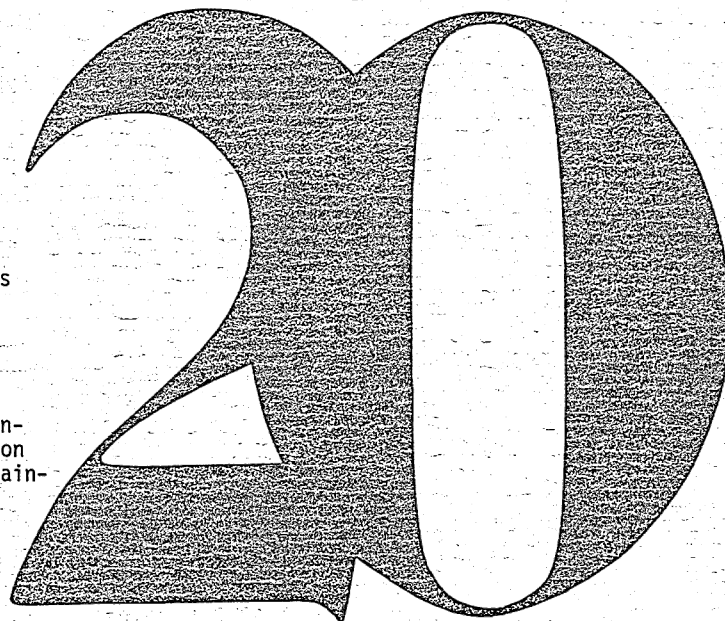
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# the university

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## Center for Civil Rights

A Ford Foundation grant of \$500,000 to establish a Center for Civil Rights at Notre Dame was announced July 21 by Rev. Theodore M. Hesburgh, C.S.C., former head of the U.S. Commission on Civil Rights.

"Our nation is now in retreat from the civil rights advances of the last 20 years," Father Hesburgh noted, "and there is urgent need for research into America's recent civil rights history, for analysis of current civil rights issues, and for recommendations designed to meet the problems of today and of the immediate future."

McGeorge Bundy, president of the Ford Foundation, agreed with Father Hesburgh's assessment of the civil rights situation and commented in a statement, "Nothing could be more timely than Father Hesburgh's decision to give his own leadership to a determined effort to assemble in one place the resources needed for understanding of the road that we have come and the distance we still have to go. Father Hesburgh's 15 years of service on the U.S. Commission on Civil Rights, and his standing as a churchman of profound personal integrity and intense social commitment, make him the ideal catalytic agent for such a center and Notre Dame its fitting home. The Ford Foundation continues to place the imperative of equal opportunity at the top of its domestic agenda."

Appointed director of the Center was Howard A. Glickstein, a former staff director for the U.S. Commission on Civil Rights. Glickstein will also be an adjunct professor in Notre Dame's Law School.

Space for the Center has been created in the expanded Notre Dame Law School building, and will house the papers of Father Hesburgh amassed during his tenure on the Civil Rights Commission. Father Hesburgh was among the original members of the Commission appointed in 1957 by President Dwight Eisenhower, was named chairman of the Commission in 1969 by President Nixon and resigned last fall at the President's request.

Father Hesburgh said the objectives of the Center include engaging in public policy analysis in the fields of civil and human rights; analyzing in depth existing civil rights developments during the

period 1957 to 1972; serving as a catalyst -- through sponsorship of conferences and lectureships and through a planned advisory council -- for proposals dealing with civil rights problems; serving as a clearinghouse for civil rights information, and serving as an educational resource for political science and law students at Notre Dame.

## Summer Art Exhibit

Graduate students enrolled in the summer art program at Notre Dame will sponsor an exhibit from 1 to 5 p.m. Sunday, Aug. 5, at O'Shaughnessy Hall and Isis Gallery in the Old Fieldhouse.

Paintings, prints, sculptures and other works of art completed by the students during the last year will be displayed and offered for sale. Weather permitting, several of the items will be displayed outdoors.

## Anticipated Enrollment

An estimated 800 women -- more than double last year's figure of 360 when Notre Dame introduced co-education on the undergraduate level -- will be part of a record anticipated undergraduate enrollment of 6,850 when classes resume on the campus Sept. 5. Adding students in the Graduate School, Law School and Master of Business Administration Program, the total enrollment is expected to reach a record 8,750.

An anticipated enrollment of 1,800 in the Freshman Year Program, an all-time high, is largely responsible for the expected record registration. Final figures for last year showed a freshman enrollment of 1,635 in a total undergraduate enrollment of 6,719. With the addition of advanced students, last year's total enrollment was 8,557.

Preliminary enrollment figures for the coming year show 1,975 in the College of Arts and Letters, 1,245 in the College of Business Administration, 959 in the College of Science, and 741 in the College of Engineering. There will be 411 in the Law School, 160 in the graduate business program and an estimated 1,225 in the Graduate School. Classes for law students will resume Aug. 28.

## **Jesse H. Jones Professorship of Business Administration**

Sponsorship of the Jesse H. Jones Professorship of Business Administration at Notre Dame has been renewed by Houston Endowment, Inc. The chair is currently held by Dr. Salvatore J. Bella, chairman of the Department of Management.

An increase from \$10,000 to \$25,000 per year in financial support was approved by the Texas-based Foundation "to help meet the increasing costs of providing a quality education." The professorship was established at Notre Dame in 1965 to honor Jones, a Houston businessman and philanthropist who had served at various times as Secretary of Commerce, chairman of the Reconstruction Finance Corporation and Federal Loan Administrator during the administration of President Franklin D. Roosevelt.

## **American College Public Relations Association**

The American College Public Relations Association (ACPRA) will sponsor a seventh Summer Academy at the University of Notre Dame August 5 - 10. Sessions in the Center for Continuing Education will be attended by administrators from colleges and universities across the nation.

Guest lecturers at the 1973 academy will include Dr. James W. Frick, vice president for public relations and development at Notre Dame, and Dr. Normal C. Francis, president of Xavier University of Louisiana.

Areas of discussion will include analysis of financing an institution, involvement of alumni and friends, annual giving programs, practical aspects of implementing effective communication programs, motivation for support and other areas.

## **Notre Dame Magazine**

Notre Dame Magazine was picked among the nation's top 10 alumni publications and shared in 10 other awards won by University publications in national competition sponsored by the American Alumni Council (AAC) and the American College Public Relations Association (ACPRA).

Notre Dame Magazine, a bimonthly University publication which goes to 72,000 alumni and friends, also received the prestigious Newsweek-AAC award for "achievement in alumni publication content relating the institution to public affairs." The publication was cited particularly for last February's issue on "The American Christian Family: Is It Worth Saving?"

The cover for the Christian family issue as well as the one for the June, 1972 issue on the two-decade presidency of Rev. Theodore M. Hesburgh, C.S.C., won additional AAC awards.

Notre Dame Magazine was also cited in the AAC-sponsored Time/Life Periodical Improvement competition, and its October, 1972, issue on admissions drew a citation for editorial excellence from ACPRA.

Other ACPRA publications awards were received for the Law School's brochure on its Kiley Fellowships and its poster on the London Law Program. "This Is Notre Dame," an Admissions Office publication, also received a special ACPRA citation. Notre Dame was one of only four institutions receiving as many as four awards in ACPRA judging of some 1,300 individual publications.

Co-editors of Notre Dame Magazine during the period judged were Ronald R. Parent and Timothy J. Hughes, and other staff members cited in awards were Michael Rider and Don Nelson, designers, and Dick Stevens, photographer.

In ACPRA national honors competition in the area of institutional financial support programs, the Notre Dame Annual Fund received a citation. All awards were announced at national meetings held last month by AAC in Vancouver, British Columbia, and ACPRA in San Diego, Calif.

# faculty notes

## University appointments

The appointments of Mr. Robert Marc Carmichael and Mrs. Beverly Waechter as assistant registrars has been announced by Richard J. Sullivan, registrar.

The appointment of Dr. Robert V. Watkins to succeed Mr. Jerome J. Sechowski, purchasing agent, and the selection of Mr. Louis J. Cohen as director of internal auditing have been announced by Rev. Jerome J. Wilson, C.S.C., vice president for business affairs.

## Non-university appointments

Dr. Thomas P. Bergin, dean, Center for Continuing Education, was recently elected chairman of the Indiana State Arts Commission for the next biennium (1973-75). Dr. Bergin has also recently accepted the position of co-chairman for the fundraising campaign of WNIT-TV, a proposed educational station.

Mr. Robert W. Galvin, one of 12 Fellows of the University, has been named a founding member of a newly-formed group of advisors to Rockefeller University.

Dr. John O. Meany, associate professor of graduate studies in education, has been appointed to the editorial board of the Journal of Pastoral Counseling.

Mr. Ambrose M. Richardson, chairman, Department of Architecture, has been named a member of the Jury of Awards for the American Institute of Steel Construction's 1973 Architectural Awards of Excellence Competition.

## Miscellany

Dr. Harvey A. Bender, professor of biology, has been named visiting professor of human genetics at the Yale University School of Medicine for the coming academic year. He has also been awarded a post-doctoral fellowship from the Society for Religion in Higher Education to undertake cross-disciplinary studies in bio-medical ethics.

Dr. Joseph Hogan, dean, College of Engineering,

participated in the American Society for Engineering Education's U.S.-Japan Joint Seminar on Engineering Education July 9 - 13 in Washington, D.C. The topic of his address was "Public and Private Support of Engineering Education."

Dr. Edward A. Kline, associate professor and director of graduate studies in English, presented a paper, "Computers and Teaching Literary Stylistics," at the Fourth Conference on Computers in the Undergraduate Curricula at the Claremont Colleges, Calif., June 18 - 20.

Dr. Edward Mayo, assistant professor of marketing, discussed "Marketing Travel" July 24 at a conference sponsored by the Discover America Travel Organization, Inc. at Notre Dame.

Rev. Lionel Mitchell, assistant professor of theology, Rev. James D. Shaughnessy, director of the Murphy Center for Liturgical Research, and Dr. William Storey, associate professor of theology, participated in a panel discussion moderated by Bob Hale of the National Broadcasting Company. The program was aired July 29 on local television as part of a film depicting the third century eucharistic prayer found in the Apostolic Tradition of Hippolytus of Rome.

Dr. Thomas J. Mueller, professor of aerospace and mechanical engineering, has received a grant from the Heineman Foundation of West Germany to partially support 11 months of research and study at the Institut von Karmen De Dynamique Des Fluides, Rhodest-Genese, Belgique. During this period, August, 1973, to June, 1974, Dr. Mueller will be on leave from the University.

Dr. Erhard M. Winkler, associate professor of geology, was a participant in a short course for college teachers in environmental geology and geologic hazards, July 15. The course was conducted by Westminster College, Salt Lake City, Utah, and the sessions were at Snowbird Lodge in the Wasatch Mountains. Dr. Winkler was one of 32 teachers selected nationally for participation in the course, which was funded by the National Science Foundation.

## Necrology

J. Patrick Canny, former president of the Notre Dame Alumni Association, died suddenly in Cleveland, July 19.

Ernest J. Ferro, manager of The Huddle food service at Notre Dame for 20 years before his retirement in July, 1971, died July 5 in South Bend.

Rev. Peter P. Forrestal, C.S.C., who served the Spanish-speaking community in the South Bend area as spiritual director for several years, died July 15 in Holy Cross House at age 84.

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# office of advanced studies

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## Information Circulars

### Environmental Protection Agency Guidelines for Fellowships

NO. FY74-3

The Environmental Protection Agency (EPA) awards fellowships for the development of career oriented personnel qualified to work in pollution abatement and control. Graduate fellowship programs will be phased out by June 30, 1976.

Emphasis is being placed on the following types of fellowships:

- Agency fellowships - awarded to present or prospective employees of a regional, State, or local environmental pollution control or regulatory agency to provide training for and upgrading of personnel in the areas of pollution abatement and control.
- Special fellowships - awarded in limited numbers to individuals for education and training in pollution control science, engineering, and technology and in specialty areas supportive of pollution abatement and control efforts.

Applicants for a fellowship are encouraged to contact the following EPA program office for information:

Manpower Development Staff  
Office of Air Quality Planning Standards  
Office of Air and Water Programs  
Environmental Protection Agency  
Research Triangle Park, North Carolina  
27711

Applicants must use EPA Form 5770-2, "Fellowship Application." This form is available from the Environmental Protection Agency, Grants Administration Division, Grants Information Branch, Washington, D.C. 20460.

A limited number of EPA Form 5770-2 is available in the Office of Advanced Studies, Division of Research and Sponsored Programs.

### Environmental Protection Agency Guidelines for Training Grants

NO. FY74-4

The Environmental Protection Agency (EPA) awards training grants for the development of career oriented personnel qualified to work in pollution abatement and control. Emphasis is being placed on training of individuals at the post high school, junior college, and baccalaureate levels, in the practical technical details and special techniques of occupations in the environment. Graduate training grant programs will be phased out by June 30, 1976. Any student entering into or currently in training must be notified by the grantee that EPA support will not be available beyond June 30, 1976.

Applicants for a training grant are encouraged to contact the appropriate EPA program office:

- Manpower Development Staff  
Office of Air Quality Planning  
Standards  
Office of Air and Water Programs  
Environmental Protection Agency  
Research Triangle Park, North Carolina  
27711

- Research and Training Grants  
Office of Radiation Programs  
Environmental Protection Agency  
Washington, D.C. 20460
- Academic Training Branch (Water)  
Division of Manpower and Training  
Office of Air and Water Programs  
Environmental Protection Agency  
Washington, D.C. 20460

Application for a training grant must be submitted on EPA Form 5700-12, "Application for Federal Assistance." These forms are available from the Environmental Protection Agency, Grants Administration Division, Grants Information Branch, Washington, D.C. 20460.

## National Foundation on the Arts and Humanities Future Funding

### NO. FY74-5

The National Endowment on the Arts and Humanities consists of a National Endowment for the Arts, a National Endowment for the Humanities, and a Federal Council on the Arts and Humanities.

The Senate recently authorized \$840 million to the Foundation for the next three years, 1974-1976.

As approved by the Senate, the bill (S 795) authorizes \$160 million for the Arts and Humanities in FY 74, which is twice the sum allocated in the year now ending. The 1974-1976 authorizations are as follows:

|                             | 1973                     | 1974 | 1975   | 1976  |
|-----------------------------|--------------------------|------|--------|-------|
|                             | (in millions of dollars) |      |        |       |
| Arts grants programs        | 29.6                     | 59   | 105.75 | 152.5 |
| Humanities grants programs  | 35.5                     | 70   | 125.00 | 180.0 |
| Art-State programs          | 6.9                      | 11   | 19.25  | 27.5  |
| Art and Humanities matching | 9.0                      | 20   | 30.00  | 40.0  |
|                             | 80.0                     | 160  | 280.00 | 400.0 |

The House Committee on Education and Labor approved the bill and authorized \$145 million for the coming fiscal year, the amount requested by the Administration. As contrasted to the Senate bill, the House bill would leave it to Congress to set the expenditure level for 1975 and 1976. This recommendation now goes to the House. The final authorization remains to be determined.

## Graduate School

### Carnegie Endowment for International Peace, International Organization Program — Travel and Maintenance Assistance

#### NO. FY74-GS1

The Carnegie Endowment's Program of Travel and Maintenance Assistance is designed to encourage original research on changes in the international system that result in significant shifts in the locus of political authority and political allegiance away from the territorial state.

In seeking to trace such shifts and their consequences, the Program focuses on three main subject areas: transnational relations, elite structures, and the output and impact of intergovernmental organizations. In its general approach, the Program seeks to encourage work in these three subject areas which will examine the consequences for the international system of some of the new phenomena on the international scene, e.g., accelerated scientific and technological change, efforts at environmental protection, efforts at economic redistribution (including elite activities that attempt to speed up these developments).

Within this framework, preference is given to applications which:

- (a) examine the relative importance and impact of transnational relations in different issue areas, or for the foreign policy of various countries;
- (b) explore linkages, communications patterns, and elite ties among several organizations within a particular activity field;
- (c) study the actual impact of international organizations either through the tracing out of policy sequences and their impacts on national sectors or by observing a single policy's impact in several countries.

Applications that treat the question of the changing character of the international system from other viewpoints will be considered. They will not, however, be given first consideration unless they are of unusual distinction.

The Program is especially oriented toward younger pre-doctoral or post-doctoral scholars affiliated with United States or Canadian institutions. It aspires to support projects that, in terms of their research objectives, their design, and their measurement strategies promise to add qualitatively new dimensions to the field. Special emphasis is given to comparative research.

Assistance will be provided under the Program primarily for travel and maintenance costs. Assistance will not be given for tuition fees nor for family allowances nor salary allowances except in unusual circumstances. Over the past years, awards have ranged on the average between \$2,000 and \$5,000.

Interested applicants should contact Dr. John J. FitzGerald, Assistant Vice President for Advanced Studies - Instruction. The Endowment will sent application forms directly to candidates nominated by Dr. FitzGerald.

Applications with supporting documents should be received by the Endowment by November 16, 1973. Candidates will be notified of their awards in February, 1974.

## Henry Luce Foundation, Inc. Announcement of Luce Scholars Grant

### NO. FY74-GS2

The Henry Luce Foundation, Inc. invites Notre Dame nominees for the 15 new annual "Luce Scholars" grants for its non-specialist Asian Studies Program.

This program is intended to promote an improved appreciation among selected, qualified U.S. university graduates or undergraduates willing and interested in advancing U.S. - Far Eastern understanding through a close association with the operation of some educational, political, or social institution of a specified Far Eastern State.

At the core of the program lie the individual internships and work/study arrangements that will be developed for the Luce Scholars on the basis of their career interests and preparation. A recent law school graduate, for example, might be placed as an intern with the Malaysian Attorney General. A young biologist could be assigned to the Institute of Biotropical Medicine in Indonesia. An artist might work for some months in the studio of a noted Japanese painter. In all instances, Asian colleagues will work with the Luce Scholars as mentors and counselors during this period.

These assignments will be learning opportunities for the Scholars. Equally important, however, will be the contribution the Scholars may make to the institutions, agencies, or individuals with whom they will be associated. It is entirely possible, of course, that a Scholar's most significant contribution may be a demonstrated willingness to learn some of the many things that Asia has to teach. In any event, it is the Luce Scholar's combined maturity, intellectual curiosity, and seriousness of purpose that will differentiate this program in quality and content from other exchange efforts.

Recognizing that the Luce Scholars as a group will have had little or no advance preparation for such an intensive experience, a brief orientation program has been planned to precede these individual assignments: A two-week briefing in the early fall in Washington, D.C., will give the Scholars an opportunity at the start of the program year to meet with Asian diplomats, journalists, and scholars, and with top American academics and officials dealing with Asian affairs.

Proceeding to the Far East immediately thereafter, the Scholars will take part in a four-week schedule of graduate-level seminars at a conference center in Asia, touching on topics ranging from Asian approaches to economic development to traditions in religion and the arts.

Though highly condensed, these studies should provide the Scholars with a broad overview of contemporary Asian affairs that will assist them in making the most of their subsequent assignments throughout the Far East. A brief wrap-up session involving Asian leaders in a joint assessment of the Scholars' experiences will be held in another Asian location at the end of the program.

All Asian aspects of the year-long Luce Scholars Program will be managed by the Asia Foundation, a non-profit, non-governmental organization with an extensive and highly respected staff of field representatives based throughout the Far East. Specific internships will be arranged by The Asia Foundation, with the advice of the Luce Foundation, in consultation with each Luce Scholar.

Sixty colleges and universities across the United States are being asked to cooperate with the Henry Luce Foundation in selecting the fifteen who will be named each year as Luce Scholars. Every other year, beginning in the fall of 1973, thirty of those institutions will be asked to submit to the Luce Foundation a maximum of four nominations from among their graduating seniors, their graduate and professional school students, or their recent graduates. Any student interested in being nominated should contact the Luce Scholars' liaison faculty member at his or her school.

Institutional nomination is the sole route to consideration. Individual applications will not be accepted. The deadline for receipt of these nominations will be the first of December 1973.

The Luce Foundation will make a preliminary screening of candidates on the basis of information supplied by the candidates and by the nominating institutions, supplemented in most cases by on-campus interviews. Finalists will be called before one of three regional screening panels early in March. A candidate's "region" will be determined by the location of the school from which he has been nominated, rather than by his place of



permanent residence. Each of these panels will select five Luce Scholars from among the finalists in its district. Successful candidates will be notified between March 15th and March 31st.

Each award will carry with it a basic stipend of \$9,000, augmented by an additional \$2,000 when the Luce Scholar is accompanied by a wife or husband. The Foundation will provide round-trip economy class air transportation as required by the Program. Medical insurance will be arranged by the Foundation at no cost to the Scholar. In cases where the place of the Scholar's assignment has a cost of living substantially higher than that found in the United States, a differential payment may also be provided.

To be eligible for nomination as a Luce Scholar, candidates must be American citizens between the ages of 21 and 30 who have earned at least a bachelor's degree (or who will receive this degree before taking part in the Luce Scholars Program). Candidates should have a record of the highest academic achievement, combined with evidence of outstanding leadership ability, either on campus or off. A strong and clearly defined career interest is equally important.

More than any other single criterion, motivation for future accomplishment in their chosen fields will be central to the selection of Luce Scholars.

The only limitation on nominees - who will be chosen without reference to race, sex, or financial need - is that they bring to the Luce Scholars Program neither a specific academic background in nor a career preference for Asian affairs or international relations.

Knowledge of an Asian language is not a requirement for selection, but Luce Scholars will be encouraged and assisted in making arrangements for whatever language instruction may seem necessary or desirable during the course of their participation in the Program.

Interested Notre Dame Graduate students may apply for nomination to Dr. John J. Fitzgerald, Luce Scholars Liaison Faculty Member for Notre Dame Graduates, Room 316, Administration Building.

## Current Publications and Other Scholarly Works

### ENGINEERING

#### Electrical Engineering

Myers, B.R. 1973. Some negative impedance converters. Proceedings IEEE 61(5):669-670.

### Metallurgical Engineering

- Cullity, B.D., and J.A. DiCello. 1972. Contactless measurement of recovery and recrystallization in steel. Metallurgical Transactions 3:2703-2704.
- Kuczynski, G.C. 1973. Physics and chemistry of sintering. Advances in Colloid and Interface Science 3:275-330.
- Kuczynski, G.C., P. Forzatti, E. Martinez, and J.J. Carberry. 1973. Influence of  $\gamma$  irradiation on catalytic selectivity. II. Journal of Catalysis 28(3):455-458.
- Kuczynski, G.C., H. Igarashi, and J. Endo. 1973. Sintering of fine ferric oxide particles. Sintering and Related Phenomena Materials Science Research 6:323-330.
- Kuczynski, G.C. 1972. Fundamentals of sintering theory. Pages 99-117 in, J.J. Burke and V. Weiss, editors, Powder Metallurgy. Syracuse.
- Kuczynski, G.C. 1973. Pore shrinkage and ostwald ripening. Sintering and Related Phenomena Materials Science Research 6:217-225.
- Miller, A.E. 1972. Review of Daniel Rosenthal and Robert Asimow's, Introduction to Properties of Materials. Mechanical Engineering News 9(4):18-19.
- Miller, A.E., T. D'Silva, and H. Igarashi. 1973. Magnetization and magnetostriction in  $1/2 \text{ Cu}_{17}$  and  $\text{Dy}_2 \text{ Cu}_{17}$ . Proceedings of Tenth Rare Earth Research Conference 1:458-465.
- Miller, A.E., H. Igarashi, and T. D'Silva. 1972. Magnetization and Magnetostriction in  $1/2 \text{ Cu}_{17}$  and  $\text{Dy}_2 \text{ Cu}_{17}$ . Proceedings of 20th Annual Midwest Solid State Conference 1:1-8.

### SCIENCE

#### Biology

- Bender, H.A., and R.S. Ostrowski. 1972. Dosage compensation in a duplicated chromosomal region of Drosophila melanogaster - Genetics 71:s45.
- Bender, H.A. 1973. Genetic counseling. AD Correspondence 6:125-129.
- Burton, W.G. 1972. Dihydrostreptomycin binding to chloroplast ribosomes from antibiotic-sensitive and resistant strains of Chlamydomonas. Biochimica et Biophysica Acta 272:305-311.
- Burton, W.G., R.P. Levine, and H. Duram. 1972. Membrane polypeptides associated with photochemical systems. Nature New Biology 237:176-177.
- Cassidy, J.D., O.P., and R.C. King. 1973. Ovarian development in Habrobracon juglandis (Ashmead) (Hymenoptera: Braconidae). II. Observations on the growth and differentiation of the component cells of the egg chamber and their bearing upon the interpretation of radiosensitivity data from Habrobracon and Drosophila. International Journal of Insect Morphology and Embryology. 2:117-136.
- Cassidy, J.D., O.P., and R.C. King. 1972. Radiosensitivity of developing oocytes in



- Habrobracon juglandis. Canadian Journal of Genetics and Cytology 14:722-723.
- Cassidy, J.D., O.P., and D.S. Grosch. 1973. Quantitative effects on purine analogue ingestion on reproduction of Habrobracon juglandis. Journal of Economic Entomology 66:319-324.
- Craig, G.B., Jr., E.C. Bay, D. Pimentel, J.D. Briggs, H.C. Chapman, M. Laird, E.L. Reeves, C.H. Schaefer, and C.H. Schmidt. 1973. Mosquito control: some perspectives for developing countries. Report of an Ad Hoc Panel, National Academy of Sciences, Washington, D.C. 63 pp.
- Craig, G.B., Jr., M.A. Dunn, T.C. Quinn, and H. Terwedow. 1972. Pre-erythrocytic rodent malaria, Plasmodium berghei: Prevention of development in the ethionine fatty liver. American Journal of Tropical Medicine and Hygiene 21:288-292.
- Craig, G.B., Jr., and G.F. O'Meara. 1972. Polygenic regulation of fecundity in auto-genous Aedes atropalpus. Entomologia Experimentalis et Applicata 15:81-89.
- Craig, G.B., Jr., and C.S. Hacker. 1972. Measuring reproductive potential in populations. Mosquito News 32:193-196.
- Craig, G.B., Jr., and P.H. Rodriguez. 1973. Susceptibility to Brugia pahangi in geographic strains of Aedes aegypti. American Journal of Tropical Medicine and Hygiene 22:53-61.
- Craig, G.B., Jr., P. Rodriguez, and H. Terwedow. 1973. Development of Brugia pahangi in male mosquitoes. Journal of Parasitology 59:222-223.
- Crovello, T.J. 1972. MODABUND - The computerized mosquito data bank of the University of Notre Dame. Mosquito News 32:548-554.
- Poulson, T.L., N. Emery, and W.B. Kinter. 1972. Production of concentrated urine by avian kidneys. American Journal of Physiology 223:180-187.
- Ross, Q.E., H. Caswell, H.E. Koenig, and J.A. Resh. 1972. An Introduction to systems science for ecologists. Volume No. 2, pages 3-78 in, B.C. Pattern, editor, Systems Analysis and Simulation in Ecology.
- Saz, H.J. 1972. Comparative biochemistry of carbohydrates in nematodes and cestodes. Pages 33-47 in, H. Van den Bossche, editor, Comparative Biochemistry of Parasites.
- Saz, H.J. 1972. Effects of anthelmintics on P<sup>32</sup> esterification in helminth metabolism. Pages 445-454 in, H. Van den Bossche, editor, Comparative Biochemistry of Parasites.
- Trpis, M., W.O. Haufe, and J.A. Shemanchuk. 1973. Embryonic development of Aedes (O.) sticticus (Diptera: Culicidae) in relation to different constant temperatures. Canadian Entomologist 105:43-50.
- Trpis, M. 1972. Seasonal changes in the larval populations of Aedes aegypti in two biotopes in Dar es Salaam, Tanzania. Bulletin of the World Health Organization 47:245-255.
- Trpis, M. 1972. Breeding of Aedes aegypti and Aedes simpsoni under the escarpment of the Tanzanian Plateau. Bulletin of the World Health Organization 47:77-82.
- Tweedell, K.S., H.F. Clark, F. Michalski, D. Yohn, and E. Zeigel. 1972. An adenovirus, FAV-I, isolated from the kidney of a frog (Rana pipiens). Virology 51:392-400.
- Weinstein, P.P. 1973. Parasitology and the United States Public Health Service: a relation of a science and government. Journal of Parasitology 59:3-14.
- Weinstein, P.P., R.I. Bolla, and C. Lou. 1972. In vitro nutritional requirements of Nippostrongylus brasiliensis. I. Effects of sterols, sterol derivatives and heme compounds on the free-living stages. Comparative Biochemistry and Physiology 43B:487-501.
- Weinstein, P.P., R.I. Bolla, and G.D. Cain. 1972. Fine structure of the Coelomocyte of adult Ascaris suum. Journal of Parasitology 58:1025-1036.
- Chemistry
- Basu S., L. Chien, and M. Basu. 1972. Studies on the biosynthesis of blood group related glycosphingolipids and gangliosides. Proceedings of the 15th International Lipid Conference 15:100.
- Basu, S., J.L. Chien, and M. Basu. Biosynthesis in vitro of blood group A related and globoside type tglycosphingolipids. Federation Proceedings 32:559.
- \*Bottei, R.S. and R.G. Schneggenburger. 1973. Compositional studies of purpurin complexes. Journal of Inorganic Nuclear Chemistry 35:1711-1714.
- \*Bottei, R.S. and R.G. Schneggenburger. 1973. A spectrophotometric study of group IVA metal complexes of naphthazarin formed by the oxidation of -hydronaphthazarin. Journal of Inorganic Nuclear Chemistry 35:000-000.
- Bottei, R.S., and C.P. McEachern. 1973. Thermogravimetric study of some divalent metal chelate polymers of dithiooxamide. Journal of Thermal Analysis 5:000-000.
- Bretthauer, R.K., G.J. Kaczorowski, and M.J. Weise. 1973. Characterization of a phosphorylated pentasaccharide isolated from Hansenula holstii NRRL Y-2448 phosphomannan. Biochemistry 12:1251-1256.
- Bretthauer, R.K., S. Wu, and W.F. Irwin. 1973. Enzymatic transfer of mannose from guanosine diphosphate mannose to dolichol phosphate in yeast (Hansenula holstii). Biochimica et Biophysica Acta 304:736-747.
- Danehy, J.P., and V.J. Elia. 1972. Determination of sulfinic acids in the presence of thiols by titration with aqueous sodium nitrate. Analytical Chemistry 44:1281-1284.
- \*Hamill, W.H., and K. Hiraoka. 1973. Excitation of luminescence from KCl:Tl<sup>+</sup>, KBr: Tl<sup>+</sup> and KI:Tl<sup>+</sup> by slow electron impact. Journal of Chemical Physics 58:000-000.
- R.G. Hayes, and A. Calabrese. 1973. Studies of the valence electron levels of CrO<sub>4</sub><sup>-2</sup>, Cr<sub>2</sub> C<sub>7</sub><sup>-2</sup>, MnO<sub>4</sub><sup>-1</sup>, VO<sub>4</sub><sup>-3</sup> and FeO<sub>4</sub><sup>-2</sup> by x-ray photoelectron spectroscopy. Journal of the American Chemical Society 95:2819-2822.

- \*Hentz, R.R., and J.L. Magee. 1972. Milton Burton: an institution is the lengthened shadow of one man. Journal of Physical Chemistry 76(25):2A-6A.
- \*Hentz, R.R., and R.M. Thibault. 1973. Concentration and temperature dependence of the quantum yield and lifetime of the lowest triplet state of benzene in the liquid phase. Journal of Physical Chemistry 77(9):1105-1111.
- Kozak, J.J., and M.J. Moffat. 1973. Analysis of the Barker-Henderson Local-Compressibility approximation. II. Comparison with other theories of liquids. Journal of Chemical Physics 58:876-889.
- Kozak, J.J., and M.J. Moffat. 1973. Modern interpretation of the average - potential - model theory of solutions. Physica 65: 485-504.
- Kozak, J.J., and R. Davidson. 1973. On the relaxation to quantum-statistical equilibrium of the Wigner-Weisskopf atom in a one-dimensional radiation field. IV. Exact solution for finite systems. Journal of Mathematical Physics 14:414-421.
- Kozak, J.J., and R. Davidson. 1973. On the relaxation to quantum-statistical equilibrium of the Wigner-Weisskopf atom in a one-dimensional radiation field. V. Exact solution for infinite systems. Journal of Mathematical Physics 14:423-431.
- Kozak, J.J., and I-Y.S. Cheng. 1973. Relationship between bifurcation points of the Kirkwood-Salsburg equation and phase transitions. Journal of Mathematical Physics 14:632-637.
- \*Magee, J.L., and J.V. Dugan, Jr. 1973. Momentum transfer and total scattering cross sections for ions with polar molecules. Journal of Chemical Physics 58:000-000.
- Nowak, T., and A.S. Mildvan. 1972. Nuclear magnetic resonance studies of selectively hindered internal motion of substrate analogs at the active site of pyruvate kinase. Biochemistry 11:2813-2819.
- Nowak, T., and A.S. Mildvan. 1972. Nuclear magnetic resonance studies of the function of potassium in the mechanism of pyruvate kinase. Biochemistry 11:2819-2828.
- Nowak, T., A.S. Mildvan, and G.L. Kenyon. 1973. Nuclear relaxation and kinetic studies of the role of  $Mn^{2+}$  in the mechanism of enolase. Biochemistry 12:1690-1702.
- \*Thomas, J.K., E.J. Land, and J.T. Richards. 1972. Excited states in the nanosecond pulse radiolysis and laser flash photolysis of N, N-dimethylaniline. Journal of Physical Chemistry 76:3805-3812.
- Walter, J.L., CSC. 1972. Rejected with a 3.2. The Advisor 8:4-5.
- Winicur, D.H., and J.L. Fraites. 1972. A gasdynamic method for calibrating volume flowmeters. The Review of Scientific Instruments 43:1542-1543.

\*Under the Radiation Laboratory

## Mathematics

- Garbanati, D.A., and R.D. Thompson. 1972. Skew circulant quadratic forms. Journal of Number Theory 6:557-572.
- Garbanati, D.A., and R.D. Thompson. 1972. Classes of unimodular abelian group matrices. Pacific Journal of Mathematics 43(3):633-646.
- Goetz, A. 1972. On the algebraic structure of the process of forming subsequences. Colloquium Mathematicum 26:313-322.
- Goodhue, W.L. 1973. On the regularity of the Riemann function for hyperbolic equations. Transactions of the American Mathematical Society 175:10 pp.
- Matsushima, Y. 1972. Differential manifolds. Marcel Dekker, Inc., New York. 303 pp.
- Ryan, P.J. 1972. A class of complex hypersurfaces. Colloquium Mathematicum 26:175-182.
- Ryan, P.J. 1973. Kahler manifolds as real hypersurfaces. Duke Mathematical Journal 40:207-213.

## Microbiology

- Erickson, R.J., and J.C. Copeland. 1973. Congression of unlinked markers and genetic mapping in the transformation of *Bacillus subtilis* 168. Genetics 73:13-21.
- Erickson, R.J., B. Janik, R.G. Sommer, M.P. Kotick, and D.P. Wilson. 1973. Synthesis and properties of poly (1, N<sup>6</sup> etheno adenylic acid) and poly (3, N<sup>4</sup> ethenocytidylic acid). Physiological Chemistry and Physics 1:27-34.
- Kulpa, C.F., and L. Leive. 1972. Mode of insertion of lipopolysaccharide into the outer membrane of *Escherichia coli*. Pages 155-160 in, C. Fred Fox, editor, *Membrane Research: First ICN-UCLA Symposium of Molecular Biology*. Academic Press, New York.

## Physics

- Browne, C.P., J.P. Sokol, R.M. Prior, and A.A. Rollefson. 1973.  $^{12}C(^3He, p)^{14}N$  reaction from 7 to 17 MeV. Physical Review C7:000-000.
- Browne, C.P., J.D. Goss, and A.A. Rollefson. 1973. Design and performance of a new magnetic spectrograph for accurate energy measurements. Nuclear Instruments and Methods 0:000-000.
- Browne, C.P., J.D. Goss, H. Stocker, N.A. Detorie, and A.A. Rollefson. 1973. States of  $^{35}Cl$  via  $^{32}S(a, p)^{35}Cl$  reaction. Physical Review C7:000-000.
- Browne, C.P., C.F. Moore, H.H. Wolter, R.L. Kaufman, J. McWherter, and J.E. Bolger. 1972. High resolution of K x-ray spectrum of 30 MeV chlorine ion beam. Journal of Physics B5:L262-L264.
- Browne, C.P., J.D. Goss, and A.A. Rollefson. 1973.  $^{13}C$  states via the  $^{12}C(d, p)^{13}C$  reaction. Physical Review C7:663-668.
- Browne, C.P. 1972. Gamma ray energy vs. particle energy measurements. Pages 15-25 in, J.H. Sanders and A.H. Wapstra, editors, *Atomic Masses and Fundamental Constants* 4.
- Miller, W.C., D.L. Friesel, and T.J. Lewis.

1972. Resonance fluorescence of  $^{23}\text{Na}$  above 3 MeV. Physical Review C6:846-850.

#### LAW

Murphy, E.J. 1972. Limiting the use of negotiable notes and waiver-of-defense clauses in consumer sales. Pages 79-100 in Consumer Protection, DaCapo Press, New York.

#### LIBRARY STUDIES

Sesplaukis, A. 1972. Land of the river Nemunas; Lithuanian textbook. Educational Council of the Lithuanian Society in America. 283 pp.  
 Sesplaukis, A. 1972. Novalis. Aidai 9: 427-431.  
 Sesplaukis, A. 1972. Žemaitė, Krėvė, Patinas ir Šekspyras. Pradalgė 8:338-352.  
 Sesplaukis, A. 1972. Hilaire Belloc - krikščioniškosios kultūros gynėjas. Tevynės Sargas 1(32):78-92.

#### ARTS AND LETTERS HUMANISTIC AND SOCIAL STUDIES

##### Art

Kinsey, D. 1972. One man show, 20 paintings. Exhibited in the South Bend Art Center, South Bend, Indiana.  
 Kinsey, D. 1972. Franklin Schenck with Bust. Painting. Exhibited in the Stewart Center, Purdue University, Indiana.  
 Kinsey, D. 1972. Faculty show, two paintings. Exhibited in the Notre Dame Gallery, Notre Dame, Indiana.  
 Kinsey, D. 1972. Group show, four paintings, one etching. Exhibited by the Temple Beth-El in the South Bend Art Center, South Bend, Indiana.  
 Kinsey, D. 1973. Registration. Painting. Exhibited in the Fort Wayne Museum of Art, Fort Wayne, Indiana.  
 Kinsey, D. 1973. Allegory on Age III. Painting. Exhibited by the Hammond Art Center, Hammond, Indiana.  
 Kinsey, D. 1973. Empty Box. Etching. Exhibited by the Hunterdon Art Center, Clinton, New Jersey.  
 Leader, R. 1972. Design of sixteen nave windows in leaded antique stained glass. Church of Saint Olaf, Minneapolis, Minn.  
 Leader, R. 1972. Design and execution of two round-headed windows in leaded glass. Robert Kuntz Residence, North Liberty, Indiana.  
 Leader, R. 1972. Design of south facade mural and two logo panels in porcelain steel. First Federal and Loan Association of East Chicago, Munster, Indiana.  
 Leader, R. 1973. Design and execution of north entry curtain wall in leaded antique stained glass. First Federal Savings and Loan Association of East Chicago, Munster, Indiana.  
 Leader, R. 1973. Design and execution of screening wall in leaded glass. Richard Wing Residence, Excelsior, Minnesota.

Leader, R. 1973. Design and execution of two narthex walls in leaded antique stained glass. Church of Saint Austin, Minneapolis, Minnesota.  
 Mooney, J.D. 1972. Woodland studies. Drawings. One-man show of twenty-five works. Exhibited at A. Montgomery Ward Gallery, University of Illinois at Chicago Circle, Chicago, Illinois.  
 Mooney, J.D. 1972-73. Woodland studies. Drawings. One-man show of twenty-two works. Exhibited at Krannert Drawing Room, Purdue University, West Lafayette, Indiana.  
 Mooney, J.D. 1973. Sculpture in new media. Plasma light sculptures. Seven sculptures and three environmental works. Illinois State Museum, Springfield, Illinois.  
 Mooney, J.D. 1973. Ball-floor, a plasma light sculpture. Cloud, a neon sculpture. Infinity plasma chamber. Hallmark Gallery, New York City.  
 Porter, D.A., and A.J. Lauck, CSC. 1973. Exhibition catalogue. Benefactors of the Art Gallery, University of Notre Dame - 60 pp.

##### Economics

Carby-Samuels, H.R. 1972. Economists and the minority economy. Third Annual Workshop, Black Economists' Development Project, September:30 pp.  
 Carby-Samuels, H.R. 1973. The role of the black business in human development. Pages 75-94 in, Gerald Whittaker, editor, The State of the Black Economy. University of Michigan Press.  
 Dugan, D.J. 1973. Discussions: abstract. Review of Social Economy 31(1):111-112.  
 Leahy, W.H. 1973. Dualism as a factor in regional and urban economic integration. Revue Tiers-Monde (Paris) Summer:11-16.  
 Masters, S.H. 1973. Two income maintenance plans, work incentives, and the poverty gap: comment. Industrial and Labor Relation Review 26(3):1002-1004.

##### Education

Banikiotes, P.G., L.C. Schumacher, and F.G. Banikiotes. 1972. Language compatibility and minority group counseling. Journal of Counseling Psychology 19:255-256.  
 Kelsey, M.T. 1972. Encounter with God. Bethany Fellowship, publisher. 281 pp.  
 Kelsey, M.T. 1973. Healing and Christianity. Harper and Row. xi and 398 pp.  
 Kelsey, M.T. 1970. Zungenreden. Chistliche Verlagsanstalt Konstanz, German publishers. 264 pp.  
 Kelsey, M.T. 1972. Rediscovering the priesthood through the unconscious. The Journal of Pastoral Counseling 7(1):26-36.  
 Kelsey, M.T. 1973. Aggression and religion: the psychology and theology of the punitive element in man. Religious Education May-June.  
 Kelsey, M.T. 1973. Facing death and suffering: a group experiment in affective learning. Lumen Vitae 28(2).  
 Meany, J.O. 1973. The psychological struggle with dependency in current Catholi-

cism. Journal of Pastoral Counseling 7(2):17-23.

Sciortino, P.T. 1973. Values and educational expenditure. Notre Dame Journal of Education 3:348-354.

#### English

Brennan, J.X. 1972. Ironic and symbolic structure in Crane's Maggie. Reprinted on pages 323-334 in, Thomas A. Gullason, editor, Stephen Crane's Career: Perspectives and Evaluations.

Brennan, J.X. 1972. The imagery and art of George's Mother. Reprinted on pages 372-381 in Thomas A. Gullason, editor, Stephen Crane's Career: Perspectives and Evaluations. New York University Press, New York.

Callahan, P.J. 1972. Diamonds. Poem. The Salt Creek Reader 5(2):11.

Callahan, P.J. 1972. Tunnel. Poem. Bitterroot 11(4):33.

Callahan, P.J. 1972. January of 1973. Poem. Notre Dame Report 2:249.

Costello, D.P. 1972. Counter-culture to anti-culture. The Review of Politics 34(4):187-193.

Costello, D.P. 1972. Counter-culture to anti-culture. Pages 187-193 in, Ronald Weber, editor, America in Change: Reflections on the 60's and 70's. University of Notre Dame Press, Notre and London.

Davis, R.W. 1972. Review of Wilbur Sanders' John Donne's Poetry. Seventeenth-Century News 30:33.

Doubleday, J.F. 1972. The Ruin: structure and theme. Journal of English and Germanic Philosophy 71(3):369-381.

Lordi, R.J. 1973. Proofreading of The Revenge of Bussy D'Ambois. English Language Notes 10:188-197.

McDonald, J.J. 1973. The old manse period canon. Pages 13-39 in, C.E. Frazer Clark, Jr., editor, The National Hawthorne Journal 1972. NCR Microcard Editions, Washington, D.C.

McLane, P.E. 1972. Review of H.E. Toliver's Pastoral Forms and Attitudes. Seventeenth-Century News 30:63.

McLane, P.E. 1972. Wolsey's Forced Loans and the Dating of Skelton's Colyn Cloute. English Language Notes 10:85-89.

Sandeén, E. 1973. Fall rain. Poem. The Iowa Review 4(1):8.

Sandeén, E. 1973. Light as a quality of mercy. Poem. The Iowa Review 4(1):9.

Sandeén, E. 1973. Mountains. Poem. The Iowa Review 4(1):9.

Werge, T. 1972. An apocalyptic voyage: God, Satan, and the American tradition in Norman Mailer's Of a Fire on the Moon. Review of Politics 34:108-128.

Werge, T. 1972. An apocalyptic voyage: God, Satan, and the American tradition in Norman Mailer's Of a Fire on the Moon. Pages 108-128 in, Ronald Weber, editor, America in Change: Reflections on the 60's and 70's. University of Notre Dame Press, Notre Dame and London.

#### General Program of Liberal Studies

Bird, O., and J. Van Doren. The hero and the heroic ideal in Great Books of the Western World. The Great Ideas Today 1973 pp. 1-28.

Nicgorski, W.J. 1973. Common sense and progress. The Review of Politics 35:282-288.

Thomas, I. 1973. Unusual features of 53\*. Notre Dame Journal of Formal Logic 14:276.

#### Government and International Studies

Arnold, P.E. 1972. Herbert Hoover and the continuity of American public policy. Public Policy 20:525-545.

Bartholomew, P.C. 1973. The Supreme Court of the United States, 1970-1971. International Political Science Abstracts 23(1): 80-81.

Goerner, E.A. 1972. Aristocracy and natural right. The American Journal of Jurisprudence 17:1-13.

Goerner, E.A. 1972. Privacy, libertarian dreams, and politics. Pages 177-196 in, Robert E. Meogher, editor, Toothing Stones; Rethinking the Political. Swallow Press, Chicago.

#### History

Aspinwall, B. 1972. Review of J.L. Altholz and D. McElrath: The Correspondence of Lord Action and Richard Simpson, V.I. History.

Aspinwall, B. 1973. America and liberal Catholicism: O.A. Brownson (in French). Proceedings of the Congress on Liberal Catholicism in Grenoble.

DeSantis, V.P. 1973. The gilded age, 1877-1897 - bibliography. AHM Publishing Corp., Northbrook, Illinois. 135 pp.

Gleason, J.P. 1972. Catholicism and cultural change in the 1960's. Pages 91-107 in, R. Weber, editor, America in Change: Reflections on the 60's and 70's. University of Notre Dame Press.

Gleason, J.P. 1972. Franklin and the election of 1764. Pages 76-84 in W.R. Jacobs, editor, Benjamin Franklin: Statesman - Philosopher or Materialist? Holt, Rinehart, and Winston, New York.

Gleason, J.P., Co-author. 1973. Episodes in American history. Ginn and Company, Boston. 687 pp.

Moore, C.E. 1973. From cooking to coping - roles, cults and women. Scholastic 114(12):13-15.

#### Philosophy

Caponigri, A.R. 1972. Hegel, the philosophy of total mediation. Pages 483-515 in, Scritti in onore di Carlo Giacon S.I. Padova, Editrice. Antenore.

Evans, J.W. 1973. Jacques Maritain. National Catholic Reporter May 11:5.

Küng, G. 1972. Nowe spojrzenie na rozwój filozoficzny Husserla (A new look at Husserl's philosophical development). Pages 145-156 in, Institut of Philosophy

- and Sociology of the Polish Academy of Science, ed., Enomenologia Romana Ingardena, Warsaw: Studia Filozoficzne.
- Küng, G. 1972. Ingarden on language and ontology: a comparison with some trends in Analytic Philosophy. Analecta Husserliana (Dordrecht) 2:204-217.
- Küng, G. 1972. Noema und Gegenstand. Pages 55-62 in, R. Haller, editor, Jenseits von Sein und Nichtsein: Beiträage zur Meinong-Forschung, Graz: Akad. Druck-u. Verlagsanstalt.
- Küng, G. 1973. Husserl on pictures and intentional objects. Review of Metaphysics 26:670-680.
- Manier, E. 1972. Review of M. Grene, editor, Interpretations of Life and Mind. Isis 0:000-000.
- Manier, E. 1971. Functionalism and the negative feedback model in biology. Boston Studies in the Philosophy of Science 8:225-240.
- Manier, E. 1972. Review of M.A. Simon. The Matter of Life. Review of Metaphysics 26:173-175.
- Manier, E. 1972. Review of P. Vorzimmer. Charles Darwin, The Years of Controversy. Heredity 27:381-384.
- McInerny, R. 1972. The poverty of pre-scriptuism. American Journal of Jurisprudence 17:80-91.
- McInerny, R. 1972. Presidential address: philosophizing in faith. Proceedings of the American Catholic Philosophical Association 46:1-9.
- McInerny, R. 1973. The Priest. Novel. Harper and Row, Inc., New York.
- McMullin, E.M., Rev. 1973. Matter. Pages 383-399 in, Marxism, Communism, and Western Society: A Comparative Encyclopedia, Herder, Freiburg.
- McMullin, E.M., Rev. 1972. Go forth and dominate the earth? Bulletin of the Catholic Commission for Intellectual and Cultural Affairs 15:9-36.
- McMullin, E.M., Rev. 1972. The dialectics of reduction. Idealistic Studies 2:95-115.
- Sobociński, B. 1972. An equational axiomatization and semi-lattice theoretical characterization of mixed associative Newman algebras. Notre Dame Journal of Formal Logic 13(3):407-423.
- Sobociński, B. 1972. Solution to the problem concerning the Boolean bases for cylindric algebras. Notre Dame Journal of Formal Logic 13(4):529-545.
- Sobociński, B. 1973. Remark about the Boolean parts in the postulate-systems of closure, derivative and projective algebras. Notre Dame Journal of Formal Logic 14(1):111-117.
- Sobociński, B. 1973. A note about Newman's algebraic systems. Notre Dame Journal of Formal Logic 14(1):129-133.
- Sobociński, B. 1973. A new axiomatization of modal system K<sub>1.2</sub>. Notre Dame Journal of Formal Logic 14(3):413-414.
- Sobociński, B. 1973. Modal system S<sub>3</sub> and the proper axioms of S<sub>4.02</sub> and S<sub>4.04</sub>. Notre Dame Journal of Formal Logic 14(3):415-418.

- Sobociński, B. 1973. Note about the Boolean parts of the extended Boolean algebras. Notre Dame Journal of Formal Logic 14(3):419-422.

#### Psychology

- Whitman, T.L. 1972. Effects of group and individually administered aversive procedures upon chronic smoking behavior. Behavior Research and Therapy 10:97-104.
- Whitman, T.L., T. Burish, and C. Collins. 1972. Development of language in two severely retarded children. Mental Retardation 10:40-45.
- Whitman, T.L., and J.G. Borkowski. 1972. The mentally retarded: the forgotten minority. A D Correspondence 5:000-000.
- Whitman, T.L., and J.G. Borkowski. 1972. A forgotten minority. Notre Dame Magazine 1:000-000.

#### Sociology and Anthropology

- Smith, C.G. and J.A. King. 1972. The treatment milieu and the prediction of mental hospital effectiveness. Journal of Health and Social Behavior 13:180-194.
- Smith, C.G. and J.A. King. 1973. The effects of staff ideology, patient population characteristics, and hospital structure on the treatment milieu of the mental hospital. Journal of Health and Social Behavior 14:163-180.

#### Speech and Drama

- Adams, F.E. 1972. Costume design and execution. James Goldman's The Lion In Winter. ND-SMC Theatre, Notre Dame.
- Adams, F.E. 1972. Costume design and execution. Tennessee Williams' Summer and Smoke. ND-SMC Theatre, Notre Dame.
- Adams, F.E. 1972. Costume design and execution. Eugene Ionesco's The Killer. ND-SMC Theatre, Notre Dame.
- Adams, F.E. 1973. Costume design and execution. John Bowen's After the Rain. ND-SMC Theatre, Notre Dame.
- Adams, F.E. 1973. Scenic design. John Bowen's After the Rain. ND-SMC Theatre, Notre Dame.
- Bain, R.E. 1972. Director. Eugene Ionesco's The Killer. Washington Hall, Notre Dame.
- Bain, R.F. 1973. Director. Tom Jones' and Harvey Schmidt's musical The Fantasticks. Moreau Hall Little Theatre, Saint Mary's College, Notre Dame.
- Ballinger, C.A. 1972. Director. Ron Cowan's Summertime. Summer Theatre, Washington Hall, Notre Dame. July.
- Ballinger, C.A. 1972. Director. James Goldman's The Lion In Winter. ND-SMC Theatre, O'Laughlin Auditorium, Saint Mary's College, Notre Dame. October.
- Ballinger, C.A. 1973. Director. William Archibald's The Innocents. South Bend Civic Theatre, South Bend. February.
- Ballinger, C.A. 1973. Director. Clark Gesner's You're A Good Man, Charlie Brown. ND-SMC Theatre, O'Laughlin Auditorium,

Saint Mary's College, Notre Dame. May.  
 Syburg, F.W. 1972. Director. The House of  
 Blue Leaves by John Guare. Notre Dame  
 Summer Theatre, Notre Dame. July-August.

### Theology

- Blenkinsopp, J. 1972. Sexuality and the  
 Christian tradition: law or love? Pages  
 24-47 in Sex: Thoughts for Contemporary  
 Christians, Doubleday, Garden City, 1972.  
 Hauerwas, S. 1972. The future of Christian  
 social ethics. Pages 123-131 in That They  
 May Live: Theological Reflections on the  
 Quality of Life.  
 Hauerwas, S. 1972. Theology and the new  
 American culture. Review of Politics  
 34:71-91.  
 Hauerwas, S. 1972. The Christian, society  
 and the weak. Notre Dame Magazine 1(5):  
 38-40.  
 Hauerwas, S. 1972. Aslan and the new  
 morality. Religious Education 67:419-429.  
 Hauerwas, S. 1972. Towards an ethics of  
 character. Theological Studies 33:698-715.  
 Hauerwas, S. 1972. Love's not all you  
 need. Cross Currents 22:225-237.  
 Hauerwas, S. 1973. Abortion: the agent's  
 perspective. American Ecclesiastical  
 Review 167:102-120.  
 Hauerwas, S. 1973. Messianic pacifism.  
Worldview 16:29-33.  
 Quinn, G.J. 1973. On Celibacy: Calvin and  
 the Catholics. American Ecclesiastical  
 Review May:000-000.  
 Quinn, G.J. 1972. Pacifism and the just  
 war: are they compatible? Dialog 11(4):  
 273-280.

- Storey, W.G., F.C. Quinn, and D.F. Wright.  
 1973. Morning praise and evensong.  
 Fides Publishers. 226 pp.  
 Storey, W.G. 1973. Praise Him! Ave Maria  
 Press. 226 pp.  
 Storey, W.G. 1973. The hours for the  
 people. Liturgy 18(5):3-7.

## BUSINESS ADMINISTRATION

### Management

- Houck, J.W. 1973. Can you imagine? Notre  
 Dame Magazine 2(1):12-14.  
 Houck, J.W. 1973. From a "science" of the  
 future to a polemic about the present.  
Review of Politics 35(2):248-251.  
 Starcevich, M.M. 1973. The relationship  
 between the "central life interests" of  
 first-line managers, middle managers, and  
 professional employees and job character-  
 istics as satisfiers and dissatisfiers.  
Personnel Psychology 27:107-115.

### Marketing Management

- Appel, D.L. 1972. Review. William Moller  
 and David Wilemon's Marketing Channels:  
 A Systems Viewpoint. Journal of Marketing  
 36(2):101-102.  
 Furuhashi, Y. 1973. Comments on advanced  
 cases in multinational business operations.  
Journal of Marketing 37(2):117.  
 Furuhashi, Y. 1973. Societal, economic and  
 political systems. Pages 34-66 in, John  
 F. Grashof and Alan P. Kelman, editors,  
Macro Marketing. Grid, Inc., Columbus,  
 Ohio.



# Monthly Summary

## Awards Received

IN THE MONTH OF JUNE, 1973

| Department<br>or Office             | Principal        | Short title   | Sponsor                       | Amount-\$<br>term |
|-------------------------------------|------------------|---|-------------------------------|-------------------|
| AWARDS FOR RESEARCH                 |                  |   |                               |                   |
| Biology                             | Rai              | Mosquito biology: genetic, organismic, environmental            | Natl. Inst. Health            | 36,146<br>1 yr.   |
| Microbiology-Lobund Lab.            | Pollard          | Study of the microflora of leukemic Laboratory animals          | Natl. Inst. Health            | 105,116<br>1 yr.  |
| Accountancy                         | Powell           | Faculty research fund   | Price Waterhouse Fdtn.        | 1,500<br>7 mos.   |
| Aerospace Mechanical Eng.           | Biles            | Systems analysis applied to federal district courts             | Natl. Sci. Fdtn.              | 20,000<br>1 yr.   |
| Chemistry                           | Bretthauer       | Lipids in the synthesis of yeast mannans                        | Natl. Sci. Fdtn.              | 34,900<br>2 yr.   |
| Electrical Eng.                     | Gajda            | Electrode materials used in charge-coupled devices              | Natl. Aero. Space Admin.      | 5,381<br>3 mos.   |
| Urban Studies                       | Broden           | Grant-in-aid  | Richard A. Rosenthal          | 50<br>---         |
| Urban Studies                       | Broden           | Grant-in-aid  | Frank Sullivan, C.L.U.        | 100<br>---        |
| Microbiology-Lobund Lab.            | Pollard          | Grant-in-aid  | Miles Lab.                    | 2,250<br>---      |
| Metallurgical Eng.                  | Fiore            | Grant-in-aid  | Armco Fdtn.                   | 5,000<br>---      |
| Chemistry                           | Castellino       | Role of Carbohydrate moiety of plasminogen                      | Ind. Heart Assocn., Inc.      | 6,000<br>1 yr.    |
| Microbiology-Lobund Lab.            | Wostmann         | Effect of intestinal flora on cholesterol metabolism            | Max Baer Heart Fund           | 10,000<br>---     |
| Law School, Civil Eng.              | McIntire, Singer | Joint program in environmental engineering and law              | Environ. Prot. Agency         | 11,448<br>2 mos.  |
| Biology                             | Cassidy          | Quantitative cytology of fatal childhood malignancies           | Canc. Soc. Elkhart Cty., Ind. | 7,000<br>---      |
| Chemical Eng.                       | Luks             | Effects of methane under pressure                               | Amer. Petrol. Inst.           | 10,000<br>1 yr.   |
| Aerospace Mechanical Eng.           | Lloyd            | Design and evaluation of a new leaflet heart valve              | Ind. Heart Assocn., Inc.      | 4,095<br>1 yr.    |
| Aerospace Mechanical Eng.           | Mueller          | Hemolytic potential of prosthetic heart valve flow              | Ind. Heart Assocn., Inc.      | 7,222<br>1 yr.    |
| Law School                          | Glickstein       | Center for civil rights   | Ford Fdtn.                    | 500,000<br>4 yr.  |
| Chemical Eng.                       | Carberry         | U.S.-Soviet co-operative program in catalytic reactor modelling | Natl. Sci. Fdtn.              | 19,000<br>1 yr.   |
| Philosophy                          | Sayre            | Exploratory study in medical ethics                             | Natl. Sci. Fdtn.              | 4,600<br>6 mos.   |
| College Eng.                        | Hogan            | Whirlpool design project  | Whirlpool Corp.               | 40,000<br>1 yr.   |
| Sociology Anthropology              | Liu              | Graduate training in social research                            | Natl. Inst. Ment. Health      | 52,956<br>1 yr.   |
| AWARDS FOR FACILITIES AND EQUIPMENT |                  |   |                               |                   |
| Electrical Eng.                     | Myers            | Grant-in-aid  | West. Electric Fund           | 1,250<br>---      |
| Metallurgical Eng.                  | Fiore            | Grant-in-aid  | Amer. Soc. Metals             | 2,740<br>---      |
| Chemistry                           | Nowak            | Magnetic resonance studies of phosphoenolpyruvate enzymes       | Research Corp.                | 9,000<br>1 yr.    |
| Art                                 | Mooney           | Plasma light sculpture  | Jefferson Elect. Co.          | 1,150<br>---      |
| Art                                 | Mooney           | Plasma light sculpture  | General Elect. Co.            | 1,250<br>---      |
| Chemical Eng.                       | Banchero         | Grant-in-aid  | Proctor Gamble Fund           | 1,000<br>---      |
| Chemical Eng.                       | Carberry         | Instructional scientific equipment-chemical engineering         | Natl. Sci. Fdtn.              | 3,200<br>2 yr.    |

# AWARDS FOR EDUCATIONAL PROGRAMS

|                       |                 |  |                              |                 |
|-----------------------|-----------------|--|------------------------------|-----------------|
| Financial Aid         | McCauslin       | College work-study program                         | U.S. Off. Educ.              | 71,173 1 yr.    |
| Freshman Year Studies | Hofman          | Schmitt challenges in science meetings             | Arthur J. Schmitt Fdn.       | 3,000 1 yr.     |
| Law School            | Foschio         | Prosecution internship program - Marshall Cty.     | Ind. Crim. Just. Plan. Agcy. | 644 ---         |
| Law School, Biology   | Murdock, Bender | Legal internship program - law and the handicapped | Natl. Ctr. Law Handicapped   | 27,720 1 yr.    |
| Mathematics           | Borelli         | Comprehensive mathematics program                  | Natl. Sci. Fdn.              | 187,400 15 mos. |
| Urban Studies         | Egan            | Catholic committee on urban ministry               | Raskob Fdn.                  | 35,000 2 yr.    |

# AWARDS FOR SERVICE PROGRAMS

|               |        |                                       |                   |               |
|---------------|--------|---------------------------------------|-------------------|---------------|
| Urban Studies | Broden | Upward Bound program for 1973-74      | U.S. Off. Educ.   | 110,000 1 yr. |
| Urban Studies | Broden | Private sector - youth urban strategy | Wash. Tech. Inst. | 14,581 ---    |

## Proposals Submitted

IN THE MONTH OF JUNE, 1973

| Department or Office               | Principal        | Short title  | Sponsor                 | Amount-\$ term |
|------------------------------------|------------------|--|-------------------------|----------------|
| PROPOSALS FOR RESEARCH             |                  |  |                         |                |
| Aerospace Mechanical Eng.          | Ariman           | Dust collection and dust cake formation in an electric field       | Environ. Prot. Agency   | 23,507 1 yr.   |
| Biology                            | Saz              | Chemotherapy and metabolism of filariids                           | Natl. Inst. Health      | 23,068 1 yr.   |
| Microbiology-Lobund Lab.           | Pollard          | Colony of germfree hamsters as a biomedical resource               | U.S. Army               | 59,104 1 yr.   |
| Chemistry                          | Hayes            | X-ray photoelectron spectroscope of heme compounds                 | Natl. Inst. Health      | 37,716 1 yr.   |
| Psychology                         | Ryan             | Language attitudes of bilingual chicanos                           | Natl. Inst. Health      | 31,014 1 yr.   |
| Metallurgical Eng.                 | Miller           | Plasma deposit rare-earth cobalt permanent magnets                 | Union Carbide Corp.     | 25,000 1 yr.   |
| Aerospace Mechanical Eng.          | Szewczyk         | Effects of turbulence and shear on flow past bluff bodies          | Natl. Sci. Fdn.         | 89,890 2 yr.   |
| Aerospace Mechanical Eng.          | Daschbach, Lloyd | Industrial and work training for the retarded                      | Aux Chandelles          | 2,208 1 yr.    |
| Chemistry                          | Martinez-Carrion | Isozymes of heart glutamate aspartate transaminase                 | Natl. Inst. Health      | 17,531 1 yr.   |
| Microbiology-Lobund Lab.           | Pollard          | Immunotherapy of AKR leukemia by allogeneic chimerism              | (Through DPRD)          | 20,863 2 yr.   |
| Chemistry                          | Fehlner          | Characterization of unstable species by mass spectroscopy          | Natl. Sci. Fdn.         | 64,792 2 yr.   |
| Chemistry                          | Duncan           | Stereochemistry and relative valence isomerization rates           | Research Corp.          | 3,400 1 yr.    |
| Aerospace Mechanical Eng.          | Lee, Ariman      | Material properties at high loading and temperatures rates         | U.S. Army               | 25,140 1 yr.   |
| Biology                            | Cassidy          | Quantitative cytology of fatal childhood malignancies              | Canc. Soc. Elkhart Cty. | 6,614 1 yr.    |
| Aerospace Mechanical Eng.          | Lee, Huang       | Thick-walled cylinders subject to pressure and temperature history | U.S. Army               | 17,932 1 yr.   |
| PROPOSALS FOR EDUCATIONAL PROGRAMS |                  |  |                         |                |
| Philosophy                         | Delaney          | Perspectives in philosophy lecture series                          | (Through DPRD)          | 7,150 ---      |
| English                            | Collins          | Modern literary biography and criticism                            | Natl. Endow. Humanities | 38,918 5 mos.  |
| Philosophy                         | Caponigri        | Philosophical foundations of the republic                          | Natl. Endow. Humanities | 39,694 7 mos.  |
| PROPOSAL FOR SERVICE PROGRAMS      |                  |  |                         |                |
| Urban Studies                      | Broden           | Urban law project  | (Through DPRD)          | 59,862 ---     |

# Summary of Awards Received and Proposals Submitted

IN THE MONTH OF JUNE, 1973

## AWARDS RECEIVED

| Category                 | Renewal |            | New |            | Total |             |
|--------------------------|---------|------------|-----|------------|-------|-------------|
|                          | No.     | Amount     | No. | Amount     | No.   | Amount      |
| Research                 | 10      | \$ 235,733 | 12  | \$ 647,031 | 22    | \$ 882,764  |
| Facilities and Equipment | 1       | 1,000      | 6   | 18,590     | 7     | 19,590      |
| Educational Programs     | 5       | 297,217    | 1   | 27,720     | 6     | 324,937     |
| Service Programs         | 1       | 110,000    | 1   | 14,581     | 2     | 124,581     |
| Total                    | 17      | \$ 643,950 | 20  | \$ 707,922 | 37    | \$1,351,872 |

## PROPOSALS SUBMITTED

| Category                 | Renewal |            | New |            | Total |            |
|--------------------------|---------|------------|-----|------------|-------|------------|
|                          | No.     | Amount     | No. | Amount     | No.   | Amount     |
| Research                 | 6       | \$ 197,628 | 9   | \$ 250,151 | 15    | \$ 447,779 |
| Facilities and Equipment | -       | ---        | -   | ---        | -     | ---        |
| Educational Programs     | -       | ---        | 3   | 85,762     | 3     | 85,762     |
| Service Programs         | -       | ---        | 1   | 59,862     | 1     | 59,862     |
| Total                    | 6       | \$ 197,628 | 13  | \$ 395,775 | 19    | \$ 593,403 |

# Closing Dates for Selected Sponsored Programs

Proposals must be submitted to the Office of Research and Sponsored Programs ten days prior to the deadline dates listed below.

| Agency   | Programs   | Application Closing Dates |
|--|--|---------------------------|
| Bureau of Higher Education                       | Cooperative Education Programs   | October 15, 1973          |
| Federal Communications Commission                | Noncommercial Educational Broadcasting Facilities  | September 15, 1973        |
| Health Services and Mental Health Administration | Developmental and Demonstration Projects   | October 1, 1973           |
|  | Research Project Grants  | October 1, 1973           |
|  | Exploratory Research Grants  | October 1, 1973           |
| National Institutes of Health                    | Construction of Cancer Research Facilities   | October 1, 1973           |
|  | Biomedical Publication Grants  | October 1, 1973           |
|  | Medical Library Science Research Projects  | October 1, 1973           |
|  | Research Project Grants  | October 1, 1973           |
|  | General Research Support Grants  | September (early), 1973   |
|  | Projects to Support Animal Resources   | October 1, 1973           |
|  | Biotechnology Resources  | October 1, 1973           |
| National Institute of Mental Health              | Mental Health Program - Project Grants   | October 1, 1973           |
|  | Mental Health Research Grants  | October 1, 1973           |
|  | Studies of Crime and Delinquency   | October 1, 1973           |
|  | Alcohol Abuse and Alcoholism   | October 1, 1973           |
|  | Mental Health of Children and Families   | October 1, 1973           |
|  | Mental Health of the Aging   | October 1, 1973           |
|  | Drug Abuse Education Projects  | October 1, 1973           |
|  | Research on Narcotic Addiction and Drug Abuse  | October 1, 1973           |
|  | Academic Career-Teacher Awards (Nonmedical) in Narcotic Addiction and Drug Abuse             | October 1, 1973           |
|  | Training for Health and Health-Related Professionals in Narcotic Addiction and Drug Abuse    | October 1, 1973           |
|  | Career-Teacher Training Centers  | October 1, 1973           |
|  | Mental Health Epidemiology   | October 1, 1973           |
|  | Minority Group Mental Health Programs  | October 1, 1973           |
|  | Metropolitan Problems  | October 1, 1973           |
|  | Special Training Projects in Mental Health   | September 1, 1973         |
|  | Utilization and Development Training Projects in Mental Health                               | September 1, 1973         |
|  | Experimental Mental Health Training Projects   | September 1, 1973         |
| National Research Council                        | Postdoctoral Research Associateships   | September 15, 1973        |
| National Science Foundation                      | Undergraduate Research Participation   | October(mid), 1973        |
|  | NATO Postdoctoral Fellowships in Science   | October(mid), 1973        |
|  | Summer Institutes and Short Courses for Secondary School Teachers of Science and Mathematics | October 1, 1973           |
|  | Institutional Grants for Research Management Improvement                                     | August 31, 1973           |
| Public Health Service                            | Research Support - Food and Drug Administration  | October 1, 1973           |
|  | Occupational Safety and Health Demonstrations  | October 1, 1973           |
|  | Occupational Safety and Health Research  | October 1, 1973           |
| Social and Rehabilitation Service (DHEW)         | Training and Curriculum Development in the Field of Aging                                    | October 1, 1973           |
|  | Research and Development in the Field of Aging   | October 1, 1973           |

|  |  |                         |
|--|--|-------------------------|
| U.S. Department of Health,<br>Education, and Welfare | Fund for the Improvement of<br>Postsecondary Education                     | September, 1973         |
| U.S. Department of Labor                             | Manpower-Related Doctoral Dissertation                                     | October 1, 1973         |
|  | MDTA Research Projects   | October 1, 1973         |
| U.S. Department of Transporta-<br>tion               | Transportation Research Opportunities<br>for Universities                  | October 1, 1973         |
| Environmental Protection<br>Agency                   | Environmental Research, Development,<br>and Demonstration                  | October 1, 1973         |
| U.S. Office of Education                             | Graduate Programs in International<br>Studies                              | October(mid), 1973      |
|  | Undergraduate Programs in International<br>Studies                         | October(mid), 1973      |
|  | Doctoral Dissertation Research   | October(mid), 1973      |
|  | Faculty Research Abroad  | October(mid), 1973      |
|  | Group Projects Abroad  | October(mid), 1973      |
|  | Foreign Curriculum Consultants   | October(mid), 1973      |
|  | National Defense Foreign Language<br>Fellowships                           | October 1, 1973         |
|  | Summer Language and Area Program   | August 15, 1973         |
|  | Annual Interest Grants Program   | September 1, 1973       |
|  | Special Projects to Prepare Personnel<br>to Work with Handicapped Children | July-September,<br>1973 |
|  | Loans for Construction of Academic<br>Facilities                           | September 1, 1973       |
| Smithsonian Institution                              | Woodrow Wilson International Center<br>for Scholars                        | October 1, 1973         |
|  | Foreign Currency Program   | October 1, 1973         |

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