

'72-'73

notre dame report

contents

December 15, 1972

the university

- 161 "Continuing Education and the Universities"
- 161 Art Gallery exhibits
- 161 Independent Colleges and Universities of Indiana, Inc.
- 162 United Way campaign
- 162 Mexican-American Studies Lecture Series

faculty notes

- 162 Non-university appointments
- 162 Miscellany

office of advanced studies

Notes for Principal Investigators

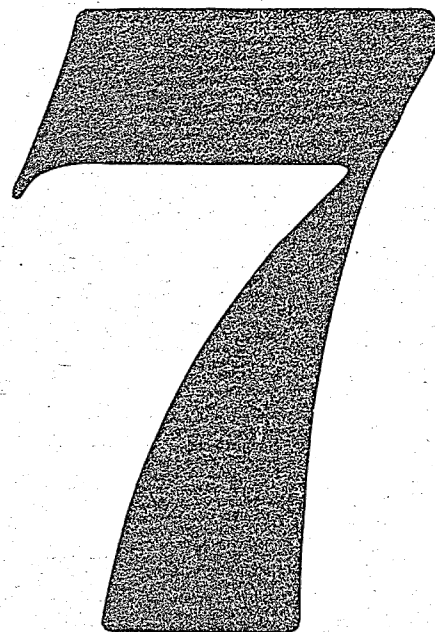
- 164 Indirect Cost Rates for Government Sponsored Programs
- 164 Estimation of Fringe Benefits for Sponsored Programs
- 165 Cost-Sharing on Research Grants from U.S. Government Agencies

Information Circulars

- 165 Department of Health, Education, and Welfare Grants for Research in Occupational Safety and Health (No. FY73-34)
- 165 National Academy of Sciences Postdoctoral Fellowship Program (No. FY73-35)
- 165 National Science Foundation Cooperative Science Programs (No. FY73-36)

- 166 National Aeronautics and Space Administration -- Langley Research Center Institute for Computer Applications in Science and Engineering (No. FY73-37)
- 166 National Science Foundation Experimental R & D Incentives Program (No. FY73-38)
- 167 National Science Foundation Research Support for Societal Impact of Computers (No. FY73-39)
- 167 National Science Foundation Planning Grants for the Formation of New Research Groups in Telecommunications Policy Formation (No. FY73-40)
- 168 National Science Foundation Federal Laboratories to Perform Validation Tests for NSF Research and Development Incentives Program (No. FY73-41)
- 169 The Ford Foundation and the Rockefeller Foundation -- A Program in Support of Social Science Research and Legal Research on Population Policy (No. FY73-42)
- 171 Current Publications and Other Scholarly Works
- 172 Closing Dates for Selected Sponsored Programs

(continued on back cover)



the university

"Continuing Education and the Universities"

"The quality of life in urban centers is a pressing problem which universities must face," according to a preliminary report on "Continuing Education and the Universities" released here as part of a national study.

Comparing the deteriorating urban center to the crisis in rural life of the 1930's, the task force asserted, "What is needed now is a similar national commitment to our urban centers and the development of university expertise and structure to assist wherever possible." The preliminary task force report is one of four studies on the future of continuing education supported through the Kellogg Foundation, chaired by Rev. Theodore M. Hesburgh, C.S.C.

While the university should provide leadership for all levels of education, the task force said, "the campus has ceased to be the only or even the dominant location for higher education." They urged that universities find ways to extend credit for television and correspondence courses, as well as independent study and perhaps travel or work experiences.

As another of six major recommendations, the report asked that "a national commission for continuing education be established" which would include a research unit, a learning unit and a clearinghouse or communications unit.

Art Gallery exhibits

The traditional Christmas Show of the University of Notre Dame's Art Gallery is now open in the O'Shaughnessy Hall exhibit area. Featuring paintings, prints and sculpture, it will be open to the public until 5 p.m. daily through New Year's Day.

Two very early sculptures in stone of the Madonna and Child, one a 16th Century marble piece by Giovanni Amadeo of Italy, and another, in French limestone, by a Burgundian French artist in the 15th Century, are excellent examples of distinct styles of carving.

The largest painting in the Notre Dame exhibit, depicting the Holy Family, is also included in this showing. Another work on view is "Adoration of the Magi," a painting by Sebastiano Concha in the 18th Century. Two etchings of the "Adoration of the Magi," one by Canini and the other by Goltzius, are hung side by side for study purposes.

The works of 11 faculty members at the Columbus (Ohio) School of Art also will be displayed until Dec. 31 in the Art Gallery.

All nationally known artists, these exhibits will include paintings or metal sculptures of Charles O'Brian Baker, Dennis Drummond, Edward Colston, David Fullam, Darron Lillian, Paul Meyers, Kenneth Rich, Todd Slaughter, James Thornton and Lowell Tolstedt. The exhibition has been arranged by Thomas Nakashima, a former student of art at Notre Dame.

Featured will be some exceptionally large pieces, including two paintings measuring 22 feet in width and a sculpture that is 24 feet in height.

The Notre Dame gallery is open from 1 to 5 p.m. weekends and from 10 a.m. to 5 p.m. weekdays.

Independent Colleges and Universities of Indiana, Inc.

The Independent Colleges and Universities of Indiana, Inc. (ICUI), has strongly urged the Indiana Commission for Higher Education to incorporate a tuition-equalization program in its planning for post-secondary education in the state.

Comprised of 31 privately-supported institutions of higher learning, including Notre Dame, ICUI also asked for additional funding of the state scholarship program "commensurate with the increased numbers of persons to be served."

The two proposals are contained in an ICUI report, stating its position on the commission's preliminary draft for post-secondary education, which was released Sept. 29.

Noting that the preliminary plan does not provide for a tuition-equalization program, ICUI asked the

commission to consider such a program in 1973, according to Robert E. Martin, ICUI president. He emphasized that such state assistance would be in the form of grants directly to Indiana students to attend independent institutions of higher learning in the state.

A non-profit corporation, ICUI was organized last summer to advance the cause of independent higher education in the state.

United Way campaign

Gifts to the United Way Campaign on the Notre Dame campus this fall totaled \$43,236 or 103 percent of the goal. More than 1,300 employees contributed to the annual fund drive through the University, including 454 students who gave \$1,306. New Notre Dame women students assisted by members of the Knights of Columbus Council and other campus groups,

raised an additional \$1,000 through the sale of shamrock lapel pins at three home football games in October. Edward J. Murphy, professor of law, served as general chairman of the campaign.

Mexican-American Studies Lecture Series

A new lecture series is being inaugurated by the Mexican-American Studies Program at Notre Dame. Dr. Julian Samora, director of the interdisciplinary graduate program, explained that the University hopes to sponsor 10 lectures during the remaining academic year.

In addition to delivering a public lecture, each speaker will hold an informal seminar for graduate students in the Mexican-American Studies Program on a topic related to the formal lecture.

faculty notes

Non-university appointments

Dr. Robert Gordon, vice president for advanced studies, has been elected to the Board of Trustees of Biological Abstracts for a three year term.

Brother Kieran Ryan, C.S.C., assistant vice president for business affairs, has been reappointed to the College Scholarship Service Committee on Membership of the College Entrance Examination Board (CEEB). The new term expires in October, 1973.

Miscellany

Dr. Paul G. Banikiotes, assistant professor in the Department of Graduate Studies in Education, presented a paper entitled "Considerations in the Application of Group Procedures in Training and Educational Programs" at the North Central meeting of the Association for Counselor Education and Supervision in Chicago, Ill., on Nov. 14.

Dr. Vincent P. DeSantis, professor of history, delivered a lecture on the "National Power of the United States," at the Inter-American Defense College in

Washington, D.C., on Nov. 13. Dr. DeSantis also read a paper on Rutherford B. Hayes' presidency at the annual meeting of the Southern Historical Association at Hollywood-by-the-Sea, Fla., Nov. 15-18. Dr. Philip J. Gleason, associate professor of history, also presented a paper at the Historical Association meeting. The topic of his work was "The Medieval Vision in American Social Criticism."

David G. Donovan, assistant director for administration of the University libraries, was the Chairman for the Organizing Committee and a participant in the Inter-American Seminar on Integrated Services of Libraries, Archives and Documentation Centers in Latin America and the Caribbean, held in Washington, D.C., Nov. 6-17.

Msgr. John Egan, Lewis Senior Fellow in Pastoral Theology, was keynote speaker at the opening session of "Symposium on Corrections: The Alternatives and Problems," sponsored by the University Catholic Center Nov. 20-22 at St. Paul's University Chapel in Madison, Wisc.

Canon Astrik L. Gabriel, director of the Mediaeval Institute, will chair the luncheon meeting of the American Catholic Historical Association Dec. 28 in New Orleans, La. Canon Gabriel will assume the presidency of the Association at this meeting.

Dr. Raymond C. Gutschick, professor of geology, addressed the Meteoritical Society on the "Kentland Impact, Anomaly, Indiana," on Nov. 14 at the University of Chicago Center for Continuing Education. He was also invited geological field leader on an excursion to the Kentland structure, Nov. 15, scheduled as part of the Society's 35th annual meeting.

Dr. James Michael Lee, professor of education, gave the keynote address, entitled "The Diocesan Youth Director and Religious Education," at the Biennial National Convention of the Division of Youth Activities of the United States Catholic Conference. Dr. Lee also presented the principal paper at the annual national convention of the Association of Professors and Researchers in Religious Education.

Dr. John W. Lucey, associate professor of aerospace and mechanical engineering, attended the American Nuclear Society Winter Meeting in Washington, D.C., Nov. 12-17, as a member of the Executive Committee of the Membership Committee and of the Mathematics and Computation Division. Dr. Edward E. Morris, assistant professor of aerospace and mechanical engineering, also attended the meeting.

Dr. Kraemer B. Luks, associate professor of chemical engineering, presented a paper at the 65th national meeting of the American Institute of Chemical Engineers in New York, Nov. 26-30. The title of the paper, which was co-authored by Dr. James P. Kohn, professor of chemical engineering, is "A Process for Extracting High Molecular Weight Hydrocarbons from a Solid Phase in Equilibrium with a Liquid Hydrocarbon Phase: Solubility Selectivity Behavior of Certain Organic Groups." Dr. Luks also presented a paper on "Modeling the Liquid State on a Molecular Basis." Dr. James J. Carberry, professor of chemical engineering, presented a paper entitled "Gamma Radiation and Catalytic Selectivity," co-authored by Dr. George C. Kuczynski, professor of metallurgical engineering. Dr. Carberry is co-author of another paper presented at the meeting: "Effectiveness Factors in Three-Phase Reactors." Dr. Francis Verhoff, assistant professor of chemical engineering, also presented a paper, entitled "Modeling of Nutrient Cycling through Microbial Populations in a Fresh Water Lake," at the meeting.

Dr. John O. Meany, associate professor of education, gave two lectures, entitled "Self-Identity in the

Religious Life" and "Experimental Dimensions of Religious Identity," at the Province Forum of the Holy Cross brothers at Holy Cross Junior College on Nov. 25.

Dr. Thomas J. Mueller, professor of aerospace and mechanical engineering, presented a paper entitled "Base Flow Characteristics of a Linear Aerospike Nozzle Segment" at the 93rd Winter Annual Meeting of the American Society of Mechanical Engineers in New York City, Nov. 27. Dr. Jerome L. Novotny, professor of aerospace and mechanical engineering, was a session chairman for one of the panels at this meeting.

Dr. Basil R. Myers, chairman of the Department of Electrical Engineering, served as chairman of a technical session on Graph Theory, and as master of ceremonies at the annual banquet, at the 6th Asilomar Conference on Circuits and Systems at the Naval Postgraduate School in Monterey, Cal., Nov. 15-17.

Dr. John D. Nicolaidis, professor of aerospace and mechanical engineering, was a banquet speaker for the Fuze Munitions Environment Characterization Symposium held Nov. 28-29 at Picatinny Arsenal, Dover, N.J.

Dr. William G. Storey, associate professor of theology, gave a two-day liturgical institute for Marianist priests and brothers, Nov. 17-19, at the Marianist Apostolic Center in St. Louis, Mo. The general theme of the institute was "Liturgy of the Hours," and Dr. Storey's addresses were entitled "The General Instruction of February 2, 1971," "The History of the Divine Office," and "The Obligation of the Divine Office."

Dr. Erhard M. Winkler, associate professor of geology, presented a paper titled "Strength and Fire Resistance of Granites and Quartz Sandstones in the Light of the P-V-T Diagram of Quartz" at a meeting in Minneapolis, Minn., Nov. 13-15. Dr. Winkler also chaired the session of the Natural Construction Materials which was held at the GSA meeting on Nov. 13.

Dr. Jonathan R. Ziskind, assistant professor of history, presented a paper entitled "Sea Loans at Ugarit" at the joint meeting of the Midwest Branch of the American Oriental Society and the Midwest Section of the Society for Biblical Literature held recently at Notre Dame.

Office of Advanced Studies

Notes for Principal Investigators

Indirect Cost Rates for Government Sponsored Programs

An incomplete schedule of indirect cost rates for fiscal year 1973 was listed in Notre Dame Report No. 5, 1972-73, because the off-campus rate for educational programs was not available at that time. The off-campus rate for educational programs is now available. Until further notice, the indirect cost rates to be used for Government sponsored programs are:

Research Projects:	
On-Campus	57.6% of Salaries and Wages
Off-Campus	12.7% of Salaries and Wages
Education Projects:	
On-Campus	90.8% of Salaries and Wages
Off-Campus	14.17% of Salaries and Wages

The rates are applicable to direct salaries and wages, including holidays, vacations, and sick leave. Fringe benefits such as TIAA, FOAB, Workmen's Compensation, Blue Cross-Blue Shield, and Total Disability Benefit Insurance should not be included in the base for calculating indirect costs.

Estimation of Fringe Benefits for Sponsored Programs

The fringe benefit rates listed in Notre Dame Report No. 1, 1972-73, were based upon the following schedule:

1. TIAA:
5% of \$10,800 of salary
10% of amount over \$10,800
2. FOAB - 5.2% of \$10,800 of salary
3. Workmen's Compensation - \$0.09 per \$100 of salary
4. Blue Cross-Blue Shield, Family Coverage, \$41.64 per month

The Office of Advanced Studies has been advised that the rates for TIAA and FOAB will be changed to the following:

	<u>Calendar Year 1973</u>	<u>Calendar Year 1974</u>
FOAB	5.85% of \$10,800	5.85% of \$12,000
TIAA	5% of \$10,800, 10% of balance	5% of \$12,000, 10% of balance

In addition, a Total Disability Benefit Insurance premium amounting to \$77 per person per year is to be included in the fringe benefits.

In anticipation of these changes, fringe benefits for sponsored programs are to be estimated as follows:

- (1) For faculty members, for academic year programs or academic year plus summer programs, twelve (12) percent of the salaries listed.
- (2) For faculty members, for summer programs only, three (3) percent of the salaries listed.
- (3) For graduate students who are to be research assistants, no fringe benefits. This is related to the tax-free status of the stipend.
- (4) For postdoctorals, and graduate or undergraduate students who are to be research aides, six (6) percent of the salaries listed.
- (5) For secretaries and technicians, six (6) percent of the salaries listed.

The line item for fringe benefits should carry the sum of foregoing items (1) through (5) inclusive. Except for programs which are limited to the summer period only, the rates are calculated on the basis of an even distribution of the fringe benefits over a one-year period.

Cost-Sharing on Research Grants from U.S. Government Agencies

In view of the preceding note on fringe benefits, footnote 2, on page 126, Notre Dame Report No. 5, 1972-73, should be changed to read $2a = 0.05T/1.696$.

Information Circulars

Department of Health, Education, and Welfare Grants for Research in Occupational Safety and Health

NO. FY73-34

Research and demonstration grants are to be given to eligible public or nonprofit private agencies or institutions for work in the fields relating to occupational safety or health. Direct inquiries to the secretary, Department of Health, Education, and Welfare, Public Health Service, Washington, D.C. 20201.

National Academy of Sciences Postdoctoral Fellowship Program

NO. FY73-35

Postdoctoral fellowships will be granted under the \$250,000 Alfred P. Sloan Foundation Grant. Approximately eight scientists each year are selected to study science and public policy while doing staff work within the complex of the National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine, or the National Research Council. About four fellowships will be awarded for the 1972-73 academic year and eight each year thereafter. For information, write: Alfred P. Sloan Foundation Fellowships, National Academy of Sciences, 2101 Constitution Avenue, N.W. Washington, D.C. 20418.

National Science Foundation Cooperative Science Programs

NO. FY73-36

The National Science Foundation offers a new Program to foster and support scientific and technological cooperation between the United States and Bulgaria, Czechoslovakia, Hungary, and Romania. The Program promotes Collaboration and exchange of information between scientists, engineers, scholars, and institutions of research and higher learning of the United States and the cooperating countries.

ADMINISTRATION

The following general guidelines have been established for the administration of the Program:

Scientists of the United States and the foreign country concerned must participate in each project approved under the Program.

Both the United States and the foreign country must approve each project.

Each country will support the cost of research and other scientific activities taking place within its territory as part of this Program.

Contributions to the Program by the United States and the cooperating foreign country should be equitable, although it is not necessary that each country's contribution to each individual project be equal or of the same kind.

SCOPE

Cooperative activities may be conducted under this Program in any branch of science and technology, including basic and applied aspects of the natural sciences and mathematics, the engineering sciences, and the social sciences, but not in the clinical medical sciences, business administration, and education.

ELIGIBILITY

American institutions eligible to participate in this Program include universities and colleges, professional societies, academies of sciences, and other nonprofit scientific organizations of the private or public sectors. American scientists employed by profitmaking organizations are not eligible for support under this Program. Support is available for American scientists who are U.S. citizens or who have at least 5 years of professional employment beyond the doctorate in U.S. institutions and are currently affiliated with an eligible U.S. institution.

TYPES OF ACTIVITIES

The Program offers financial support for three types of activities: cooperative research projects, seminars, and scientific visits. Comparable activities funded from other sources may be incorporated into the program by agreement between the coordinating agencies.

ADDITIONAL INFORMATION

Submission of preliminary proposals to NSF for comment and guidance, before conclusion of understandings with foreign colleagues,

is encouraged. Submission of a preliminary proposal to NSF before attempting to reach understandings with foreign colleagues is especially recommended in the case of a project involving Czechoslovakia or Bulgaria and also in the case of a project in the social sciences involving any one of the four countries.

Additional information may be obtained from the Office of Advanced Studies, Division of Research and Sponsored Programs, Extension 7378.

National Aeronautics and Space Administration — Langley Research Center Institute for Computer Applications in Science and Engineering

NO. FY73-37

An Institute for Computer Applications in Science and Engineering (ICASE) has been established at NASA's Langley Research Center.

The Institute will be a focal point for work by the academic community and the Langley Center in applied mathematics, computer science, and the use of computers in solving NASA-related scientific and engineering problems.

ICASE is being operated at the Langley Center by the Universities Space Research Association (USRA), a national consortium of 51 universities headquartered at Charlottesville, Va., through an agreement with Langley.

The purpose of ICASE is to establish a cooperative research effort to solve present and future aeronautical and space-related problems, find means for more efficient use of the newest generation of computers, and help universities take advantage of research opportunities, at the Langley Center, that require advanced computer facilities.

USRA is working with two other NASA centers in similar projects. It operates the Lunar Science Institute near the Manned Spacecraft Center at Houston, Texas; and it provides assistance to a program of Materials Processing in Space at the Marshall Space Flight Center, Huntsville, Alabama.

Information concerning the Institute and its programs may be obtained by writing to Institute for Computer Applications in Science and Engineering (ICASE), P.O. Box 728, Langley Air Force Base, VA 23365.

National Science Foundation Experimental R & D Incentives Program

NO. FY73-38

The National Science Foundation has announced a new program designed to provide experimental evidence concerning various incentives which the Federal Government might use to increase the application and use of science and technology in the civil sector. This program is being planned and carried out in cooperation with the Experimental Technology Incentives Program in the U.S. Department of Commerce.

This new program stems from a growing recognition of the importance of technological innovation in maintaining international industrial competitiveness and in meeting growing domestic needs. This recognition is accompanied by the realization that not enough is known about the actual social, institutional, and economic consequences of innovation incentives to safely mount a national effort. The assignment to the Foundation is to determine, by experiment, the actual effects of various incentive mechanisms for increasing the rate of transfer of new technology to goods and services manufactured and consumed in the private and public sectors.

In organizing and supporting an experimental program in innovation incentives, the National Science Foundation is interested in identifying and testing incentives which would: (1) promote the increased utilization of new technology by all sectors of the economy, and (2) in the long run, stimulate greater non-Federal investment in R&D.

In most cases, it is expected that experiments conducted under this program will involve close cooperation between two or more of the following institutions: universities and colleges, profit and nonprofit research institutes, industry and industrial trade associations, professional societies, Federal laboratories, state and local governments, and public service industries and organizations. Such cooperative projects will be encouraged.

The objectives of this program are:

1. To identify institutional barriers to innovation, and
2. To test appropriate Federal action which might reduce such barriers.

The program will provide a focus in the Federal structure for testing various means of accelerating the rate of technological innovation in the private and public sectors of the economy. The program will support (1) background studies to identify and understand barriers and blockages to the techni-

cal innovation process in selected areas of application; (2) experiments designed to investigate incentives intended to overcome these blockages. Each experiment will support tests of the effect of a specific incentive mechanism on a barrier or set of barriers which inhibit the innovation process.

This program is not established to support basic or applied research per se, nor will it serve as a vehicle for augmenting the R&D budgets of participating institutions.

A brochure detailing the specifics of the Experimental R&D Incentives Program will be prepared and released in the near future.

Additional information regarding specific criteria for proposal guidelines and proposal development may be obtained from the Office of Advanced Studies, Extension 7378.

National Science Foundation Research Support for Societal Impact of Computers

NO. FY73-39

The National Science Foundation has announced the formation of a Computer Impact on Society section to support research designed to help better understand the impact computers have on our way of life.

The new section, within the Office of Computing Activities, is headed by Dr. Peter G. Lykos and includes two programs. A Computer Impact on Organizations program will be directed by Dr. Fred Weingarten and a Computer Impact on the Individual program will be headed by Dr. M. Granger Morgan.

The Impact on Organizations program will support studies, research and demonstration projects designed to improve our understanding of the role of computers in management and decision making at all levels. The computer's influence on the future structure and behavior of social organizations will be explored. Projects to be considered cover investigations of legal and economic problems, including security and privacy questions, and problems in areas such as automation, robotics and traffic flow.

The Impact on the Individual program will study the ways in which computers affect our work patterns and life styles. Work will be supported on improving citizen access to automated information systems, including problems of ease of access, accuracy and confidentiality. Emphasis will be placed on improving the methods available for persons to communicate with machines.

During Fiscal Year 1973 the section will be concerned primarily with developing guidelines and priorities in addition to making

a limited number of grants.

Suggestions for further program activities as well as inquiries may be sent to:

Computer Impact on Society
National Science Foundation
Washington, D.C. 20550

National Science Foundation Planning Grants for the Formation of New Research Groups in Telecommunications Policy Formation

NO. FY73-40

The Division of Social Systems and Human Resources of the Research Applications Directorate at the National Science Foundation has announced plans for providing up to eight one-year planning grants averaging \$75,000 each for new groups entering the field of problem focused policy research in telecommunications. Awards will be made on a competitive basis. Proposals may be submitted at any time up to close of business March 1, 1973, and formal announcements of awards will be made not later than May 1, 1973.

OBJECTIVES OF PLANNING GRANTS

Several Government agencies now fund selected research on long-range policy issues concerning telecommunications, but the amount of this research and independent research outside the Government is quite limited. As a result, the collective capability for carrying out such research is quite limited, and it has therefore been concluded that both the Government and the public will benefit if more capability is created for this purpose.

These planning grants are therefore designed to create new groups in telecommunications policy research. Universities, colleges, and nonprofit institutions which do not currently have significant organized telecommunications research programs are eligible for the competition.

These planning grants have four specific objectives. They are:

1. To bring together effective teams of researchers with expertise in the several disciplines relevant to telecommunications policy studies.
2. To carry out an exploratory research project useful to Federal, State, or local decision-makers.
3. To produce alternative agenda for new telecommunications policy research.

4. To develop specific proposals for telecommunications policy research, to be submitted at the end of the grant period to appropriate Federal, State or local agencies.

The structure of planning grant proposals should deal with all of these objectives. Each proposal should discuss the way in which people with different backgrounds would be brought together, and why it is thought that the proposed organization would be fruitful. The agenda setting function, the exploratory research project, and the formulation of a detailed proposal for major further research should be approached in a unified way, i.e., it should be clear how a broad treatment of a part of the telecommunications field, which would lead to an agenda for further research, would be combined with a more intensive exploratory research effort in a part of the field. It would be expected that this research effort would lead to at least a tentative set of alternative answers to some policy question that public decision-makers consider important. It would be reasonable to then prepare a detailed proposal for a project which would provide more definitive answers to this question or a set of related questions. It is imperative, however, that the planning grant proposal be clear as to what would be done to achieve the four objectives.

The topics which may be considered for investigation may include, but are not limited to, the following:

- Telephone regulation
- Allocation of the radio spectrum
- Broadcast content regulation
- Consumer preferences for programming
- Uses of broadband communication
- Citizen feedback
- Public television
- Transportation-telecommunications tradeoff
- Organizational uses
- Institutional responsiveness

Additional information on these topical areas and proposal format are available in the Office of Advanced Studies, Division of Research and Sponsored Programs, Extension 7378.

Proposals are due at NSF by close of business March 1, 1973, to qualify for consideration.

National Science Foundation Federal Laboratories to Perform Validation Tests for NSF Research and Development Incentives Program

NO. FY73-41

The National Science Foundation has announced the first project in its Experimental R&D Incentives Program. This involves the use of Federal laboratories to verify the performance of technical innovations aimed at the civil sector.

Performance validation is a crucial step in the progress of an innovation toward use, and inability to obtain such a test can be a decisive block. Such blockage can occur in the path of an innovation toward the private market or toward acceptance by a municipality or other public jurisdiction.

The goal of the NSF's Experimental R&D Incentives Program is to experiment with incentives for increasing the efficiency and speed of conversion of R&D to new or improved products, processes, and services which contribute to improvements in the quality of life, employment opportunities, economic growth, productivity, or foreign trade.

In the project which was announced, Federal participation will be limited to validation testing. It will not include any developmental effort or any evaluative analysis of results.

The project recognizes that at several points in the evolution of a typical technical innovation, the validity of claimed performance becomes crucial. This occurs at the points where a new party to the innovation is asked to assume some of the risk. He questions performance and if his questions go unanswered, the innovation may go no further.

Some of those risk points are:

- An individual inventor formulates a concept and tests it by available analytical methods. He typically needs venture capital to go further. The venture capitalist feels the need for verification of critical claims. If he feels the risk does not justify funding such tests, the development stops there.
- An innovator within a large organization is permitted free time to carry a new idea of his own through analytical and bench-type testing. Beyond that he needs management approval to use the laboratory for verification. If the personal project is not judged relevant to the organization's mission, it may be cut off at that point.

-A product is developed and put on the market. If the organization lacks an established reputation leading consumers to gamble on the product, market penetration may be so difficult and slow a small organization cannot survive.

-A customer, perhaps a manager in state or local government, needs an improved piece of equipment to solve a new problem. But he cannot gamble on equipment whose performance he has no way of validating.

In general, it is felt that at points where transfer of risk is involved, resistance to an unknown innovation could be reduced if credible performance verification could be offered. It appears probable that the Federal Government could, fully within the free enterprise system, augment reduction to practice and transfer into the civil sector by assisting in the validation of innovative concepts and products.

Among the criteria an innovation must meet for testing are these:

1. It must have the potential for significantly advancing the state-of-the-art.
2. There must be a strong or potentially strong public benefit from the idea or product.
3. The normal market mechanism is not working to advance the idea or product.

The Ford Foundation and the Rockefeller Foundation — A Program in Support of Social Science Research and Legal Research on Population Policy

NO. FY73-42

THE FORD AND ROCKEFELLER FOUNDATIONS jointly announce the third year of a program of awards in support of social science research and legal research on population policy.

The following research areas have been identified by a group of leading students of population problems as relevant to the major issues surrounding the development of world and national population policies. This listing is intended to be suggestive rather than exhaustive. Other research proposals that fall within the general focus of the program will also be considered on their merits.

SUGGESTED RESEARCH AREAS

Interaction of population variables and law

Relation between population and laws on

family formation and dissolution

Relation between population and laws relating to housing, property, education, and health

Relation between population and social services

Relation between government policies and family-size norms

Effects of population policies on community and family

Demographic effects of abortion legislation

Interaction of population variables and economic policies

Relation between population and tax and monetary policies

Relation between population and economic incentives and disincentives

Interrelation of population growth and economic growth in developed countries

Economic implications of rapid population growth in developing countries

Influence of population policy on market and nonmarket productive activities

Implications of population policy for labor force and manpower needs

Interaction of population variables and social, cultural, and political change

Relation between environmental policy and population growth and distribution

Influence of population education on population growth

Population effects of changes in the status and roles of women

Population distribution

Policy implications of population distribution and movement

Policy implications of changing rural populations

Policy implications of urban growth

Immigration and emigration policies and laws

Effects of regional economic planning policies on migration and urbanization

Present and past population policy

Sources and types of resistance to and support for population policy

Public opinion and population policy

Communications and population policy

Implementation and administration of population policy

International cooperation on population policies

Historical development of population policies

Zero population growth

Current prospects for zero population growth

Demographic consequences of zero or negative population growth

Economic implications of zero or negative population growth

Social, cultural, and/or political consequences of zero or negative population growth

Alternative institutions and value systems necessary for attaining and maintaining zero or negative population growth

AWARDS

It is anticipated that the Foundations will fund between 10 and 30 research proposals. (Twenty-two were funded in 1971 and 26 in 1972.) Selections will be made with the help of a committee of distinguished scholars in the social sciences, law, and population. Decisions will be based on 1) the relevance of the proposed research to current issues of population policy; 2) its potential contribution to understanding the determinants and consequences of population policy; and 3) its use of the most appropriate and powerful analytical methods. Clarity and effectiveness of presentation will be important.

DURATION AND PAYMENT

The proposed research should begin in 1973 (on or after July 1) and be completed within two years. Preference will be given to projects that also have some support from the institution with which the applicant is affiliated, or from other sources, and to proposals seeking a relatively modest amount of funding. In some cases, awards may be made that cover all costs of a proposal. In no case will an award exceed \$50,000, and a grant of such magnitude will be rare under this program. In no case may indirect costs exceed 10 per cent of the total grant. Grants may cover the costs of data collection, other research expenses, necessary travel, and professional salaries or maintenance in lieu of salaries. A grant will be made only to a university or other tax-exempt institution eligible for foundation

grants with which an applicant is associated. A successful applicant will be asked to provide a letter from the appropriate administrative officer of such an institution indicating its willingness to administer the grant.

LOCATION OF RESEARCH

It is generally expected that an applicant will submit a proposal for studying population policy of his/her own country or a country in which he/she has had considerable previous experience. Genuinely collaborative research involving scholars of more than one country will be welcomed. Terms of the proposed collaboration, including the justification for and the specific nature of the joint work, should be spelled out in detail.

ELIGIBILITY

There are no specific eligibility criteria, but demonstrated research ability, knowledge of population issues, and previous experience in this or a closely related field are likely to be minimally necessary if a proposal is to be competitive.

ORIENTATION OF PROPOSALS

Proposals must be research-oriented. Other types of proposals are not eligible under this program.

Proposals must also be relevant to population policy. Such relevance is the prime criterion by which proposals will be judged. Proposals that are otherwise worthy, but lack clear relevance to population policy, will not be considered.

FORMAT OF APPLICATIONS

Information on proposal format and proposal content is available in the Office of Advanced Studies, Division of Research and Sponsored Programs, Extension 7378.

CLOSING DATE AND NOTIFICATION

There are no standardized application forms or procedures except those described above. Proposals must be received by February 1, 1973. Evaluation and selection will be prompt; awards will be announced in April, 1973.

WHERE TO APPLY

Proposals originating in Asia, Africa, or Latin America should be sent to the appropriate country or regional representative of the Ford Foundation. Proposals originating on other continents should be sent directly to:

The Ford and Rockefeller Foundations
Program in Social Science, Law,
and Population Policy
320 East 43rd Street
New York, N.Y. 10017

Current Publications and Other Scholarly Works

ARTS AND LETTERS HUMANISTIC AND SOCIAL STUDIES

Economics

Worland, S.T. 1972. Radical political economy as a "Scientific Revolution." Southern Economic Journal October:274-285

Education

Ipsaro, A.J., P.T. Sciortino, and J.J. McCarthy. 1972. Without clear goals, schools are lost. National Catholic Reporter, Education Supplement October 27:9,16.

Meany, J.O., and F.J. Ruetz. 1972. A probe into faculty evaluation. Educational Record of the American Council on Education 53(4):300-307.

English

Jemielity, T. 1972. Dr. Johnson and the uses of travel. Philological Quarterly 51:448-459.

History

Chroust, A.-H. 1972. Philosophy starts in wonder (Aristotle, Metaphysics 982 b 11 ff.). Divas Thomas 75:56-65.

Chroust, A.-H. 1972. Aristotle and the foreign policy of Macedonia. Review of Politics 34:367-394.

Chroust, A.-H. 1972. Aristotle's sojourn in assos. Historia: Zeitschrift für Alte Geschichte 21:170-176.

Chroust, A.-H. 1972. Comments on Aristotle's "On Prayer." The New Scholasticism 46:308-330.

Dolan, J.P. 1972. Immigrants in the city: New York's Irish and German Catholics. Church History 41:354-368.

Gleason, J.P. 1972. Catholicism and cultural change in the 1960's. Review of Politics 34(4):91-107.

Philosophy

Delaney, C.F. 1972. The changing temper of American philosophy. Review of Politics 34:129-138.

Psychology

Borkowski, J.G., and A. Kamfonik. 1972. Verbal mediation in moderately retarded children: effects of successive mediational experiences. American Journal of Mental Deficiency 77(2):157-162.

Sociology and Anthropology

Liu, W.T., and R.W. Duff. 1972. The strength in weak ties. Public Opinion Quarterly, Fall:361-366.

BUSINESS ADMINISTRATION

Management

Heisler, W.J., and G. Gemmill. 1972. Personal control beliefs: job strain correlates for managers. Pages 140-152 in J.W. Slocum, editor, Research in Organizations. Proceedings of the Ninth Annual Conference of the Eastern Academy of Management at Northeastern University.

ENGINEERING

Aerospace and Mechanical Engineering

Mueller, T.J., and W.P. Sule. 1972. Base flow characteristics of a linear aerospace nozzle segment. Journal of Engineering for Industry. Paper No. 72-WA/Aero-2.

Civil Engineering

Tenney, M.W. 1972. Vacuum filtration. Pages 219-233 in E.L. Tackston and W.W. Eckenfelder, editors, Process Design in Water Quality Engineering: New Concepts and Developments. Jenkins Publishing Co., New York.

Electrical Engineering

*Berry, W.B., and Y.C. Chang. 1972. Potential barrier determination by photoemission. Extended Abstract-142nd Meeting of the Electrochemical Society 162:354-355.

Hogan, J.C. 1972. The engineering college-industry interface in research, design, and consulting --- a university viewpoint. Proceedings of the Ninth Annual Institute for Engineering Deans at the University of Hawaii. February 21-23:32-34.

Myers, B.R. 1972. Review of Narsingh Deo's central tree. Mathematical Review 44(4):728.

*Under the Radiation Laboratory

Metallurgical Engineering

Peretti, E.A., and R.J. Coyle. 1972. The ternary subsystem Sn₄As₃-Bi-SnAs. Journal of Materials Science 7:989-994.

SCIENCE

Biology

Crovello, T.J. 1972. Computerization of specimen data from the Edward Lee Greene Herbarium (ND-G) at Notre Dame. Brittonia 24(2):131-141.

Crovello, T.J. 1971. Abstract and summary. The fourth annual numerical taxonomy conference. Systematic Zoology 20(2):233-238.

Crovello, T.J., and W.W. Moss. 1971. A bibliography on classification in diverse disciplines. Classification Society

Bulletin 2(3):29-45.

- Crovello, T.J., and C.S. Hacker. 1972. Evolutionary strategies in life table characteristics among feral and urban strains of *Aedes aegypti* (L.). Evolution 26(2):185-196.
- *Rai, K.S., and Sr. M. Asman. 1972. Developmental effects of ionizing radiation in *Aedes aegypti*. Journal of Medical Entomology 9(5):468-478.
- Tihen, J.A. 1972. The fossil record. Pages 8-13 in W.F. Blair, editor, Evolution in the genus Bufo. University of Texas Press, Austin.
- Weinstein, P.P., and T.P. Bonner. 1972. Ultrastructure of cuticle formation in the nematodes *Nippostrongylus brasiliensis* and *Nematospirides dubius*. Journal of Ultrastructure Research 40:261-271.
-
- *Under the Radiation Laboratory
-

Chemistry

- D'Allelio, G.F. 1972. Preparation of polyoxazolidinones. U.S. Patent 3,694,406. September 26, 1972.
- D'Allelio, G.F., E.T. Hofman, and W.F. Strazik. 1972. Chelating polymers. IV. Monomeric n-hydroxyalkylaminoacetic acids as Chelating compounds. Journal of Macromolecular Science-Chemistry A6(3):471-512.
- D'Allelio, G.F., E.T. Hofman, and W.F. Strazik. 1972. Chelating polymers. V. Aminoacetic acid chelating polymers derived from polyglycidyl methacrylate. Journal of Macromolecular Science-Chemistry A6(3):513-567.
- *Funabashi, K., and T. Kajiwarra. 1972. Role of low-energy resonances in some elementary processes of radiation chemistry. The Journal of Physical Chemistry 76(19):2726-2732.
- *Hentz, R.R., and G. Kenney-Wallace. 1972. Optical absorption of solvated electrons in alcohols and their mixtures with alkanes. Journal of Physical Chemistry 76(20):2931-2933.
- *Hentz, R.R., Farhataziz, and E.M. Hansen. 1972. Pulse radiolysis of liquids at high pressures. III. Hydrated-electron reactions not controlled by diffusion. The

Journal of Chemical Physics 57(7):2959-2963.

- *Schwartz, M.E., and J.D. Switalski. 1972. Binding energy shifts for carbon, nitrogen, oxygen, and sulfur core electrons from extended Hückel theory valence molecular orbital potentials at the nuclei. Journal of the American Chemical Society 94:6298-6301.
- *Thomas, J.K., and J.T. Richards. 1972. Solvation of electrons in 3-methylhexane at 77°K. The Journal of Chemical Physics 57(7):3025-3026.
- *Watson, E., Jr., and S. Roy. 1972. Selected specific rates of reactions of the solvated electron in alcohols. National Standard Reference Data System, National Bureau of Standards 42:22 pp.
-
- *Under the Radiation Laboratory

Mathematics

- Clough, R.R., and J.D. Stasheff. 1972. BSJ does not map correctly into BSF Mod 2. Manuscripta Math. 7:205-214.
- Huckleberry, A.T., and R. Nirenberg. 1972. On a class of complex spaces intermediate to Stein and compact. Bulletin of the American Mathematical Society 78(5):852-853.

Physics

- Johnson, W.R. 1972. Radiative decay rates of metastable one-electron atoms. Physical Review Letters 29:1123.
- Johnson, W.R., and K.W. Broda. 1972. Single-quantum annihilation of positrons by screened K- and L-shell electrons. The Physical Review A6:1693.
- McGlinn, W.D., and S.K. Bose. 1972. Massive particles and the spontaneous breakdown of dilatation invariance. The Physical Review D6:2304.
- Shanley, P.E. 1972. Inelastic effects in approximate three-body amplitudes. The Physical Review C6:1445.

MEDIAEVAL STUDIES

- Beichner, P.E., CSC. 1972. Review of Ernest G. Mardon, The Narrative Unity of the Cursor Mundi. Speculum 47(3):539-540.

Closing Dates For Selected Sponsored Programs

Agency	Programs	Application Closing Dates	
National Institutes of Health	Fellowships in Laboratory Animal Science	January	2, 1973
	Postdoctoral and Special Research Fellowships in Health Communications	January	2, 1973

documentation

Statement of Agreement Between Notre Dame and Saint Mary's College on a Second Semester Co-Exchange Program for 1972-73

November 15, 1972

Educational enrichment is the most valuable objective of a viable co-exchange program. Therefore, conversations between the University and the College have been underway since August in hope of finding a better procedure that would make co-ex opportunities more freely available to students on both campuses. It has been agreed that at least for the second semester of 1972-73 a more generous exchange program will prevail.

Students at either school will be able to enroll in co-exchange courses next semester without incurring individual tuition charges. Special fees, if any, will be paid by the individual students themselves. Charges between schools will not be made for the second semester of this school year.

Each school will have a ceiling quota of 3,000 hours to be assigned by each institution according to guidelines determined by its own staff. Each school will seek to avoid overburdening specific departments in the other institution. There will be no requirement that this 3,000 quota be entirely used up, nor will there be an accounting for hours not so used. Following advance registration the results of this policy shall be re-evaluated and balanced by representatives from each institution on a joint committee. Other forms of cooperation will be progressively explored.

Thus, it is apparent that not every student will be able to take all the courses he or she wishes at the other institution since only if some form of control is exercised is it possible for co-exchange to work effectively.

The Department of Speech and Drama will continue as a joint department and its hours will be exclusive of or in addition to the 3,000 hour quota.

The right of students to register for courses in the other institution and pay the appropriate fees and tuition will continue to be in effect if they wish to exercise this privilege.

Reverend James T. BurtchaeII, C.S.C.
Provost
University of Notre Dame

Dr. Edward L. Henry
President
Saint Mary's College, Notre Dame

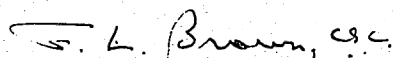
Minutes of the Academic Council Meeting November 16, 1972

The Academic Council met on November 16, 1972 to continue its deliberations on the revision of the Faculty Manual.

Most of the meeting was devoted to discussion of the article on the academic officers. With some minor amendments the Council approved the revision recommended by the Steering Committee. The major changes in this article include incorporation of the offices of Provost, Associate Provost, and Vice President for Advanced Studies; addition of the concurrence of the elected members of the Academic Council in the appointment of the Provost; addition of students to search committees for the Provost, Deans of the Undergraduate colleges and the Freshman Year of Studies, and the Vice President for Advanced Studies; establishment of a formal review for major University officers, and the enlargement of formal consultative procedures in the appointment of departmental chairmen to include all departmental faculty rather than only senior members as before. During discussion the Council rejected by voice vote a motion to substitute the Faculty Senate for the Academic Council as the body which provided for the faculty and student members making up the search committee for a Provost.

The Council also considered the first section of the Manual on the faculty. The Council voted to continue the four current categories--Teaching-and-Research, Special Research, Library, and Special Professional--and added a fifth category, Non-Regular Faculty which includes Visiting, Adjunct, Part-time, Guest, and retired Emeritus Faculty.

Respectfully submitted,



(Rev.) Ferdinand L. Brown, C.S.C.
Secretary to the Academic Council

Law Faculty Resolution of Appreciation to Father Hesburgh

November 21, 1972

Rev. Theodore M. Hesburgh, C.S.C.
President
University of Notre Dame
Notre Dame, Indiana 46556

Dear Father Ted:

Our Faculty asked that I forward to you the following resolution adopted at our meeting of November 21, 1972:

On the occasion of Father Hesburgh's departure from the U.S. Commission on Civil Rights, the law Faculty wishes to express its appreciation of his many years of dedicated service and moral leadership on that Commission, and to the cause of social equality in our country.

May I add, as a Notre Dame man and an American, my own gratitude to you.

Respectfully,

Thomas L. Shaffer
Dean

contents (continued)

documentation

- | | | | |
|-----|---|-----|--|
| 173 | Statement of Agreement
Between Notre Dame and
Saint Mary's College on
a Second Semester Co-Ex-
change Program for 1972-73 | 174 | Minutes of the Academic
Council Meeting, Novem-
ber 16, 1972 |
| | | 174 | Law Faculty Resolution
of Appreciation to
Father Hesburgh |

Dean Joseph C. Hogan
College of Engineering
Box 309
Notre Dame, Ind. 46556

notre dame report

An official publication published fortnightly by the University of Notre Dame, Department of Information Services. Individual copies are available in the Notre Dame Hammes Bookstore at 30 cents. Mail subscriptions are \$6 an academic year. Back copies are 50 cents each.

Vol. 2, No. 7

December 15, 1972



Mary Catherine Stevens, Editor
Publications Office, 209 Administration Building
Notre Dame, Indiana 46556
219: 283-1234
