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New Master's Degree Offered

A course of study leading to the master's degree in history of Christianity will be inaugurated during the fall semester by the University. Focusing on the development of institutions and heritages in the Christian tradition, the new sequence is expected to appeal to the growing number of students and adults seeking a complete knowledge of their beliefs. Faculty members from the departments of history and theology will share the teaching duties. Additional information may be obtained by contacting Rev. Marvin R. O'Connell, chairman of the history department.

Union-Management Conference

"Horizons for Future Collective Bargaining" is the theme of the 23rd annual Union-Management Conference scheduled at Notre Dame on June 10. John J. Carroll, assistant commissioner for research and statistics, will discuss the financial health of the nation's social security program on the topic "Projecting Social Security."

Other noted authorities in the area of industrial relations, benefit structures and evaluation of job factors will speak at the one-day session in O'Laughlin Auditorium of Saint Mary's College. Ken Bannon, vice president of the UAW, will discuss "The Labor Movement Reacting Today."

The annual conference is sponsored by Notre Dame's Department of Economics in cooperation with the Law School, Unions and Management, and Saint Mary's College.

Glee Club Records Album

Notre Dame's Glee Club has recorded a new Christmas album, "A-Caroling" containing songs arranged by David Clark Isele, present director, as well as by the late Daniel Pedtke, the group's director for more than 35 years. The stereo album is priced at \$5.95 and may be ordered by writing to A-Caroling, Notre Dame Glee Club, Box 403, Notre Dame, Ind. 46556.

Memorial Library Hours Summer Session

Memorial Library hours for Monday, June 20 through Thursday, August 4, 1977 are:

<u>lst and 2nd floors</u> Monday through Friday Saturday Sunday	8	a.m a.m p.m	
<u>4th through 13th floors (to</u> Monday through Saturday Sunday	8	a.m p.m	

The hours of service of the Research Libraries are posted in the individual libraries.

All libraries will be open on Independence Day, July 4.

Vol. 6, No. 18 June 3, 1977 Notre Dame Report is an official publication published fortnightly during the school year, monthly in summer, by the University of Notre Dame, Department of Information Services. Second-class postage paid at Notre Dame, Indiana. ©1977 by the University of Notre Dame, Notre Dame, Indiana 46556. All rights reserved.

faculty notes

Appointments

James R. Wruck, formerly the assistant director for Hardware/Software Systems, has been promoted to associate director of the Computing Center by R. Brian Walsh effective May 1.

Honors

Thomas P. Bergin, dean of Center for Continuing Education, was elected to the nominating committee of the New York Stock Exchange at the annual meeting May 9. The eight-member group, four from the securities industry and four from the public sector, recommends candidates to serve as directors of the exchange.

Edwin T. Mertz, visiting professor of chemistry, received an honorary degree, Doctor of Agriculture, honoris causa, from his home institution, Purdue University, at their commencement, May 15.

Brother Leo V. Ryan, C.S.V., dean of the College of Business Administration, was re-elected as director of the Vilter Corporation (Milwaukee) at their annual shareholders mceting, May 3. He was also re-elected as Director of Vilter Sales and Construction Company (Chicago), Viltar, International (Milwaukee) and Filbert Corporation (Miami). In addition, Brother Ryan was re-elected for a oneyear term as member of the National Board of Advisors, Benedictine Sisters of Nauvoo, Ill.

<u>Thomas J. Schlereth</u>, assistant professor of American studies, has won the Award for Distinguished Writing on Historic Preservation given by Southhold Restorations, Inc., at its annual awards banquet, May 11. Professor Schlereth was honored for his study of campus architecture and planning, <u>The University</u> of Notre Dame, A Portrait of Its History and Campus (1976).

<u>Albin A. Szewczyk</u>, professor of aerospace and mechanical engineering, has received an award from the Air Force Office of Scientific Research and the Office of Naval Research to attend the XIII Biennial Fluids Symposium in Poland in September 1977. <u>Ronald Weber</u>, chairman and associate professor of American studies, has been elected secretarytreasurer of the Ohio-Indiana American Studies Association.

Activities

<u>Joan Aldous</u>, William R. Kenan, Jr. professor of sociology, made a family sociology seminar presentation at Northwestern University, May 13.

<u>Nripendra N. Biswas</u>, associate professor of physics, presented a colloquium "Particle Production in Hadron-Hadron Collisions" at the Department of Physics, University of Iowa, on May 2.

<u>Neal M. Cason</u>, professor of physics, gave a talk on "Study of Scalar and Tensor Mesons in π $^{-}p \longrightarrow nK_{S}^{\circ}K_{S}^{\circ}$ Experiments" at the Annual ZGS User's Meeting, Argonne National Laboratory, Ill. on April 14.

<u>Thomas P. Cullinane</u>, assistant professor of aerospace and mechanical engineering, presented a seminar entitled "The Determination of Egress Routes for Emergency Conditions in Industrial Plants," at the University of Oklahoma, Stillwater, Okla. on May 12.

James P. Danehy, professor of chemistry, gave an invited lecture "Mechanistic Studies on the Cleavage of the Sulfur-Sulfur Bond in Organic Disulfides" at the Washington Research Center, W.R. Grace and Company, in Baltimore, Md. on May 12.

Fabio B. Dasilva, associate professor of sociology and anthropology, was the discussant of a session on Phenomenology and Sociology held at the Northcentral Sociological Association annual meeting in Philadelphia, May 12.

<u>A.L. Gabriel</u>, director of the Folsom Ambrosiana collection, presented an illustrated lecture on the "Iconography of Mediaeval Paris Colleges" May 12 at the annual meeting of the Mediaeval Academy of America in Toronto. <u>R.J. Havlik</u>, assistant director for technical services, Memorial Library, delivered a talk entitled "Penny Banks in American History and Technology" at the American Heritage Round Table in the Mishawaka Public Library on May 12.

<u>Richard J. Hunter, Jr.</u>, adjunct instructor of management, spoke on "Student Leadership in the Seventies" at the Cathedral High School National Honor Society Induction in Indianapolis on April 14.

<u>Moses Johnson</u>, assistant professor of psychology, delivered an invited address on: "Some Thoughts and Perspectives on the Various Approaches to Parent Training," May 15, and presented several papers with students (graduate and undergraduate) at the Third Annual Convention of the Midwestern Association of Behavior Analysis, Chicago, Ill. on May 14-17.

<u>Charles F. Kulpa, Jr</u>., assistant professor of microbiology, spoke on "Local Research in Cancer Chemotherapy," to the South Bend Rotary Club on March 30, and to the Roseland Rotary Club on May 19. <u>Charles A. Rey</u>, assistant professor of physics, gave an invited paper, "The Pion Form Factor," at the meeting of the American Physical Society in Washington, D.C. on April 27.

Ellen Bouchard Ryan, associate professor of psychology and <u>Richard J. Sebastian</u>, assistant professor of psychology, presented a joint paper entitled "The Effect of Speech Style and Social Class on Social Judgments of Speakers," at the annual meeting of the Midwestern Psychological Association in Chicago on May 5.

Thomas L. Theis, assistant professor of civil engineering, attended the 32nd Purdue Industrial Waste Conference, West Lafayette, Ind. where he presented a paper, "Field Investigations of Trace Metals in Groundwater from Fly Ash Disposal", May 10-12.

Eduardo E. Wolf, assistant professor of chemical engineering, presented a paper entitled "Activity and Lifetime of a Composite Automobile Catalyst Pellet" at the Fifth North American Meeting of the Catalysis Society held in Pittsburgh, April 24-27.

office of advanced studies

Information Circulars

New York State Senate Senate Legislative Fellows Program_

No. FY77-100

The New York State Senate Legislative Fellows Program is designed to give talented graduate students (at any stage of graduate study) a first-hand knowledge of New York State government. Major purposes of the program are to foster an accurate understanding of our governmental system and to interest bright students from a variety of academic disciplines in public service careers. Applications from students in disciplines not normally associated with political life, such as the sciences, engineering, and business one especially welcome. The fellows will spend an entire year in Albany during which they will be carefully trained and then immersed in staff work of the Legislature. This program offers a unique opportunity for new Ph.D's who have been unable to secure academic teaching positions to enter the non-academic world on a professional level.

Eligibility:

Ten fellows are chosen each year. Each must meet the following minimum requirements:

- * Be a matriculated student in a recognized graduate program at an accredited college or university at time of application;
- * Be a resident of New York State or attend an educational institution in New York State;
- * Have a strong orientation toward public service;
- * Possess an outstanding academic record;
- * Show evidence of strong research and communication skills.

The criteria of selection are ability, needs of the Senate, and geographic balance.

How to apply:

An application form;

- Transcripts of undergraduate and graduate;
- Two letters of reference from persons familiar with the candidate's academic and professional abilities;
- A typewritten essay of 2,500 words or less. The essay should focus upon a significant issue facing state government. It should cover the ways in which the applicant's own interests and experience and skills of his academic discipline relate to the analysis of the issue. Essays will be reviewed for coherence, organization, originality, and analytical quality.

Work Experience:

Fellows will work as legislative staff members during the year of the Fellowship. Due to the demanding nature of the work, no concurrent academic coursework is permitted.

Possible Assignments Include:

- A Senate Standing Committee, such as
- Transportation;
- A Senate Select Committee, such as Interstate Cooperation;
- The Senate Program Staff.
- " The Senale Program Start.

<u>Salary:</u> Fellows receive a salary of \$11,000 per year and the normal benefits of other Senate Employees.

National Institute of Mental Health Deadlines for Submission of Applications for Clinical or Services Manpower Training Grant, Fiscal Year 1978

<u>No. FY77-101</u>

Division of Manpower and Training Programs

The deadline for the submission of applications for clinical or services manpower training grants administered through the Division of Manpower and Training Program has changed from July 1, 1977 to September 15, 1977. Grant activities affected by this changed include:

> 1. <u>Mental Health Service Education</u> <u>Grants</u> for specialized training of professional and paraprofessional personnel for the delivery of mental health services in a variety of service settings.

2. <u>State Mental Health Manpower Development Grants</u> for capacity building in State and sub-State mental health jurisdictions to develop manpower systems necessary for providing quality mental health services. 3. <u>Mental Health Services Manpower Research and Development Grants</u> for a systematic approach to the development of knowledge and technology needed to address national mental health manpower issues and problems related to: (a) mental health manpower education and training; and (b) mental health manpower development in general.

Division of Special Mental Health Programs

The deadlines for the submission of applications for clinical or services manpower training grants administered through the Division of Special Mental Health Programs are October 1, 1977; February 1, 1978; and June 1, 1978. Grant activities affected by these deadlines include:

> 1. <u>Crime and Delinquency Training</u> <u>Grants for development, implementation,</u> and evaluation of innovative models for training professional and paraprofessional personnel to fulfill national needs in areas related to crime and delinquency.

2. <u>Metropolitan Problems Training</u> <u>Grants</u> to increase the capability of professional and paraprofessional personnel (mental health planners and service providers) to meet the needs of diverse and special urban populations, particularly underserved groups.

3. <u>Minority Group Mental Health Edu-</u> <u>cation Grants</u> to prepare minority group members for professional careers in the delivery of mental health services.

4. <u>Rape Prevention and Control Training</u> <u>Grants to develop, implement, and eval-</u> uate innovative models for training in the prevention, treatment, control of problems of sexual assault.

An announcement defining these program areas, designating the awarding units and describing the types of new, renewal, and supplemental applications eligible for support during the FY 1978 cycle, will be forthcoming by June 1, 1977.

Public Health Service Alcohol, Drug Abuse, and Mental Health Administration National Research Service Awards for Individual Fellows

No. FY77-102

The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) provides National Research Service Awards to individuals for research training experiences in specified areas of biomedical and behavioral research.

ADAMHA is redirecting the emphasis of support in its research training programs from pre-doctoral to postdoctoral support based on findings and recommendations from national manpower studies. While applications will be accepted for predoctoral or postdoctoral training, the highest priority will be given by ADAMHA to applicants for postdoctoral training.

The next receipt date for applications is October 1, 1977.

Public Health Service Alcohol, Drug Abuse, and Mental Health Administration National Research Service Awards for Institutional Grants

No. FY77-103

The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) will award grants to eligible institutions to develop or enhance research training opportunities for individuals selected by them who are training for careers in specified areas of biomedical and behavioral research.

ADAMHA is redirecting the emphasis of support in its research training programs from predoctoral to postdoctoral support based on findings and recommendations from national manpower studies. While applications will be accepted for training of predoctoral and/or postdoctoral individuals, the highest priority for funding will be given to applications for postdoctoral training. Any request for support of predoctoral training must be accompanied by special justification in terms of manpower needs in the particular research area(s) to be encompassed by the proposed training program.

The annual receipt date for applications is October 1.

Current Publications And Other Scholarly Works

ARTS AND LETTERS HUMANISTIC AND SOCIAL STUDIES

Economics

Kim, Kwan S.

Y.C. Chang and K.S. Kim. 1976. Segmented regression analysis in dealing with cross-section, qualitative data--In application to consumer attitudes toward gasoline conservation measures. Pages 242-244 <u>in</u>, Proceedings of the American Statistical Association--the Business and Economic Section. August 26-28, Boston.

Worland, Stephen T.

S.T. Worland. 1976. Mechanistic analogy in Smith's Theory of Policy. Pages 94-112 <u>in</u>, W.R. Morrow and R.E. Stebbins, eds. Adam Smith and the Wealth of Nations: 1776-1976. Eastern Kentucky University, Richmond, Kentucky.

Government and International Studies

Beitzinger, Alfons J.

- A.J. Beitzinger. 1976. The philosophy of law of four American Founding fathers. American Journal of Jurisprudence 21:1-19.
- Dowty, Alan K. A.K. Dowty. 1977. United States foreign policy and the current impasse: Some observations. Middle East Review 9(3): 39-46.
 - A.K. Dowty. 1977. Israel. Pages 311-314 in, Collier's Year Book.

History

DeSantis, Vincent P. V.P. DeSantis. 1977. Italy and the Cold War. Pages 26-39 <u>in</u>, J.M. Siracusa and G. St. John Barclay, eds. The Impact of the Cold War, Reconsiderations.

SCIENCE

Biology

- Saz, Howard J.
 - R.S. Rew and H.J. Saz. The carbohydrate metabolism of <u>Brugia pahang</u>: micro-filariae. <u>Journal of Parasitology</u>. 63(1):123-129.

Chemistry

- Thomas, J. Kerry *J.K. Thomas. 1977. Effect of structure and charge on radiation--induced reactions in micellar systems. Accounts of Chemical Research 10:133-138.
- *Under the Radiation Laboratory

Earth Science

- Horodyski, Robert J.
 - R.J. Horodyski. 1976. Stromatoliles of the upper Siyeh Limestone (Middle Pro-terozoic), Belt Supergroup, Glacier National Park, Montana. <u>Precambrian</u> Research 3:517-536.
 - R.J. Horodyski. 1976. Stromatolites from the Middle Proterozoic Altyn Limestone, Belt Supergroup, Glacier National Park, Montana. Pages 585-597 <u>in</u>, M.R. Walter, ed. Stromatolites.
 - B. Bloeser, J.W. Schopf, R.J. Horodyski, and W.J. Breed. 1977. Chitinozoans from the Late Precambrian Chuar Group of the Grand Canyon, Arizona. Science 195:676-679.

Microbiology

- Kulpa, Jr., Charles F. C.J. Pazoles and C.F. Kulpa, Jr. 1977. Biosynthesis and structure of lipopolysaccharide in an outer membrane-defective mutant of Escherichia col: J5. Biochimica et Biophysica Acta 466:160-175.

ENGINEERING

Aerospace and Mechanical Engineering

- Brach, Raymond M. B.M. Naveh and R.M. Brach. 1977. On the transition of a shaft through critical speeds. <u>Journal of Dynamic Systems</u> 99:48-50.
- Cullinane, Thomas P. T.P. Cullinane. 1977. Industrial air contaminants: An engineering--OSHA concern. Diversity-Technology Explosion 22:1-10.
 - T.P. Cullinane. 1977. Minimizing cost and effort in performing a link analysis. Human Factors 19(2):151-156.

Chemical Engineering

- Wolf, Eduardo E.
 - E.E. Wolf. 1977. Activity and lifetime of a composite automobile catalyst. Journal of Catalysis 47:85-91.
 - E.E. Wolf and T. Vermeulan. 1976. A multiple-layer cross-flow configuration for preparative chromatography of multicomponent mixtures. <u>Industrial</u> and <u>Engineering Chemistry, Process De</u>-sign and Development 15(4):485-490.
 - E.E. Wolf and E.E. Petersen. 1977. Kinetics of deactivation of a reforming catalyst during methylcyclohexane dehydrogenation in a diffusion reactor. Journal of Catalysis 46:190-203.
 - E.E. Wolf and E.E. Petersen. 1977. On th kinetics of self-poisoning catalytic re-On the actions. Journal of Catalysis 47:28-32.

Metallurgical Engineering

- Cullity, Bernard D.
 - B.D. Cullity. 1977. Some problems in X-ray stress measurements. <u>Advances in</u> X-ray Analysis 20:259-271. L.C. Ting, R. Stevens, and B.D. Cullity. 1977. X-ray diffraction in color. Metal Progress 111(3):3.

MEMORIAL LIBRARY

- Havlik, Robert J.
 - R.J. Havlik. 1977. Review of R.A. Sala-man, Dictionary of Tools Used in the Woodworking and Allied Trades, c. 1700-1970. American Reference Books Annual 8:430.
 - R.J. Havlik. 1977. Review of C.J. Sipple, Data Communications Dictionary, American Reference Books Annual 8:759.

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 <u>Closing Dates</u>
Administration on Aging Council for International Ex- change of Scholars	Model Projects on Aging University Lecturing and Advanced Research in Africa, Asia, and Europe for 1978–79	July 1, 1977 July 1, 1977
Health Resources Administration Health Resources Administration Health Resources Administration National Endowment for the Hu-	under the Fulbright-Hays Act Developmental and Demonstration Projects Exploratory Research Grants Research Project Grants Fellowship and Stipend Programs (summer	July 1, 1977 July 1, 1977 July 1, 1977 July 1, 1977 July 1, 1977
manities National Institute on Alcohol	seminars) Alcohol Abuse and Alcoholism	July 1, 1977
Abuse and Alcoholism National Institute on Drug Abuse	Academic Career-Teacher Awards (Nonmed- ical) in Narcotic Addiction and Drug Abuse	July 1, 1977
National Institute on Drug Abuse	Clinical Investigator Awards in Narcotic Addiction and Drug Abuse	July 1, 1977
National Institute on Drug Abuse	Research and Narcotic Addiction and Drug Abuse	July 1, 1977
National Institute on Drug Abuse	Training for Health and Health-Related Professionals in Narcotic Addiction Drug Abuse	July 1, 1977
National Institutes of Health National Institute of Mental	Biomedical Publication Grants Biotechnology Resources Medical Library Resources Projects to Support Animal Resources Research Project Grants Mental Health Epidemiology	July 1, 1977 July 1, 1977 July 1, 1977 July 1, 1977 July 1, 1977 July 1, 1977 July 1, 1977
Health National Institute of Mental	Mental Health of Children and Families	July 1, 1977
Health National Institute of Mental	Mental Health of the Aging	July 1, 1977
Health National Institute of Mental	Metropolitan Problems	July 1, 1977
Health National Institute of Mental	Minority Group Mental Health Programs	July 1, 1977
Health National Institute of Mental	Project Grants	July 1, 1977
Health National Institute of Mental	Research Grants	July 1, 1977
Health National Institute of Mental	Studies of Crime and Delinquency	July 1, 1977
Health National Science Foundation National Science Foundation	Earth Sciences Proposals Joint U.SAustralian Seminars and Workshops	July 1, 1977 July 1, 1977
National Science Foundation National Science Foundation	Oceanographic Equipment Proposal Ship Operations and Shipboard Tech-	July 1, 1977 July 1, 1977
National Science Foundation	nicians Support U.SIsrael Binational Science Found- ation Proposals	July 1, 1977
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Spring Commencement 1977 Honorary Degrees



At the 132nd Commencement the May Exercise The University of Notre Dame confers the degree of Doctor of Laws, <u>honoris</u> causa

the author of more than twenty books and hundreds of articles on both academic and pastoral subjects. He is the chancellor of an outstanding Catholic university, Cardinal Archbishop of one of the major cities of the world, and President of the Episcopal Commission

of his country which he has led in a most valiant proclamation on the requirements of human dignity. He serves as a ranking member of the Secretariat for Non-Believers in Rome, as well as the Vatican Congregation on Sacraments and Divine Worship. Elevated to the rank of cardinal in 1973, he has used his prestige and authority on outspoken defense of the human rights of all exploited groups in his country. He stands today as a sign of hope to those struggling for justice and social reform. As a Franciscan priest, he remains close to the poor and the suffering of his archdiocese. At the same time, he excels as innovative administrator, compassionate pastor, and determined leader. His words and actions are living reminders that the core of ministry is to heal, to sustain, and to guide. On

Paulo Evaristo Cardinal Arns Sao Paulo, Brazil



At the 132nd Commencement the May Exercise The University of Notre Dame confers the degree of Doctor of Laws, <u>honoris causa</u> on

an economist who has achieved high rank as both academician and government official. Born in Austria but raised in New Jersey, he was educated in Columbia University, earning his doctorate and Tater becoming John Bates Clark Professor of Economics there.

While he has lectured widely on American campuses, his original insights into the nature of economic fluctuation have propelled him beyond the confines of the academy. For twentyfive years, during the presidencies of Eisenhower, Kennedy, Johnson, Nixon, Ford and Carter, he has served his country with singular wisdom and distinction, coping at the highest governmental levels with inflation, recession, unemployment, and other forces which threaten the national economy and our commonweal. Currently he is serving his second term as Chairman of the Board of Governors of the Federal Reserve System. Notre Dame awards its accolade to a formidable figure, equally at home in the university lecture hall or the cabinet room. On

> The Honorable Arthur F. Burns Washington, D.C.



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, honoris causa

All scenarios leading to the highest office in our land share in the improbability which attended the birth of the republic itself, but some are more improbable than others.

Let us take an Annapolis graduate, a former Naval officer, a nuclear engineer, a successful farmer and businessman, a former Governor of the largest state East of the Mississippi who, a few years ago, began to work toward the presidency of this nation. It was said he could not be successful. No one from the Deep South had achieved this office since 1849 and, besides, he was an outsider unknown along the Potomac. He made some people nervous because he said publicly that he prayed privately. To the very day of election, it was said he was more enigmatic than charismatic.

He won and brought a new accent to the White House. At home, he began by offering a generous amnesty to those caught in the misadventure of Vietnam. Abroad, he began to use foreign aid as a leverage to improve conditions of human dignity throughout the world. He has bluntly told his countrymen that they must change a wasteful life style. And he has offered the Soviet Union the most comprehensive strategic arms limitation agreement in the history of disarmament negotiations. At work in all these initiatives in his oft-stated wish to bring about "a government as competent and as compassionate as are the American people." That, too, seems improbable, but it is the measure of the man that he has taught us to be hopeful about the improbable. On

The Honorable Jimmy Carter Plains, Georgia and Washington, D.C.



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, <u>honoris</u> causa on

a woman of rare accomplishment in the American business world. Her position as Chairman of the Board and Chief Executive Officer of the First Wisconsin Trust Company bespeaks both keen ability and

a strong spirit. With enviable professionalism, she has made her mark in her own company and in the many others who receive her sage advice. Beneath her business acumen is a gentility and sensitivity that identify a woman concerned with the human spirit and generous in its nurturing. Notre Dame honors as executive--competent and conscientious--and a woman--gentle and generous. On

> Catherine B. Cleary Milwaukee, Wisconsin



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At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, <u>honoris causa</u> on

an educator and scholar of great creativity, of international renown in the fields of international relations and diplomatic history. At present a professor at the University of Paris, he has recently been elected to the French Academy of Moral and Political Science.

Throughout the years of transatlantic difficulties, Professor Duroselle, a fervent advocate of international understanding, has been an able interpreter of American to Frenchmen and of French policies to Americans, especially through his books, lectures, and his work as Director of the Commission of French-American cultural exchanges.

It is particularly fitting that Notre Dame, whose very name bespeaks its French origins, should honor a distinguished French scholar on the eve of the bicentenary of the French-American alliance, the alliance that secured our independence and made us forever friends of France. On

Jean-Baptiste Duroselle Paris, France



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, <u>honoris causa</u> on

a native of Belgium, who has served the people of God with uncommon zeal and competence during his 43 years as a priest. Trained by the great Cardinal Cardijn, he brought his skill and deep faith to his service as a national chaplain of the Young Christian Students,

and as the director of the overseas work of the Belgian Church. Recognized for his spiritual strength and diplomatic skills, he has represented the Holy See in Laos, Malaysia, Singapore, and Thailand. With wisdom and justice, he later helped formulate the Catholic Church's response to the quest for liberation and human development in Africa while serving in Gabon, Cameroon, and Equatorial Guinea. Appointed Apostolic Delegate to this country four years ago, this gentle churchman has summoned forth high leadership among our bishops. On

The Most Reverend Jean Jadot Washington, D.C.



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, <u>honoris causa</u> on

the Archbishop of Seoul, primate of Korea, respected international advocate of social justice. Alert no less to the danger of the internal subversion of civil liberties in his country than to the ever present external threats to its national security, he boldly rallies

present external threats to its national security, he boldly rallies his countrymen to the defense of both in moments of impending crises. Stirred by the spirit of Vatican II, he calls on all his faithful, especially the laity and the young, to rediscover those values, sacred and profane, without which our society would find it difficult to survive. His lifelong commitments to the church and to the well-being of man provide the leadership and inspiration that we sorely need. A prominent journalist, distinguished educator, and brilliant administrator, this prince of the church remains above all a priest in touch with his people--an unfailing hope for the poor and defenseless.

> Sou Hwan Cardinal Kim Seoul, Korea



At the 132nd Commencement the May Exercises

The University of Notre Dame

confers the degree of Doctor of Laws, honoris causa

on

a teacher and student of constitutional law. Admitted to the bar in 1945, he spent a year with the Justice Department before moving on to the practice of law in New York City.

But the call to teach and to write were strong, and this teacher-scholar-author returned to the campus--to Indiana University, then to Northwestern, and finally to the University of Chicago, where over the past 24 years he has become one of its most distinguished professors.

As a commentator without ideological label on the way Americans live with their charter of government, he has won the applause of his students, with uncommon effect, of law and of religions and of judges. And the importance of constitutional law in today's society has no greater champion nor more able advocate than the person we now so honor. On

> Philip Kurland Chicago, Illinois



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, honoris causa on

the exiled Bishop of Umtali, whose refusal in his own words, "to become an agent of vengeance for an oppressive power" led to his vilification, to a prison sentence, to the loss of his Rhodesian citizenship, and finally to his deportation. During 31 years with

his fellow Carmelites in Rhodesia, the last 20 of them as bishop of a new diocese, and as president of the country's Justice and Peace Commission, he maintained an unremitting condemnation of racial discrimination, of economic exploitation, and of brutality. In a country where the church was in grave danger of becoming identified with the white ascendancy, his courage helped to restore a prophetic Christian witness among the oppressed peoples of Southern Africa. On this son of Ireland and adopted son of Africa and of the new Zimbabwe, on this friend of children and of prisoners, on this man of compassion amidst guerilla warfare and tyrannical countermeasures, a composer of limericks and dancer of Irish jigs. 0n

> Donal Patrick Lamont Umtali, Rhodesia



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Laws, honoris causa

a public man whose personal integrity and extraordinary practical wisdom have won the hearts and minds of constituents and the respect of colleagues for the past 40 years. Born into an Irish-American working class neighborhood in North Cambridge, Massachusetts, he

has demonstrated time after time in American politics what wonders the virtues of patience and prudence can work. As a state legislator, school committeeman, congressman, and now Speaker of the House of Representatives, he has known when to speak, whom to persuade; and what to give up in order to carry a legislative program. By nature a problem solver and conciliator, he has acquired a much deserved reputation as a master of the legislative process.

Ever alert to protect the interests of his constituents, he has had the courage to support policies in Washington which were unpopular at home because in conscience he believed them best for the nation. On

> The Honorable Thomas P. O'Neill, Jr. Cambridge, Massachusetts and Washington, D.C.



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Science, <u>honoris</u> <u>causa</u> on

a physician, teacher, scholar and innovative administrator who early recognized the relationship of human pathology and social ills and has labored to ameliorate community problems and inform public policy. He has enhanced the clinician's ability to reach

the wider community, providing the best of medical care to those who traditionally have been least able to command it. Soon he will conclude a dozen years as Dean of the Harvard Faculty of Medicine, where his ideal of extended service and outreach has been translated into a long series of significant public programs. We honor him today for a lifetime of dedication to medical science and the healing arts, and for his singular fidelity to his professional oath "...I will share my substance with him, I will supply his necessities if he be in need...". On

> Robert Higgins Ebert Boston, Massachusetts



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Engineering, <u>honoris</u> <u>causa</u> on

a native of Stoke-on-Trent, Staffordshire, England, who came to the United States as a boy in 1925. After completing his economics degree at the University of Pennsylvania in 1939, he joined the General Electric Company as a management trainee. Starting as a

traveling auditor, he rose through the corporate hierarchy to his present post as Chairman of the Board and Chief Executive Officer. As head of one of the world's largest industrial corporations, he has brought a philosophy and a style to the management task which have imbued his subordinates with an entrepreneurial spirit, a sensitivity to human values, and an awareness of the intimate relationship between the corporation and society. As a presidential advisor and a spokesman for the business community, he has brought his talents to bear on some of the nation's critical problems, including energy, the economy, and equality of opportunity. On

> Reginald H. Jones Greenwich, Connecticut



At the 132nd Commencement the May Exercises The University of Notre Dame confers the degree of Doctor of Engineering, <u>honoris causa</u> on

an engineering educator and consultant who is an alumnus and Trustee of this University. As Dean of Engineering at Howard University and as a Program Officer of The Alfred P. Sloan Foundation, he has been a vigorous leader in the nationwide efforts to increase opportunities

in engineering for minority students. His own research in electronic communications at Johns Hopkins, the University of Michigan, and the Rand Corporation has been recognized by his appointment as a White House Fellow and his election to the National Academy of Engineering. His alma mater now honors him as he responds to the call of his country and its President to serve as the Army's Assistant Secretary for Research and Development. On

> Percy A. Pierre Washington, D.C.

Commencement Address

Delivered by Jimmy Carter, President of the United States, at the commencement exercises at Notre Dame University, Sunday, May 22, 1977.

In his 25 years as President of Notre Dame, Father Hesburgh has spoken more consistently and effectively in support of the rights of human beings than any American I know.

His interest in the Notre Dame Center for Civil Rights has never wavered and he played an important role in broadening the scope of the center's work to include all peopleas shown in last month's conference here on human rights and American foreign policy.

That concern has been demonstrated again today by the selection of Bishop Donal Lamont, Paul Cardinal Arns, and Stephen Cardinal Kim to receive honorary degrees. In their fight for human freedoms in Rhodesia, Brazil and South Korea, these three religious leaders typify all that is best in their countries and in their church. I am honored to join you in recognizing their dedication and personal sacrifice.

Last week I spoke in California about the domestic agenda for our nation. Our challenge in the next few years is to provide more efficiently for the needs of our people, to demonstrate--against the dark faith of the times--that our government can be both competent and humane.

I want to speak today about the strands that connect our actions overseas with our essential character as a nation.

I believe we can have a foreign policy that is democratic, that is based on our fundamental values, and that uses power and influence for humane purposes. We can also have a foreign policy that the American people both support and understand.

I have a quiet confidence in our own political system.

Because we know democracy works, we can reject the arguments of those rulers who deny human rights to their people.

We are confident that democracy's example will be compelling, and so we seek to bring that example closer to those from whom we have been separated and who are not yet convinced.

We are so confident that democratic methods are the most effective, and so we are not tempted to employ improper tactics at home or abroad.

We are confident of our own strength, so we can seek substantial mutual reductions in the nuclear arms race.

We are confident of the good sense of our own people, and so we let them share the process of making foreign policy decisions. We can thus speak with the voices of 215 million, not just of a handful.

Democracy's great recent successes--in India, Portugal, Greece, Spain--show that our confidence is not misplaced.

Being confident of our own future, we are now free of that inordinate fear of communism which once led us to embrace any dictator who joined us in our fear.

For too many years we have been willing to adopt the flawed principles and tactics of our adversaries, sometimes abandoning our values for theirs.

We fought fire with fire, never thinking that fire is better fought with water.

This approach failed--with Vietnam the best example of its intellectual and moral poverty.

But through failure we have found our way back to our own principles and values, and we have regained our lost confidence.

By the measure of history, our nation's 200 years are brief; and our rise to world eminence is briefer still. It dates from 1945, when Europe and the old international order both lay in ruins. Before then, America was largely on the periphery of world affairs. Since then, we have inescapably been at the center.

We helped to build solid testaments to our faith and purpose--the United Nations, the North Atlantic Treaty Organization, the World Bank, the International Monetary Fund and other institutions. This international system has endured and worked well for a quarter of a century.

Our policy during this period was guided by two principles: a belief that Soviet expansion must be contained, and the corresponding belief in the importance of an almost exclusive alliance among non-Communist nations on both sides of the Atlantic.

That system could not last forever unchanged. Historical trends have weakened its foundation. The unifying threat of conflict with the Soviet Union has become less intensive even though the competition has become more extensive.

The Vietnamese war produced a profound moral crisis, sapping worldwide faith in our policy. The economic strains of the 1970's have weakened public confidence in the capacity of industrial democracy to provide sustained well-being for its citizens, a crisis of confidence made even more grave by the covert pessimism of some of our leaders.

It is a familiar truth that the world today is in the midst of the most profound and rapid transformation in its entire history. In less than a generation the daily lives and the aspirations of most human beings have been transformed. Colonialism has nearly gone; a new sense of national identity exists in almost 100 new countries; knowledge has become more widespread; aspirations are higher. As more people have been freed from traditional constraints, more have become determined to achieve social justice.

The world is still divided by ideological disputes, dominated by regional conflicts, and threatened by the danger that we will not resolve the differences of race and wealth without violence or without drawing into combat the major military powers. We can no longer separate the traditional issues of war and peace from the new global questions of justice, equity and human rights.

It is a new world--but America should not fear it. It is a new world--and we should help to shape it. It is a new world that calls for a new American foreign policy--a policy based on constant decency in its values, and on optimism in its historical vision.

We can no longer have a policy solely for the industrial nations as the foundation of global stability, but we must respond to the new reality of a politically awakening world.

We can no longer expect that the other 150 nations will follow the dictates of the powerful, but we must continue--confidently--our efforts to inspire, and to persuade, and to lead.

Our policy must reflect our belief that the world can hope for more than simple survival and our belief that dignity and freedom are man's fundamental spiritual requirements.

Our policy must shape an international system that will last longer than secret deals.

We cannot make this kind of policy by manipulation. Our policy must be open and candid; it must be one of constructive global involvement, resting on these five cardinal premises:

First, our policy should reflect our people's basic commitment to promote the case of human rights.

Next, our policy should be based on close cooperation among the industrial democracies of the world because we share the same values and because together we can help to shape a more decent life for all.

Based on a strong defense capability, our policy must also seek to improve relations with the Soviet Union and with China in ways that are both more comprehensive and more reciprocal. Even if we cannot heal ideological divisions, we must reach accommodations that reduce the risk of war. Also, our policy must reach out to the developing nations to alleviate suffering and to reduce the chasm between the world's rich and poor.

Finally, our policy must encourage all countries to rise above narrow national interests and work together to solve such formidable global problems as the threat of nuclear war, racial hatred, the arms race, environmental damage, hunger and disease.

Since last January we have begun to define and to set in motion a foreign policy based on these premises--and I have tried to make these premises clear to the American people. Let me review what we have been doing and discuss what we intend to do.

<u>First</u>, we have reaffirmed America's commitment to human rights as a fundamental tenet of our foreign policy. In ancestry, religion, color, place of origin and cultural background, we Americans are as diverse a nation as the world has ever known. No common mystique of blood or soil unites us. What draws us together, perhaps more than anything else, is a belief in human freedom. We want the world to know that our nation stands for more than financial prosperity.

This does not mean that we can conduct our foreign policy by rigid moral maxims. We live in a world that is imperfect and will always be imperfect--a world that is complex and will always be complex.

I understand fully the limits of moral suasion. I have no illusion that changes will come easily or soon. But I also believe that it is a mistake to undervalue the power of words and of the ideas that words embody. In our own history that power has ranged from Thomas Paine's "Common Sense" to Martin Luther King, Jr's "I Have a Dream."

In the life of the human spirit, words are action--much more so than many of us may realize who live in countries where freedom of expression is taken for granted.

The leaders of totalitarian countries understand this very well. The proof is that words are precisely the action for which dissidents in those countries are being persecuted.

Nonetheless, we can already see dramatic worldwide advances in the protection of the individual from the arbitrary power of the state. For us to ignore this trend would be to lose influence and moral authority in the world. To lead it will be to regain the moral stature we once had.

All people will benefit from these advances. From free and open competition comes creative change--in politics, commerce, science, and the arts. From control comes conformity and despair.

The great democracies are not free because they are strong and prosperous. I believe they are strong and prosperous because they are free.

<u>Second</u>, we have moved deliberately to reinforce the bonds among our democracies. In our recent meetings in London we agreed to widen our economic cooperation; to promote free trade; to strengthen the world's monetary system; to seek ways to avoiding nuclear proliferation; we prepared constructive proposals for the forthcoming meetings on North-South problems of poverty, development, and global well-being; and we agreed on joint efforts to reinforce and modernize our common defense.

Even more important, all of us reaffirmed our basic optimism in the future of the democratic system. Our spirit of confidence is spreading. Together, our democracies can help to shape the wider architecture of global cooperation, and the London meeting was a successful step toward this goal.

<u>Third</u>, we have moved to engage the Soviet Union in a joint effort to halt the strategic arms race. That race is not only dangerous, it is morally deplorable. We must put an end to it.

I know it will not be easy to reach agreements. The issues are extraordinarily complex, and American and Soviet interests, perceptions and aspirations vary. We need to be both patient and prudent.

Our goal is to be fair to both sides, to produce reciprocal stability, parity, and security. We desire a freeze on further modernization and continuing substantial reductions of strategic weapons. We want a comprehensive ban on nuclear testing, a prohibition against chemical warfare, no attack capability against space satellites, and arms limitations in the Indian Ocean. I hope that we can take joint steps with all nations towards eliminating nuclear weapons completely from our arsenals of death. We will persist.

I believe in detente with the Soviet Union. To me it means progress towards peace. But that progress must be both comprehensive and reciprocal. We cannot have accommodation in one part of the world and the aggravation of conflicts in another.

Nor should the efforts of detente be limited to our two countries alone. We hope the Soviet leaders will join us in efforts to stop the spread of nuclear explosives and to reduce sales of conventional arms. We hope to persuade the Soviet Union that one country cannot impose its own social system upon another, either through direct military intervention or through the use of a client state's military force--as with the Cuban intervention in Angola.

Cooperation also implies obligation. We hope that the Soviet Union will join in playing a larger role in aiding the developing world, for common aid efforts will help us build a bridge of mutual confidence.

Fourth, we are taking deliberate steps to improve the chances of lasting peace in the Middle East.

Through wide-ranging consultations with the leaders of the countries involved, we have found some areas of agreement and some movement towards consensus. The negotiations must continue.

Through my public comments, I have also tried to suggest a more flexible framework for the discussion of the three key issues which have so far been intractable: the nature of a comprehensive peace, the relationship between security and borders, and the issue of the Palestinian homeland.

The historic friendship between the United States and Israel is not dependent on domestic politics in either nation; it is derived from our common respect for human freedom and from our common search for permanent peace. We will continue to promote a settlement which all of us need. Our own policy will not be affected by changes in leadership in any of the countries in the Middle East. Therefore, we expect Israel and her neighbors to continue to be bound by UN Resolutions 242 and 338, which they have previously accepted.

This may be the most propitious time for a genuine settlement since the beginning of the Arab-Israeli conflict. To let this opportunity pass could mean disaster, not only for the Middle East, but perhaps for the international political and economic order as well.

Fifth, we are attempting, even at the risk of some friction with our friends, to reduce the danger of nuclear proliferation and the worldwide spread of conventional arms.

At the recent summit there was general agreement that proliferation of explosives from reprocessed nuclear wastes is a serious issue. We have now set in motion an international effort to determine the best ways of harnessing nuclear energy for peaceful use, while reducing the risks that its products will be diverted to the making of explosives.

We have also completed a comprehensive review of our own policy on arms transfers. Competition in arms sales is inimical to peace and destructive of the economic development of the poorer countries. We will, as a matter of national policy, seek to reduce the annual dollar volume of arms sales, to restrict the transfer of advanced weaponry, and to reduce the extent of our co-production arrangements with foreign states. Just as important, we are trying to get other nations to join us in this effort.

All of this is just the beginning. But it is a beginning aimed towards a clear goal; to create a wider framework of international cooperation suited to the new historical circumstances.

We will cooperate more closely with the newly influential countries in Latin America, Africa and Asia. We need their friendship and cooperation in a common effort as the structure of world power changes.

More than 100 years ago, Abraham Lincoln said that our nation could not exist half slave and half free. We know that a peaceful world cannot long exist one-third rich and twothirds hungry.

Most nations share our faith that, in the long run, expanded and equitable trade will best help developing countries to help themselves. But the immediate problems of hunger, disease, illiteracy and repression are here now. The western democracies, the OPEC nations, and the developed communist countries can cooperate through existing international institutions in providing more effective aid. This is an excellent alternative to war.

We have a special need for cooperation and consultation with other nations in this hemisphere. We do not need another slogan; although these are our close friends and neighbors; our links with them are the same links of equality that we forge with the rest of the world. We will be dealing with them as part of a new worldwide mosaic of global, regional and bilateral relations.

It is important that we make progress toward normalizing relations with the People's Republic of China. We see the American-Chinese relationship as a central element of our global policy, and China as a key force for global peace. We wish to cooperate closely with the creative Chinese people on the problems that confront all mankind. We hope to find a formula which can bridge some of the difficulties that still separate us.

Finally, let me say that we are committed to a peaceful resolution of the crisis in Southern Africa. The time has come for the principle of majority rule to be the basis for political order, recognizing that in a democratic system the rights of the minority must also be protected. To be peaceful, change must come promptly. The United States is determined to work together with our European allies and the concerned African states to shape a congenial international framework for the rapid and progressive transformation of Southern African society and to help protect it from unwarranted outside interference.

Let me conclude:

Our policy is based on an historical vision of America's role;

It is derived from a larger view of global change;

It is rooted in our moral values;

It is reinforced by our material wealth and by our military power;

It is designed to serve mankind;

And it is a policy that I hope will make you proud to be American.

Valedictory Address

Julius DeBroeck, B.S., Pre-professional Studies

Dear Members of the Notre Dame Family,

During this season of the year, hundreds of young people will stand in this capacity, reflecting upon the past four years of school and charging their classmates with the fate of the world. Often these speeches can become so overly optimistic as to sound foolish and naive. However, as much as we may try to deny our personal responsibilities, we are called by our God to alter the world by the power of our lives and the force of our faith.

So here I am, speaking as if I had some special insight, telling you to go out and change the world. I realize that this could sound like a poor political speech or an even worse sermon. Such talk would seem fine for congressmen or diplomats who are in a position to act upon such beliefs, but what about you and me? Not all of us will be peanut farmers from Georgia or college presidents from Indiana. What about those of us who will be businessmen in Ohio, lawyers in Arizona or doctors in Texas? How can one individual make a difference in a world gone crazy?

I can't give you any specific answers to the obvious problems of the world because I honestly don't know any of these long sought solutions. However, no matter how hopeless or senseless the world may seem, I can believe that it needn't remain so. I can believe that there are answers if we are willing to pay the price. No matter how much blood-shed and violence surround us, I believe that it need not continue forever. Looking beyond the darkness of prejudice, I see that the poor condemned to the ghettoes of our country or the victims of senseless violence throughout the war-torn countries are much like you and me--they want only the chance to lead a decent life, a life of peace, and in that life, to secure a better opportunity for their children. Basically what I am asking you, and myself, is to believe, with all your heart, in the promises of a poor carpenter's son from Galilee given to us 2,000 years ago, and the hope for change inherent in those promises.

A belief in the possibility of change can only create a potential for change, a potential that can be fulfilled only by our actions. Again, this would seem easy for those who write treaties or supply food for the needy. However, what the world desparately needs more than treaties or food are people--people of every profession who are not afraid to be real human beings, who are willing to care. On a public level, we can do all in our power to encourage decisions that reflect moral considerations, not merely the political and economic criteria that can crush individuals. We can realize that any change begins in the minds of a few individuals and becomes effective, not from governmental approval of the letter of the law, but by belief in the spirit of the law by each and every person. At a more personal level we can find that suffering is not monopolized by the Third World. We will see, in our family and friends, that loneliness and despair are just another kind of hunger, a hunger that can strike very close to home. In our professions, we can strive to see people not as medicaid or account numbers, but as individuals with unique hopes and desires and unique problems.

I can't predict any specific accomplishments for members of this class nor can I promise you a new world in five or 500 years. We can only trust in the promises of our God and try to live a life that will best reflect such a belief. Dag Hammarskjold once wrote "Life only demands from you the strength you possess. Only one feat is possible-not to have run away." All we can offer the world is our best effort to run towards those who need our help.

Thank you.

Laetare Medal

The University of Notre Dame to Michael Mansfield Greetings:

The man to whom Notre Dame gives its highest honor today has a favorite expression he learned as a young man in the copper mines of his native Montana: "Tap 'er light."

In Montana that proved good advice about nudging dynamite sticks into drill holes, but for our honoree it has also served a larger purpose in a situation some would consider no less sensitive--being first among 100 equals in the United States Senate.

With the encouragement and support of his wife, he left the mines, studied Asian history, and was a tenured professor when elected to the House of Representatives in 1943. Ten years later, he ran successfully for a seat in the Senate and in 1961 became Majority Leader.

His style in the upper chamber was curious. He was patient in a job which had usually called for arm-twisting. He promoted the careers of young senators when he was expected to defend the republic's most revered oligarchy. In a time of hyperbolic rhetoric, the best people could say of him was framed in old-fashioned words: fair, quiet, open, good. He gave presidents deep respect, but kept his own judgment. Instead of resisting change, he coaxed it along. In the end, he somehow got ahead by eschewing ambition.

And when last January he left for the last time the first seat on right of the center aisle in the front row, he had served as the Senate's Majority Leader for longer than any other person. He stepped down with the confidence of one whose discreet guidance had created responsible succession. He asked at that time, in his plain-spoken manner, only one favor. "After I'm gone," he said, "I want to be forgotten." It is a request as easily resisted as it was sincerely made. The nation will soon send Mike Mansfield as its ambassador to Japan, and Notre Dame proudly sends him abroad with its 95th Laetare Medal, awarded over the years to Catholics distinguished in service to their country. We can only give back to him his own gentle admonition: "Tap 'er light."

Faculty Senate Journal April 19, 1977

At 7:35 p.m. the chairman, Prof. James Danehy, called the meeting to order in Room 202 of the Center for Continuing Education and requested Prof. Paul Conway to offer a prayer. Danehy then introduced the newly elected members of the senate, who would officially be seated on May 10 but who had been invited to observe the meeting.

The Journal for March 24 having been approved, Prof. Norman Haaser presented the final report of the senate ad hoc committee on the departmental examination question. He said that the committee wished the senate to approve the report so that it might be discussed at the meeting of the Academic Council on May 2. Danehy then reviewed the controversy, explaining that the senate had passed a motion to suspend 8 a.m. exams until the issue had been studied; that the Academic Council had voted to table this motion, but that Father Hesburgh had requested the council to undertake such a study; that the senate committee, however, had been the only organization to have done so, despite a letter from the provost implying the contrary; and that Father Ferdinand Brown had asked Prof. William Biles for copies of the report to be distributed at the council meeting. Danehy then called for a brief recess so that the senators could read the report.

Conway, seconded by Prof. James Robinson, moved that the study be accepted by the senate, Robinson adding that its conclusions and recommendations be specifically endorsed. These conclusions, in brief, were that despite the concern expressed by the provost, morning exams interfere with students' activities more than do evening exams; that the results of the study "strongly suggest that the opportunity for evening examinations should be restored"; but that "given a lack of a really strong preference for evening exams to 8 a.m. exams, it is worthwhile to continue the prohibition against scheduling classes and laboratories at 8 a.m. Tuesday and Thursday."

In response to several questions, Haaser explained that Biles, who had chaired the committee but could not attend the meeting, might furnish a detailed account of the statistical techniques used in conducting and interpreting the surveys. He also said that the provost believed the number of student respondents (298 out of a total of 1400 surveyed) to be too small, but added that the sample was probably adequate because the students had been randomly selected. Prof. Claude Pomerleau noted further that the provost had made no study before announcing the change in policy. Profs. Morris Wagner and Kenneth Goodpaster expressed concern that those surveyed might not have approved of a double option, to which Haaser replied that the committee had not considered this solution until it discovered that opinion was divided and that such an option was only temporary. The motion was passed with no negative votes and three abstentions. Danehy, having stated that he would convey this result to the Academic Council, then thanked the members of the ad hoc committee: Biles, Haaser, Nancy Cox, Peter Haley, Tracy Kee, Carole Moore, Patricia Tack and Robert Williamson. Haaser added that Biles deserved special recognition.

Prof. Bobby Farrow reported that during the month of March, the senate had spent \$75.11, leaving a balance of \$1,069 (53.6 per cent of the budget) in the treasury.

In his chairman's report, Danehy stated that the senate had received two items of correspondence: a letter from Father Hesburgh indicating that he would be pleased to address the senate on its tenth anniversary, especially if the format allowed for discussion; and a letter from Mr. Charles McCollester stating that the mail room had been at fault for failing to seal envelopes containing confidential material, and promising that this oversight would be corrected in the future.

Danehy then asked the senators to nominate prospective members of the Student Life Council (SLC) and the Faculty Affairs Committee of the Board of Trustees (FAC). The faculty, he explained, would select candidates in a general election, choosing two new members of the SLC and three new members of the FAC; but in both instances, the senate would serve as a nominating committee. Those nominated for the SLC were the following (names of senators proposing candidates are in parantheses): Profs. Albert LeMay (Prof. John Lyon), William Biles (Profs. Hafiz Atassi and John Lucey), Lloyd Ketchum (Prof. Irwin Press), Sophie Korczyk (Conway), Julian Pleasants (Wagner), Thomas Theis (Lucey) and Gary Gutting (Goodpaster). Conway was named by Prof. James Wittenbach but declined the nomination. Those nominated for the FAC were Profs. John Santos (Press), Gerald Jones (Press), Robert Kerby (Press), Thomas Swartz (Robinson), Albin Szewczyk (Atassi), Paul Conway

(Prof. Lee Tavis), Stephen Rogers (Lyon), James Danehy (Press), Edward Cronin (Conway), Thomas Mueller (Lucey), Alberta Ross (Prof. Sonia Gernes), Frederick Crosson (Prof. Phillip Sloan), and James B. Stewart (Pomerleau). Press was named by Farrow but declined the nomination. In response to queries from Press and Goodpaster, Danehy said that he would allow the senators one day to inform the nominees that they had been chosen and to obtain their consent that they be listed on the ballot.

Danehy also announced that on May 10, the senate would elect officers for the coming year, and that senators wishing to propose candidates should so inform the Executive Committee before May 1.

The Committee on Administration having no report, Press spoke on behalf of the Faculty Affairs Committee and asked for a reconsideration of a motion passed by the senate on March 24: "that a study of the question of retirement be conducted by the Faculty Affairs Committee, the study to be initiated before the close of the current semester." Observing that the motion had been passed by a vote of 11-5, with 13 abstentions, Press inquired whether there was sufficient interest to justify his committee's working on this matter. Prof. Rufus Rauch suggested that the clause "before the close of the current semester" be deleted, and Gernes added that the fall term might be a more opportune time to study the issue. But Farrow, who had proposed the original motion, argued that the committee should be permitted to conduct its study at whatever time it deemed appropriate. An informal poll having been taken, Press said that he still did not sense sufficient interest to justify such a study, and Danehy suggested that the committee members settle the question among themselves.

The meeting was recessed at 8:41 p.m. and reconvened at 8:52 p.m.

Speaking for the Committee on Student Affairs, Pomerleau said that he had consulted Mary Clare McCabe, director of Student Development, who had affirmed the need for more faculty participation in the area of student life and residentiality. He added that his committee would discuss this matter further.

Robinson, seconded by Gernes, moved that the Academic Manual be amended by adding the following sentence to the end of the second paragraph of Article IV, Section 2:

An elected faculty member of a University body (exclusive of departmental committees) may, if necessary, be represented by a faculty member appointed as his or her proxy by the elected faculty member. Similarly, a student member of a University body may appoint a fellow student as proxy for a given meeting. Proxy representatives have full speaking and voting privileges.

He explained that the senate had already passed a motion giving the right of proxy to faculty members, but that the Executive Committee of the Academic Council, in a proposal to extend the same right to student members, had left open the possibility that faculty might choose proxies from outside the faculty, and that students might choose proxies from outside the student body. Hence, he said, the amendment was needed to eliminate any confusion. The motion was passed unanimously.

Referring to a motion (passed by the senate at its meeting of March 24) which would permit faculty members to appeal decisions of Committees on Appointments and Promotions, Prof. Paul Kenney observed that there is currently a provision for direct appeal to the provost. Robinson, however, said that at present an appeal can be made only if principles of academic freedom have been violated, and Press and Danehy argued that in any case appeals procedures need to be formalized.

There being no further business, the meeting adjourned at 9 p.m.

Those absent but not excused: Robert Anthony, physics; Reginald Bain, speech and drama; Paul Bosco, modern languages; Roberta Chesnut, theology; John Connaughton, law, Brian Crumlish, architecture; James Dougherty, English; W. Phillip Helman, radiation laboratory; Thomas Kapacinskas, theology; Sheridan McCabe, psychology and counseling center; Carole Moore, history; Arthur Quigley, electrical engineering; Robert Rodes, law; Rev. Charles Sheedy, theology; Ronald Weber, American studies.

Respectfully submitted,

Sarah B. Daugherty Secretary

Minutes of the Committee on Research and Sponsored Programs January 25, 1977

Date: January 25, 1977

Place: Room 202, Center for Continuing Education

Attendance: Thomas F. Broden Thomas J. Mueller Edward Manier Charles F. Crutchfield James P. Kohn Edward R. Trubac James L. Melsa Francis M. Kobayashi Robert E. Burns (for Isabel Charles) William Berry (for Joseph C. Hogan) David C. Leege Robert H. Schuler Thomas S. Fern Cornelius P. Browne John W. Houck Robert E. Gordon Leo V. Ryan, C.S.V. David T. Link John W. Mihelich

Absent: Thomas Schlereth John J. Kennedy Louis Pierce Bobby J. Farrow Bernard Waldman James T. Burtchaell, C.S.C. George A. Brinkley Morris Pollard

Observers: Justin A. Soleta Chau T.M. Le J. Michael Pinter

1. Minutes of the meeting held on Nov. 30, 1976:

The meeting was convened by Chairman Prof. John Mihelich at 3:30 p.m. Since there were no corrections to the minutes, the minutes were approved as printed.

2. Remarks by the chairman: Professor Mihelich:

Mihelich noted that the faculty Research Fund Announcement appeared in the Notre Dame Report No. 7, Dec. 17, 1976, and had a Feb. 1 deadline.

3. Programs in the Urban Institute - Prof. Thomas Broden:

The Urban Institute was created in 1970 with a mission of relating the resources of Notre Dame to various community, local, state, national and international needs. Particular emphasis was placed on social concerns. The activities of the institute can be divided into two broad categories: 1) Role of the Church in Urban Society and 2) Integrated Pluralism.

Under the umbrella of the Role of the Church in Urban Society are the programs concerning the Catholic Committee on Urban Ministry and the National Neighborhood Training Center. Included in the Integrated Pluralism area are the Urban Observatory, Upward Bound, Midwest Council of LaRaza, Multicultural Education and various activities in the private sector.

The first program established in the institute by Monsignor Jack Egan was the Catholic Committee on Urban Ministry. When the program began there was only a small number of people involved. It has now grown to an activity involving 3,000 people. The National Neighborhood Training Center is concerned with training seminarians and women religious in understanding urban society and institutions and the possible roles of the Church in such matters as juvenile justice, health, education, neighborhood preservation and re-vitalization.

The Urban Observatory program involves a combination of South Bend city government personnel and Notre Dame professors. The program is oriented around neighborhoods and it is concerned with the planning and delivery mechanisms of governmental services.

The purpose of Upward Bound is to identify young persons in high school with intellectual potential for further training, but have insufficient financial backing as well as educational deficiency. A summer program at Notre Dame which is tutored by graduate students and professors has evolved. The results have been extraordinary, with 85 to 90 per cent of the people involved in this program going on for advanced work.

The Secretariat of the Midwest Council for LaRaza is located in the Urban Institute. The Midwest Council of LaRaza is a coalition of Spanish-speaking neighborhoods. Its purpose is to call to the attention of the nation a large number of Spanish-speaking people in the Midwest area.

The Multicultural Education Program has been carried out in close coordination with the South Bend Community School System. The program provides summer institutes for teachers in the values of multicultural education and also provides school year assistance to integrate these ideas into programs at the school. Pilot programs have been conducted in the northeast area of the city regarding socio-economic factors.

In the private sector, the Urban Institute is providing technical and professional research assistance to two local organizations: The Urban Coalition and United Way. The institute currently has a number of students in the program of Urban Studies. Some of these students are taking double majors, while others have taken only a single course in Urban Studies.

4. Remarks by the Vice President for Advanced Studies - Prof. Robert Gordon:

Gordon commented on one of the problems that the Urban Institute has, that there is no single source of funding for its programs. As a result it must seek some funding from many different sources requiring a great deal of effort on its part. Broden amplified this comment by responding that it currently receives funding from HEW, HUD, the Lilly Foundation, several religious related foundations and the Campaign for Human Development of the Diocese of Fort Wayne-South Bend.

Gordon continued his remarks by pointing out that the December report of awards received and proposals submitted indicated a continuing progress toward the goals of research sponsorship. He noted, however, that there was a tendency on government agencies to spread their money over several proposals and, as a consequence, give a little bit to lots of people. This generally meant that each award was slightly less than had been the case in the past. This was reflected in the December report by showing a significant increase in the amount of awards but only approximately the same number of dollars versus last year's statistics at this time. There was some concern in the decrease in the number of proposals submitted and their associated total dollar volume. He emphasized the need to keep funded research volume up in order to minimize overhead costs. In the same line, Gordon noted that the average amount requested per proposal has dropped.

The prospects for sponsored research looks quite good. The budget proposals submitted by President Ford show an increase of approximately 8 per cent in research dollars. The National Science Foundation's basic research budget has a proposed increase of approximately 12 per cent. He emphasized the need to address the question of aging equipment and noted that there appears to be some improvements along this line from foundations such as NSF. He pointed out the continuing emphasis on areas of national need and an emphasis on quick pay-off research to the possible detriment of long-range research (basic research). He emphasized the need to educate non-science people to the needs for basic research.

James Melsa Secretary

Remarks of the Vice President for Advanced Studies

My remarks will be brief.

Data on Awards Received and Proposals Submitted, through Dec. 31, 1976, are at hand.

Most striking in the awards received category is the fact that some 33 more awards are reguired to maintain a dollar volume equal to that of FY75 in this fiscal year. The mean value of an award in FY75 was \$55,370 versus \$35,226 in the current year. This reduction is in keeping with observations made by various national budget watchers that the agencies are giving small packages to greater numbers. Allied to this, and of more concern, is the dollar-volume of proposals, some \$3.0 million less than in FY75, and near \$1.5 million less than last year, yet the number of proposals is approximately the same. As I have previously remarked, if you do not ask, you do not receive; and if you ask for a small amount--under current procedures--you receive something smaller.

Because I am concerned that we are doing more work for the same total dollars--without even a cost of living increase--I asked for the figures on proposals submitted this month. As of Jan. 25, we have 138 proposals with a total dollar value of \$7.4 million; in FY75, comparable data are 148 for \$9.9 million. While this month does witness some closure, we will need to step up proposal submission and the dollar value of our requests if we expect to finish the year at a level about \$15 million. It has been my experience that we are conditioned by program managers to seek less, without concomitant reduction in what we say we will do. This then amounts to a transfer of cost from the sponsor to the University. Somehow we need to break that trend and reduce costs.

The climate for research in the near term looks good. While the budget submitted by President Ford may well be modified by the new administration, I do not believe these modifications will materially reduce emphasis on basic research. The proposed budget shows an overall increase of 8 per cent for research. Other federal activities did not fare so well.

At NSF, which last year was our biggest single course for funds among federal agencies, the increase for research is 12.4 per cent above the FY77 total: \$688 million vs. \$606 million.

Late in the fall the National Science Board in its annual report pointed up the need to address both aged and out-moded major scientific equipment. Federal recognition of this need is reflected in the budget. However, early "leaks" on the plans for how the funds will be dispersed indicate that the institutions will have to match up to 50 per cent of total costs.

Emphasis continues on selected research areas embracing problems of national concern. Particular areas are environment, technology and economic productivity, the latter being given a hard push.

Financially there would appear to be some slight turn around from the Nixon days. But the climate for research in the long term is not good. At a recent symposium on the future of American Universities held at the American Physical Society meetings, Dale Corson put his finger squarely on the problem: continued emphasis on short-range, quick fix (thus conditioning for more of same) and the general lack of public appreciation of the nature and goals of research. One is most particularly worried that the public at large fails to recognize the difference between directed technology and unfettered basic research, but when a room full of decision-makers are confused, we have a problem. It is probably a fair bet that we had more members in the First Continental Congress who had intimate familiarity with the process and prospects of science and engineering than we have in Congress today. Less than 1 per cent of the combined membership of 535 in the House and Senate, at least prior to the last election, had a professional background in science and engineering. Most of these people are from the liberal arts-law tradition. And a look at Congressional action with respect to science and technology in the last several Congresses is a look at the lack of public understanding of basic versus applied research. While we may have some modification in the budget proposal by the White House, the major problems lie in the Congress. I am not convinced that academic natural scientists, social scientists, engineers and scholars in the humanities and arts are preparing the next generation of decision-makers with the sufficient background to engender a "yea" vote when the appropriation for the several independent agencies supporting scholarly work is on the floor. But that is another matter.

The point of all this is that despite possible cutbacks in the budget request as it moves through to appropriation, funds are present now and will continue to be available next year to good proposals. We need to insure that our ideas, in proposal form, are at least exposed for possible funding.

Summary of awards received and proposals submitted for the period July 1, 1976 to Dec. 31, 1976.

	AWARDS RECEIVED	
Category	Number	Amount
Research Facilities and Equipmen Educational Programs Service Programs	46 3 12 <u>28</u> Total 89	\$2,459,062 76,000 425,443 <u>174,611</u> \$3,135,116
	PROPOSALS SUBMITTED	
Category	Number	Amount
Research Facilities and Equipmen Educational Programs Service Programs	$ \begin{array}{ccc} 71\\ 1\\ 37\\ \hline 1\\ Total \end{array} $	\$3,947,133 19,500 1,670,490 70,033 \$5,707,156
	Charles and the second se Second second sec second second sec	

Comparison with the corresponding period of two preceding fiscal years is as follows:

		July 1, 1974 to December 31, 1974		July 1, 1975 to December 31, 1975		July 1, 1976 to December 31, 1976	
	lan Artistan ing ta	No.	Amount	No.	Amount	No.	Amount
Awards rece	ived	56	\$3,100,717	73	\$2,817,372	89	\$3,135,116
Proposals s	ubmitted	119	\$8,629,986	119	\$7,160,789	110	\$5,707,156

Minutes of the Committee on Research and Sponsored Programs March 8, 1977

Date: March 8, 1977

Place: Room 202, Center for Continuing Education

Attendance: T. Asano Thomas F. Broden Thomas J. Mueller Edward Manier Charles F. Crutchfield James F. Kohn James L. Melsa Francis M. Kobayashi Robert E. Burns (for Isabel Charles) William Berry (for Joseph C. Hogan) David C. Leege Thomas S. Fern Cornelius P. Browne Robert E. Gordon John W. Mihelich Thomas Schlereth John J. Kennedy Louis Pierce Bobby J. Farrow George A. Brinkley

Absent: Bernard Waldman James T. Burtchaell, C.S.C. Morris Pollard

Observers: Justin A. Soleta Chau T.M. Le

1. Minutes of the meeting held on Jan. 25, 1977:

The meeting was convened by the chairman, Prof. John Mihelich, at 3:30 p.m. There being no corrections, the minutes were approved as printed.

2. Report on the Vector Biology Laboratory - Prof. George B. Craig:

Craig presented an interesting report on the activities of the Vector Biology Laboratory. See attached information.

3. Remarks of the chairman - Mihelich:

Mihelich informed the committee that he had appointed a nominating committee, consisting of Profs. James Kohn, chairman and Cornelius Browne and Thomas Schlereth, to make nominations for the at-large members to the University Committee for Research and Sponsored Programs. In addition, the committee will make recommendations for officers next year, including the chairman, vice chairman and secretary. Other members of the committee will be elected by the individual colleges.

4. Report of the Faculty Research Fund Committee - Prof. A. Edward Manier:

The announcement for this year's Faculty Research Fund Competition was placed in the Dec. 17 Notre Dame Report. The announced review committee for the Faculty Research Fund was Profs. Morton S. Fuchs, John Kozak, James Melsa, Edward Trubac, Carl O'Nell and Manier, chairman. Twenty-two proposals were received, these proposals divided into 15 from the College of Business, 5 from the College of Arts and Letters, 1 from the College of Science and 1 from the College of Engineering. Because of the large number of proposals from the business college and the small number from the science college, Fuchs agreed to resign his position on the review committee and was replaced by Prof. Herb Sim in order to more effectively review the proposals. In reviewing the proposals and in making final recommendations for awards, the committee carefully followed all of the published rules. They recommended the funding of 13 proposals, totaling \$17,800. The proposals were classified into four categories: 1) science and engineering; 2) arts and letters; 3) business-quantitative and 4) business-behavior science. Proposals in each of these categories were ranked and then cross-category comparisons made. Kohn asked why such a small number of proposals were received. Two explanations were offered: 1) there are now fewer young people in the University and 2) that the tighter guidelines had made it unattractive for some of the more senior people.

Prof. Gordon asked if he should increase the funding to one of the individuals who has indicated a need for additional money. The individual's original proposal had asked for more than the published guidelines allowed. The committee had cut back his funding to that allowed by the published rules, recognizing that this could create a hardship. After considerable discussion, it was the general censensus of the committee that the rules should continue to be applied to all individuals. They pointed out the possible ill-will that could be created by people who had voluntarily limited their request to that allowed by the published rules.

The details of the awards will be published in a Notre Dame Report.

5. Research Proposal Handbook - Manier:

Manier handed out copies of the Research Proposal Handbook prepared by Leege and Manier for use in the arts and letters college. The handbook was written to help faculty interested in becoming involved with sponsored research and to eliminate some of the demands placed upon Manier and Leege for answering routine questions. The handbook was sent to all faculty in the arts and letters college and attempts to answer three questions: 1) what is the format of a proposal; 2) what are the deadlines associated with various types of programs; and 3) what are the Notre Dame procedures regarding sponsored research.

In addition, the Center for the Study of Man has also opened a Browsing-Reference Room in Room 1122 of the Memorial Library. This Browsing Room is stocked with all of the standard grants' reference encyclopedias, newsletters and the Guide to Federal Assistance for Education.

Leege indicated that this handbook, in part, grew out of the Center for the Study of Man's effort to help social science and humanity faculty to become more involved with external research funding. He plans that it will be updated every two or three years. They also hope to have summer workshops on how to prepare a proposal, which will be directed by Manier. Although the handbook is directed at social science and humanity faculty, it should also be of interest to faculty members in other parts of the University. Leege indicated that copies of the handbook are being mailed to all deans and department chairmen in the University.

6. Remarks of the Vice President for Advanced Studies - Gordon:

Gordon reviewed the summary of awards and proposals for this school year. He indicated that his office processed 37 proposals in February and noted the importance of following the ten-day lead time for proposal processing. Gordon also noted that again the smaller dollar amounts of proposals and awards. He indicated that we have continued to have approximately a 50 per cent success rate.

Gordon briefly reviewed the DNA Recombinant Research situation at the University. He indicated that the accusations regarding this type of work were totally unfounded. The University does have an annual agreement with Miles Laboratories for conducting joint research projects and this issue has led to a change in that agreement. Before this change, there was no way to review the research activities being undertaken regarding this agreement because of certain proprietary aspects of the work. The new agreement will include a sunshine rule which will allow a University review of the research to insure compliance with University and governmental regulations.

Gordon noted that NIH guidelines say nothing about the type of research being conducted at Notre Dame. He noted that there are three bills currently pending in Congress requiring compliance with NIH rules on recombinant research. These bills are very specific and limited only to this type of research. However, there is growing pressure to generalize these bills, or to generate other types of regulations which would begin to restrict and control all types of research. He indicated the severe consequences of such regulations. Gordon also noted that there is a group of people in Washington pushing for an Environmental Impact Statement to be associated with any research which would modify the environment in any way.

Gordon commented briefly on the situation regarding page charges and U.S. Postal regulations. A strict enforcement of current rules would indicate that if an article is paid for by the government or others through page charges, that it will be necessary to place the words "Paid Advertisement" on the article. Gordon believes that the Carter administration would make only small modifications in the budget submitted by President Ford with regard to research activities. He noted, however, that NIH Biomedical Science Support Grants have been omitted from the new budget. He is now actively fighting to have this program reinstated and believes that it probably will be. There was a brief discussion of the future and features of institutional grants of this type.

A new extramural research program of approximately \$27 million is being established by the Agriculture Department. As of this time, they do not appear to know how they are going to run this program. However, the focal point of the program seems to be on photo-synthesis.

Manier pointed out that faculty fellowships do not appear in the Report of Sponsored Research. Gordon pointed out, however, that the Faculty Annual Report would list such fellowships as an award or honor.

Manier pointed out the need to simplify certain Notre Dame procedures for proposal processing. In particular, he noted the need for simplifying the method of handling activities involving the Center for Continuing Education. Gordon pointed out that some improvements have been made in this line and asked Manier to send him a memo describing the problems in more specific detail.

Respectfully submitted,

James L. Melsa Secretary

Vector Biology Laboratory

The 35 people at Notre Dame who work on mosquitoes are organized into the Vector Biology Laboratory. First initiated in 1957, the VBL contains people having widely diverse interests, from molecular biology to population biology, yet all concentrate on the same group of organisms. This multi-discipline approach to mosquitoes has been synergistic.

Research results are published in professional and scientific journals; more than 200 papers have been produced. The VBL holds weekly seminars on mosquito biology. It main-tains a library of 2,000 volumes, primarily on mosquito biology.

Components of the VBL:

1. World Health Organization International Reference Center for Aedes

Over 35 species and 150 strains of mosquitoes are maintained. Emphasis is on <u>Aedes</u> <u>aegypti</u>, with standard strains, geographic variants, inbred lines and strains up to eight genetic markers. The material is available on request to interested research workers.

2. MODABUND

In the Mosquito Data Bank, the recent literature on mosquitoes has been computerized. Twenty-six thousand references on mosquitoes have been taped, covering 1940 to the present. Computerized key word searches allow rapid preparation of bibliographies.

3. Training Program in Mosquito Biology

A Mosquito Biology Training Program is devoted to the production of new Ph.D.'s able to apply aspects of modern biology to the traditional fields of medical entomology and parasitology. Mosquito-borne pathogens maintained include <u>Plasmodium gallinaceum</u>, <u>Crithidia fasciculata</u>, <u>Brugia pahangi</u>, <u>Dirofilaria immitis</u> and <u>LaCross Encephalitis</u> Virus. 4. Laboratory Research Programs

- a. Formal Genetics George Craig
- Cytogenetics Karamjit Rai b.
- c. Reproductive Biology Morton Fuchs, Craig, Rai
 d. Population Biology Theodore Crovello, Craig, Rai c.

- e. Systematics Crovello
 f. Biochemical Studies Fuchs
 g. Behavior Genetics Craig
 h. Arboviruses Paul Robert Grimstad
- 5. Field Research Frograms
 - a. Mombasa, Kenya: Ecological Studies of <u>Aedes aegypti</u>. Preliminary to Genetic Control (With AID & ICIPE)
 b. Delhi, India: Genetic Control of <u>Culex fatigans</u> and <u>Aedes aegypti</u> (with WHO & ICMR)

 - с.
 - U.N.D. Environmental Research Center, Gogebic Co., Upper Mich.

d. St. Joseph Country Mosquito Control Program

Research supported by National Institutes of Health, Energy Research and Development Agency, Communicable Disease Center, National Science Foundation, U.S. Agency for International Development, United Nations Development Program, Smithsonian Institution, John Muir Foundation, World Health Org. and Indiana Dept. Public Health.

Name	Position	Research Interest				
Teaching and Research Faculty						
George B. Craig, Jr.	Clark Professor	Vector genetics; reproductive				
		physiol systematics & bio-				
		nomics of Aedes				
Theodore J. Crovello	Professor	Numerical taxonomy; population				
		biolog computerized Mosquito				
	가지 말 수 있는 것 같아요. 이 가지 않는 것 같아요.	Data Bank				
Morton S. Fuchs	Professor	Biochemical genetics; hormone				
		and gene-controlled sterility;				
Kananista C. Dat		reprod.				
Karamjit S. Rai	Professor	Cytogenetics; chemosterliants &				
Research Associates - Fa	<u>au1+v</u>	radiation; chromosome mechanics				
Paul Grimstad	Asst. Fac. Fellow	0				
Paul Grinistau	ASSL. Fac. Fellow	Arbovirus transmitting & sur-				
		veilance; <u>A. triseriatus</u> , hendersoni bionomi				
Suk-Hee Kang	Asst. Fac. Fellow	Biochemistry of Mosquito Repro-				
Suk-nee kung-	ASSC. THE TETTOW	duction				
Postdoctorals	<u>ter parti de transfera de presenta de </u>					
Durland Fish	NIH PD Fellow	Treehole Mosquito Ecology				
Ken France	NIH PD Trainee	Biochem. of Mosquito Reproduction				
Tom Kelly	NIH PD Trainee	Biochem. of Mosquito Reproduction				
Philip Lounibos	ICIPE Res. Assoc., NIH	In Kenya, ecologist at MBU				
Annalisa Marchi	Italian Ministry Pub.	Cytogenetics (DNA replication				
지 않는 것은 것 같은 것 같은 것을 했다.	Hlth. & ERDA (U.S.A.)	patterns in mosquitoes)				
Robert Novak	NIH PD Fellow	Population Ecology				
Fidelis Ogah	ICIPE Res. Assoc., UNDP	In Kenya, population genetics,				
말 이 같은 것을 수 있는 것을 가지 않는 것을 가 없다.		MBU				
Stephen Saul	NIH PD Fellow	Population genetics				
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Name	Position	Research Interest
Graduate Students		
Paul Fortunato	Teaching Asst.	Biochemistry of Autogeny
Margaret Lien	Teaching Asst.	Mutant analysis; phenogenetics
Peter Masler	Teaching Asst.	Biochemistry of Autogeny
Moosa Motara	Teaching Asst.	Chromosome banding methods
Leonard Munstermann	Teaching Asst.	Allozymes: E. African popula- tion; formal genetics
John Peloquin	Teaching Asst.	Mosquito trapping; field method
John Petersen	Teaching Asst.	Mosquito behavior
Donald Shroyer	Teaching Asst.	<u>A. triseriatus</u> - population biology
Henry Sneed	Teaching Asst.	
Larry Szymczak	Teaching Asst.	Interspecific hybridization
Lavern Whisenton	NSF Biomedical	Mosquito ultrastructure
	Fellowship	
Undergraduates		
Ann Berges	Senior	Phenogenetics of mutants
Margaret McKiernan	Sophmore	Arbovirus vector studies
David Taylor	Senior	Phenogenetics of mutants
Technical Aides		
Sue Ball	Research Technician - Rai	
Ernestine Hodges	Research Technician - Craig	
Peggy Hodges	Research Technician - Craig	
Carol Jolly	Research Technician - Fuchs	
Mary Richardson	Technical Typist - Craig	
Loretta Wasmuth	Laboratory Manager - Criag	





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

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