

NOTRE DAME REPORT

THE UNIVERSITY

- 191 *Hatch Elected Provost*
- 191 *McKenna, Malloy and Beauchamp Elected to New Terms of Office*
- 191 *Welsh Family Underwrites Women's Residence Hall*
- 192 *Notre Dame Selected to Templeton Honor Roll*
- 192 *Committee on International Studies Formed*
- 192 *Office of University Computing Renamed Office of Information Technologies*

DOCUMENTATION

- 197 *Corrections to Notre Dame Report #4*
- 200 *Opening Mass Homily
September 10, 1995*
- 202 *President's Address to the Faculty
October 10, 1995*
- 212 *University Committee on Libraries
September 22, 1995*

FACULTY NOTES

- 193 *Honors*
- 193 *Activities*

THE GRADUATE SCHOOL

- 213 *Current Publications and Other Scholarly Works*
- 217 *Awards Received and Proposals Submitted*
- 218 *Awards Received*
- 219 *Proposals Submitted*

NOVEMBER 17, 1995 • NUMBER 6

Hatch Elected Provost

Nathan O. Hatch, vice president for graduate studies and research since 1989, was elected provost of the University by the Board of Trustees. Hatch will succeed Timothy O'Meara, provost since 1978, on O'Meara's retirement from the post June 30, 1996.

The provost is the University's second ranking officer and, at the direction of the president, exercises overall responsibility for the academic enterprise. Hatch will be the third person to hold the position at Notre Dame since its establishment in 1970.

Hatch, a professor of history and member of the faculty since 1975, regularly is cited as one of the most influential scholars in the study of the history of religion in America. His book, *The Democratization of American Christianity*, published by Yale University Press in 1989, has garnered three awards and was chosen in a survey of 2000 historians and sociologists as one of the two more important books in the study of American religion.

Hatch served as acting dean of the College of Arts and Letters in 1988-89, and from 1983 to 1988 was associate dean. During that time he founded and directed the Institute for Scholarship in the Liberal Arts, which fostered a six-fold increase in external funding of faculty in the humanities and social sciences and assisted faculty members in winning 21 National Endowment for the Humanities fellowships from 1985 to 1991 — an achievement that ranked the University among the top 10 nationally.

Hatch directed graduate studies in the history department from 1980 to 1983, during which time he also was awarded the college's Paul Fenlon Award for excellence in undergraduate teaching.

A summa cum laude graduate of Wheaton College in 1968, Hatch earned his master's and doctoral degrees, in 1972 and 1974, respectively, from Washington University in St. Louis. He has held postdoctoral fellowships at Harvard and Johns Hopkins Universities and has been awarded research grants by the National Endowment for the Humanities, the American Council of Learned Societies and the American Antiquarian Society.

Hatch was president of the American Society of Church History in 1993 and is a senior advisor to the Religion Division of the Pew Charitable Trusts. Active in South Bend civic affairs, he was elected vice chair of the board of the St. Joseph Medical Center and serves on the board of the Michiana Public Broadcasting Corporation. He was a director of the United Way of St. Joseph County from 1987 to 1992.

McKenna, Malloy and Beauchamp Elected to New Terms of Office

The Board of Trustees elected Rev. Edward A. Malloy, C.S.C., to a third five-year term as president to begin July 1, 1997, and elected board chair Andrew J. McKenna of Winnetka, Ill., to a new two-year term beginning in May 1996. The board also elected Rev. E. William Beauchamp, C.S.C., to a third five-year term as executive vice president concurrent with Malloy's.

McKenna has served as chair of the board since June 1992 and previously was the board's first vice chair, assuming that role with its creation in 1986.

Based upon internal reviews of the three officers, the board undertook their reappointments in conjunction with the election of Nathan O. Hatch as the new provost and preparatory to the mounting of the University's next capital campaign.

Welsh Family Underwrites Women's Residence Hall

One of two new women's residence halls now under construction on the West Quad will be underwritten with a gift from the Robert J. Welsh family. Robert Welsh, a Notre Dame alumnus and trustee, is president and chief executive officer of Welsh, Inc., of Merrillville, Ind.

A native of Gary, Ind., Welsh was graduated from Notre Dame in 1956 with a bachelor's degree in finance. He began his career at Welsh Oil, Inc., that same year and assumed the leadership of the company in 1968. He was a member of the Advisory Council for the Law School from 1987 to 1990, then joined the Advisory Council for the College of Business Administration until his election as a Trustee in 1991. He previously served on the board of regents of Saint Mary's College, including several years as vice chair of the board, and is a benefactor of the Center for the Homeless in South Bend. He is a recipient of Saint Mary's President's Medal and of a Notre Dame alumni club "Man of the Year" award.

In addition to heading Welsh, Inc., Welsh also is president of Aspen, Inc., a petroleum hauling company. He is director of Catholic Charities; Northern Indiana Public Service Company; NIPSCO Industries, Inc.; NBD Indiana, Inc. (Indianapolis); the Northwest Indiana Forum; the Northwest Indiana Entrepreneurship Academy; Zollner Industries; and Lakeshore Health Systems.

Notre Dame Selected to Templeton Honor Roll

Notre Dame has been selected to the 1995 John Templeton Foundation Honor Role for Character Building Colleges. Established in 1989, the biennial honor role recognizes those institutions of higher learning that best "encourage the development of strong moral character among students."

The Templeton Foundation was formed in 1987 by international investment counselor John M. Templeton to forge stronger links between the sciences and all religions. The foundation works closely with scientists, theologians, philosophers, scholars and medical professionals to support programs and studies that seek to further understanding of spirituality and the importance of personal character.

Committee on International Studies Formed

A committee to assist in the development of international studies at Notre Dame and a new director of international studies programs have been appointed.

Thomas E. Bogenschild has been appointed director of international studies. A 1977 graduate of Occidental College, Bogenschild obtained a master's degree in anthropology from the University of Chicago in 1984 and a doctoral degree from the University of California at Berkeley in 1992. A specialist in cultural anthropology, he has a particular interest in the religions, cultures and politics of Central America and is at work on a book, "The Roots of Protestant Fundamentalism in Liberal Guatemala, 1882-1940." He was vice chair of Berkeley's Center for Latin American Studies from 1989 to 1993. Before coming to Notre Dame he was associate director of the program in Latin American studies at Princeton University.

The ad hoc Committee on International Studies was approved by the Academic Council last May. It will recommend policies for a wide variety of international activities including international study programs, faculty and student exchanges, foreign language study and library resources. Appointed for an initial two-year period, the ad hoc committee also will recommend a permanent committee structure to the Academic Council.

The committee, to be chaired by Rev. Timothy R. Scully, C.S.C., will include all the University's deans, the academic directors of the international institute and centers, and other faculty members with international expertise.

Members of the committee are: Harold W. Attridge, dean of the arts and letters; Thomas Bogenschild; Francis J. Castellino, dean of science; Seamus Deane, Keough professor of Irish studies; Jo Ann DellaNeve, associate professor and chairperson of Romance languages and literatures; Rev. Patrick Gaffney, C.S.C., associate professor of anthropology; Alexander Hahn, professor of mathematics; Iván Jaksic, assistant provost for international studies; John G. Keane, dean of business administration; Eileen Kolman, dean of the Freshman Year of Studies; Rev. William M. Lewers, C.S.C., director of the Center for Civil and Human Rights; David T. Link, dean of law; A. James McAdams, associate professor of government and international studies; Anthony N. Michel, dean of engineering; Robert C. Miller, director of University libraries; Dian H. Murray, associate dean of arts and letters; Guillermo A. O'Donnell, academic director of the Kellogg Institute; Mihir Sen, professor of aerospace and mechanical engineering; Raimo V. Väyrynen, director of the Kroc Institute; Michael A. Wadsworth, director of athletics; J. Robert Wegs, professor of history; and Robert W. Williamson, professor of accountancy.

Notre Dame sponsors 18 international study programs for its undergraduate students in Europe, Latin America, the Middle East, Far East and Australia. Two programs in the Law School are headquartered in London, and the College of Business Administration has professional programs in London and Santiago, Chile.

Office of University Computing Renamed Office of Information Technologies

The Academic Council approved a change in the name of the Office of University Computing to the Office of Information Technologies (OIT). Larry Rapagnani, assistant provost, requested the name change to reflect the services provided by the department since technological issues and not just computing issues are the focus for the future.

OIT administers Notre Dame's wide-ranging information and computer resources, including 597 computer workstations and several dedicated terminals in 10 clusters throughout campus. The clusters and most academic buildings are linked in a fiber-based network to campus resources, including the Hesburgh Library's on-line catalog, an electronic-mail system, a campuswide information system, and research computing facilities.

Personnel in OIT also assist faculty members in the transition from old teaching methods to the use of new forms of teaching technology. Photographic, audio, video and computer graphic design services are available to the University community through Educational Media.

FACULTY NOTES

Honors

George B. Craig Jr., Clark professor of biology, received the Sove Gold Medal for Career Achievement in Vector Ecology at the annual meeting of the Society of Vector Ecology in Fort Collins, Colo., Oct. 7-12.

Bro. Louis Hurcik, C.S.C., associate professional specialist in physical education, received a 40-year pin in recognition of his community volunteer service for the St. Joseph County Chapter of the American Red Cross.

Thomas L. Shaffer, Short professor of law, was appointed to the Interest on Lawyers Trust Accounts (IOLTA) Pro Bono Initiative Planning Committee of the Indiana Supreme Court by Chief Justice Shepard. This is a seven-member committee which is to recommend a way to use IOLTA funds to coordinate lawyer service pro bono publico.

Billie F. Spencer Jr., professor of civil engineering and geological sciences, has been appointed to the editorial board of the journal *Structural Engineering Review*.

Dennis J. Stark, director of aquatics and assistant professor of physical education, was recognized by the St. Joseph County Chapter of the American Red Cross for completing 50 years of community volunteer service.

Activities

Bruce C. Auerbach, associate chairperson and associate professional specialist in communication and theatre, designed the lighting for "The Homecoming" for the New Jersey Shakespeare Festival at Drew University in Madison, N.J., June 14-July 1.

Supriyo Bandyopadhyay, associate professor of electrical engineering, coauthored the papers "Giant Magnetoresistance in Quasi Periodic Arrays of Nickel Quantum Dots" with D-F. Yue, G. Banerjee and Albert E. Miller, professor of chemical engineering, "Electrosynthesis of Semiconductor and Ceramic Superconductor Quantum Dot Arrays" with Banerjee, Yue, Miller, J.A. Eastman, R.E. Ricker and M. Chandrasekhar, and "Biexcitons in Quantum Wires Subjected to a Magnetic Field" with A. Balandin, presented at the third international symposium on Quantum Confinement held in Chicago, Ill., Oct. 10-12.

Gail Bederman, assistant professor of history, was a co-facilitator in the "Gender and Catholicism in the Curriculum" session at the conference Engendering American Catholic Studies sponsored by the Cushwa Center held at the University of Notre Dame, Notre Dame, Ind., Sept.

29-Oct. 1. She spoke in the final session titled "Conference Conclusions" in an interdisciplinary conference Malinchismo/Machismo: Gender and Manhood Among Mexicanos in the United States sponsored by the Center for the Study for Race and Ethnicity at the University of California in San Diego, Calif., Oct. 6-7.

Ikaros Bigi, professor of physics, gave the invited lecture "Quo Vadis, Fascinum?" at the workshop on the Tau/Charm Factory at Argonne National Laboratory in Argonne, Ill., June 22. He presented the High Energy Physics seminar "The Expected, The Promised and the Conceivable — on CP Violation in Beauty and Charm Decays" at Harvard University in Cambridge, Mass., Sept. 8. He gave the invited lecture "On Extracting $|V_{cb}|$ from Semileptonic B Decays — The Theoretical Side of the Challenge" at the DESY Theory Workshop 1995 in Hamburg, FR Germany, Sept. 28.

George B. Craig Jr., Clark professor of biology, consulted with the Division of Vector-borne Disease, CDC, Ft. Collins, on plans for investigation of epidemiology of LaCrosse Encephalitis in West Virginia and presented the paper "LAC in West Virginia: An Emerging Infection" at the annual meeting of the Society of Vector Ecology in Fort Collins, Colo., Oct. 7-12. He presented the Entomology seminar "The Diaspora of the Asian Tiger Mosquito" and conferred on a joint research grant for remote sensing of illegal scrap tire disposal, NIH Special Grant, at the Department of Entomology at the University of Kentucky in Lexington, Ky., Oct. 12-13.

Lawrence S. Cunningham, chairperson and professor of theology, gave two conferences on Spirituality and Prayer to participants in the CCFM sabbatical program in Notre Dame, Ind., Sept. 4. He served as the theological advisor to the Catholic Pluralism Project at Purdue University in West Lafayette, Ind., Sept. 29. He gave the invited lecture "From Theology to Religion and Back Again" to the Department of Religion at Florida State University as part of their 30th anniversary celebrations in Tallahassee, Fla., Oct. 12. He presented the Hesburgh lecture on "The Church and the New Millenium" to the Notre Dame Club of North Florida in Tallahassee, Fla., Oct. 13.

James T. Cushing, professor of physics, delivered the invited keynote lecture "Philosophical Concepts in Physics: Determinism versus Indeterminism" at the annual meeting of the Illinois section of the American Association of Physics Teachers at Bradley University in Peoria, Ill., Oct. 27. He presented the paper "Hermeneutics, Underdetermination and Quantum Mechanics" at the third international conference on History and Philosophy of Science in Science Education held at the University of Minnesota in Minneapolis, Minn., Oct 29-Nov. 1.

FACULTY NOTES

Roberto A. DaMatta, Joyce professor of anthropology, presented the paper "The Visible Hand of the State: The Cultural Meaning of Documents in Brazil" at the international seminar "The Challenge of Democracy in Latin America: Rethinking State-Society Relations" sponsored by the University Institute of Research of Rio de Janeiro and the International Political Science Association in Rio de Janeiro, Brazil, Oct. 4-6.

Jay P. Dolan, professor of history, presented "The Search for an American Catholicism" at St. Thomas Aquinas Center at Purdue University in West Lafayette, Ind., Oct. 18.

Patrick F. Dunn, professor of aerospace and mechanical engineering, presented a paper titled "Oblique Impact of Microspheres with Planar Surfaces" coauthored with **Raymond M. Brach**, associate professor of aerospace and mechanical engineering, and Gregory Janson at the 14th annual meeting of the American Association for Aerosol Research in Pittsburgh, Pa., Oct. 10. Dunn presented an invited talk on "Combined-Effects Aerosol Deposition Experiments" at the Electric Power Research Institute in Palo Alto, Calif., Oct. 13.

William G. Dwyer, Hank professor of mathematics, gave an invited talk titled "Homology Decompositions of Classifying Spaces" as part of the special session on Algebraic Topology at the American Mathematical Society meeting at Kent State University in Kent, Ohio, Nov. 4.

Harald E. Esch, professor of biological sciences, gave the seminar "Bees Measure Distance Optically" at the University of Marburg, Germany, Oct. 13. He presented the seminar "The Marvellous Intelligence of Bees: Bee Research Between 1946 and 1996" in Innsbruck, Austria, Oct. 17. He gave the seminar "Optical Distance Measurement by Honeybees" in Wurzburg, Germany, Oct. 20.

Mohamed Gad-el-Hak, professor of aerospace and mechanical engineering, presented an invited lecture titled "Does a Turbulent Boundary Layer Ever Achieve Self-Preservation?" at the Department of Theoretical and Applied Mechanics at the University of Illinois at Urbana-Champaign, Ill., Oct. 19.

James A. Glazier, assistant professor of physics, gave the invited seminar "The Thermodynamics of Cell Sorting" at the Mathematics Institute at the University of Bath in Bath, England, Oct. 18, and at the Institute of Mathematics at Oxford University in Oxford, England, Oct. 20.

Denis Goulet, O'Neill professor of economics, delivered the paper "Human Development: True Wealth and Economic Efficiency" and presented the workshop Development Ethics: Approaches to Research and Teaching to the Encuentro Internacional Nuevo Order Economico y

Desarrollo: Desafios Eticos Para el Siglo XXI in Santiago, Chile, Oct. 28.

A. Alexandrou Himonas, associate professor of mathematics, gave the invited talk "Analytic Hypoellipticity for Operators with Double Characteristics" at the "Brazil-USA conference on Multidimensional Complex Analysis and Partial Differential Operators" at Sao Carlos, Brazil, June 15. He gave a colloquium talk titled "Analytic Singularities and Eigenvalue Problems" at the Department of Mathematics of the Federal University of Sao Carlos, Brazil, June 23.

Iván Jaksic, assistant provost for international studies, associate professor of history and fellow in the Kellogg Institute, presented "Andrés Bello's Role in Nineteenth-Century Spanish America" at the School of Advanced Study at the University of London in London, England, Oct. 19, and at Saint Anthony's College, Oxford University, in Oxford, England, Oct. 20.

Kwan S. Kim, professor of economics and fellow in the Kellogg Institute, was an invited speaker at an international conference on Global Restructuring of the Economies and Corporations organized and sponsored by the Maastricht School of Business and the Dutch government in Maastricht, the Netherlands, Sept. 8. He served on the panel on the Korean development during an East Asian Studies symposium sponsored by the Indiana University East Asian Studies Center in Bloomington, Ind., Oct. 25.

Edward A. Kline, professor of English and O'Malley director of the Freshman Writing Program, chaired a session on "Canadian Literature" at the annual conference of the Indiana College English Association at Anderson University in Anderson, Ind., Oct. 13-14.

Catherine Mowry LaCugna, professor of theology, presented the colloquium "Systematic Theology: God" at the University of Notre Dame, Notre Dame, Ind., Sept. 27.

Ruey-wen Liu, Freimann professor of electrical engineering, gave the seminars "Blind Signal Processing: Fundamentals and Applications" and "Blind Channel Equalization for Wireless Communication" at the University of Hong Kong in Hong Kong, Oct. 10-11.

A. Eugene Livingston, professor of physics, presented the invited talk titled "Atomic Structure of Highly Charged Ions" at the DOE Atomic Physics program workshop in San Antonio, Tex., Nov. 3.

Gilbert D. Loescher, professor of government and international studies, presented a paper on human rights and refugees at an international conference on Human Rights and Human Wrongs at the University of Wales at Aberystwyth, Wales, June 30-July 2. He addressed an in-

FACULTY NOTES

international conference of policymakers, journalists and academics titled "Migration and International Politics" hosted by Deutsche Gesellschaft für Auswärtige Politik (German Society for Foreign Affairs) at Strausberg, Germany, July 5-7.

Rev. Richard P. McBrien, Crowley-O'Brien-Walter professor of theology, presented "The Future of the Church: Looking Forward by Looking Back" at a meeting on the Future Church of Southwest Ohio in Dayton, Ohio, Oct. 6. He presented "The Church: Community of Communities" at Holy Family School of Ministry in Inverness, Ill., Oct. 14.

Rev. John Allyn Melloh, S.M., coordinator of the Marten Program and professional specialist in theology, videotaped a segment on Liturgical Preaching in a new video series on preaching produced by St. Meinrad's with a grant from the Lilly Foundation, May 16. He led the English-speaking discussion group at the conference titled "The Sermon on the Mount" at the second biennial meeting of Societas Homiletica, an international group of homileticians, in Berlin, Germany, June 26-30. He presented a major paper on "What is Liturgical Preaching? A Look Back and a Look Ahead" and two other presentations on Method in Preaching at the College of Ripon and York, St. John's, at a program sponsored by the (English) College of Preachers, July 4-6. He gave a workshop on Preaching Method at the Southwest Institute for Diaconal Studies in Austin, Tex., Aug. 25-26.

Thomas V. Merluzzi, associate professor of psychology and director of the Gerontological Research Center, presented "A Study of the Mediational Properties of Self-Efficacy in Coping with Cancer" at the 103rd annual meeting of the American Psychological Association in New York, N.Y., Aug. 11.

Philip Mirowski, Koch professor of economics and the history and philosophy of science, gave the invited lecture "Do You Know the Way to Santa Fe? or Complexity Comes to Economics" at the University of Warsaw economics faculty in Warsaw, Poland, Oct. 16. He presented the plenary lecture "Hayek vs. Polanyi: Economics, Science and Knowledge" to the meetings of the European Association for Evolutionary Political Economy in Krakow, Poland, Oct. 21.

Rev. Wilson D. Miscamble, C.S.C., chairperson and associate professor of history, gave the invited lecture titled "The Primacy of Interest: George Kennan's Strategy of Containment" at the National War College, National Defense University, in Washington, D.C., Sept. 14. He was an invited participant in a conference on "Moral Judgment and Cold War History" organized by the Carnegie Council in Ethics and International Affairs in New York, N.Y., Oct. 20-21.

Ellen O'Connor, associate professional specialist in the College of Business Administration and associate professor in the Center for Business Communication, presented a paper titled "Lines of Authority: Readings of Foundational Texts on the Profession of Management" at the 1995 annual meeting of the Academy of Management held in Vancouver, Canada, Aug. 6-9. She chaired the symposia "Out of Bounds: Nontraditional Research Approaches to Organization Studies" and "Language and Organizational Action" at that meeting.

Alvin Plantiga, O'Brien professor of philosophy, presented "Pluralism: A Defense of Religious Exclusivism" at the University of Pretoria in Pretoria, South Africa, Sept. 18. He presented "An Evolutionary Argument Against Naturalism" and "Christian Philosophy at the End of the Twentieth Century" at the University of South Africa in Pretoria, South Africa, Sept. 19-20. He gave "An Evolutionary Argument Against Naturalism" at the University of Witwatersrand in Johannesburg, South Africa, Sept. 20. He presented "Christian Philosophy at the End of the Twentieth Century" at the Rand Afrikaans University in Johannesburg, South Africa, Sept. 21. Plantiga lectured on "Pluralism: A Defense of Religious Exclusivism" and "Christian Philosophy at the End of the 20th Century" at the University of Potchefstroom in Potchefstroom, South Africa, Sept. 22. He presented "Pluralism: A Defense of Religious Exclusivism" at the University of Stellenbosch in Stellenbosch, South Africa, Sept. 28. He presented "An Evolutionary Argument Against Naturalism" at the University of Cape Town, Rondebosch, South Africa, Sept. 29.

Joachim Rosenthal, associate professor of mathematics, gave the talk "A General Sufficient Condition for the Matrix Completion Problem" at the third symposium on Matrix Analysis and Applications held in Kalamazoo, Mich., Oct. 13-14.

Ken D. Sauer, associate professor of electrical engineering, presented a workshop seminar titled "Modeling and Optimization in Bayesian Tomographic Reconstruction" at the IEEE international conference on Engineering in Medicine and Biology in Montreal, Canada, Sept. 19. He presented two papers on numerical methods for tomography at the IEEE international conference on Image Processing in Washington, D.C., Oct. 23-25.

Mark R. Schurr, assistant professor of anthropology, presented the invited lecture titled "Archaeology Isn't All Digging: New Non-Destructive and Non-Invasive Archaeological Techniques" at the conference Indigenous Woodland People: Contemporary Issues and Traditional Knowledge at the Minnetrira Cultural Center in Muncie, Ind., Sept. 29. He presented a paper titled "Excavations and Geophysical Survey at the Bellinger Site: New Data on Goodall Hopwellian Occupations" at the Midwest Archaeological Conference in Beloit, Wis., Oct. 26-29.

FACULTY NOTES

Steven R. Schmid, assistant professor of aerospace and mechanical engineering, presented the invited lecture "Lubrication with Emulsions" at Gifu University, Oct. 30. He presented the paper "Oil Droplet Entrainment in Emulsion Lubrication" at the international Tribology Conference in Yokohama, Japan, Oct. 31.

Robert M. Slabey, associate professor of English, presented the paper "Diminished Bodies in American War Literature" at the Villa Mirafiori, Università degli Studi di Roma "La Sapienza," for the XIII biennial international conference of the Associazione Italiana di Studi Nord-Americani in Rome, Italy, Oct. 25.

J. Eric Smithburn, professor of law, presented an invited paper titled "International Child Abduction and the Hague Convention" to the Hong Kong Family Law Association in Hong Kong, Oct. 18.

Billie F. Spencer Jr., professor of civil engineering and geological sciences, chaired a session titled "Stochastic Mechanics and Simulation" at the 1995 ASME Design Engineering Technical Conferences, 15th biennial conference, on Mechanical Vibration and Noise in Boston, Mass., Sept. 17-20. He presented a paper titled "Optimal Structural Control: A Reliability Based Approach" coauthored with D.C. Kaspari and Michael K. Sain, Freimann professor of electrical engineering, at that conference. Spencer and S.F. Wojtkiewicz coauthored the paper presented by L.A. Bergman, professor of aeronautical and astronautical engineering at the University of Illinois in Urbana-Champaign, titled "Numerical Solution of Some Three-State Random Vibration Problems" at that conference. Bergman and Spencer organized a symposium titled "Vibration and Control of Stochastic Dynamical Systems" which was comprised of 23 papers and was held in conjunction with the 1995 ASME Design Engineering Technical Conferences. Spencer gave the following seminars in the Southwest Mechanics Seminar Series: "Implementable Feedback Control Strategies for Earthquake Hazard Mitigation" to the Department of Civil Engineering at Rice University in Houston, Tex., Oct. 9, "Behavior and Modeling of Magnetorheological Dampers" in the Ocean Research and Development Department at Shell Development Company in Houston, Tex., Oct. 10, "Implementable Feedback Control Strategies for Earthquake Hazard Mitigation" to the Department of Mechanical Engineering at Southern Methodist University in Dallas, Tex., Oct. 11, and "Behavior of Modeling of Magnetorheological Dampers" to the Department of Aerospace and Mechanical Engineering at the University of Oklahoma in Norman, Okla., Oct. 12. Spencer and **David J. Kirkner**, associate professor of civil engineering and geological sciences, gave a two day mini-course on "ANTWIL," a tool for determination of tire-wheel interface loads, and "ARIES," a solid modelling package for finite element analysis for the Vehicle Equipment Division

at Wright-Patterson Air Force Base in Dayton, Ohio, Oct. 16-17.

James P. Sterba, professor of philosophy and fellow in the Kroc Institute, presented two lectures "Feminist Justice" and "Homosexual Justice" at the University of Warsaw in Warsaw, Poland, June 21, 28. He presented the papers "Libertarian Critics and Davenport's Critique" and "Sexism and Racism: The Common Ground" at the 13th international Social Philosophy meeting at Colby College in Waterville, Maine, Aug. 10-13. He gave the paper "Environmental Justice" at an international conference on Environmental Policy held in Florence, Italy, Aug. 23-28. He presented a paper titled "Environmental Justice Without Environmental Racism" at a conference on Environmental Justice held at Oregon State University in Corvallis, Oreg., Sept. 19-21. He gave the paper "Feminist Justice and Racial Justice: Joint Requirements for the Pursuit of Peace" at the eighth Concerned Philosophers for Peace conference held at the University of Dayton in Dayton, Ohio, Oct. 20-22. He presented the paper "Global Justice" at the international conference on Ethics and Development held in Santiago, Chile, Oct. 24-28.

J. Kerry Thomas, Nieuwland professor of chemistry, gave the lecture "Photochemistry on Silica" to the Chemistry Department at Loughborough University in Loughborough, United Kingdom, Aug. 24. He presented "Radiation Chemistry of Surfaces" at the Millar meeting on Radiation Chemistry in Ravenna, Italy, Sept. 16-21. He lectured on "Fast Reactions of Ions at Surfaces" at the Fast Reactions in Solution meeting of the Royal Society of Chemistry at the University of East Anglia in Norwich, United Kingdom, Sept. 6-9.

Henry Weinfield, assistant professor in the Program of Liberal Studies, spoke on "Mallarmé and the Process of Translation" at Xavier University in Cincinnati, Ohio, Oct. 24. He read from his translations of Mallarmé as well as from his own poetry at Xavier, Oct. 25.

James F. White, professor of theology, gave the lecture "The Presence of the Past in Worship: Eighteenth and Nineteenth Century Survivors" at Union Theological Seminary in New York, N.Y., Nov. 6.

Hong-Ming Yin, assistant professor of mathematics, presented an invited talk titled "Campanato-John-Nirenberg-Morrey Estimates for Parabolic Equations and Applications" at the Department of Mathematics at Texas A&M University in College Station, Tex., Oct. 19.

Randall C. Zachman, assistant professor of theology, presented "Calvin as Analogical Theologian" at the Sixteenth Century Studies conference in San Francisco, Calif., Oct. 27.

Corrections to *Notre Dame Report* #4

UNIVERSITY ADMINISTRATION

Information Technologies

Sr. Elaine DesRosiers, O.P., Ed.D.
Director of Educational Media

RECTORS AND ASSISTANT RECTORS

Badin Hall

Sr. Mary Catherine Nolan, O.P., Rector

UNIVERSITY COMMITTEES

Editors of Scholarly Publications

Journal of Management
Robert P. Vecchio, Editor

Faculty Senate

Members

Hafiz Atassi, Professor of Aerospace and
Mechanical Engineering (ex officio)

Term Expires
1996

University Committee on the Freshman Year of Studies

Marsha Stevenson, Associate Librarian, University Libraries
Sean Hynes, Junior, College of Engineering

FACULTY OF THE UNIVERSITY

MATTHEW F. BENEDICT, *Adjunct Assistant Professor of English*. B.A., Univ. of Massachusetts, 1986; M.A., Univ. of Notre Dame, 1994. (1994)

H. GORDON BERRY, *Professor of Physics*. B.A., Oxford Univ., 1962; M.A., *ibid.*, 1963; M.S., Univ. of Wisconsin, Madison, 1963; Ph.D., *ibid.*, 1967. (1994)

JEAN M. ELLIOTT, *Adjunct Assistant Professor in the Arts and Letters London Program*. B.A., Univ. of London, 1971; Ph.D., *ibid.*, 1984. (1995)

REV. ROBERT EPPING, C.S.C., *Adjunct Instructor in Theology*. A.B., Univ. of Notre Dame, 1967; S.T.B., Gregorian Univ., 1969; M.Th., Univ. of Notre Dame, 1970; S.T.L., Gregorian Univ., 1975. (1995)

JOSEPH C. FREELAND, *Assistant Professional Specialist in Computer Science and Engineering*. B.S.E., Purdue Univ., 1985. (1995)

MARGARET J. HEALY, *Adjunct Assistant Professor in the Arts and Letters London Program*. B.A., Queen Mary College, Univ. of London, 1981; M.A., Birkbeck College, Univ. of London, 1991; Ph.D., Univ. College London, 1995. (1995)

G. JAMES HOPKINS, *Adjunct Associate Professor in the Arts and Letters London Program*. A.B., Harvard Univ., 1963; B.A., King's College, Univ. of Cambridge, 1965. (1995)

REV. JOHN F. LAHEY, C.S.C., *Associate Professional Specialist in Theology*. A.B., Univ. of Notre Dame, 1966; M.Th., *ibid.*, 1969; D. Min., Andover Newton, 1974; J.C.B., Catholic Univ., 1979; J.C.L., *ibid.*, 1981; J.C.D., *ibid.*, 1988. (1982)

GIOVANNA LENZI-SANDUSKY, *Adjunct Instructor in Romance Languages and Literatures*. Laurea in Lettere e Filosofia, Univ. degli Studi di Firenze, Italy, 1979. (1990)

XINSHENG LIU, *Assistant Professional Specialist in Chemistry and Biochemistry*. M.Sc., Jilin Univ., China, 1978; Ph.D., Univ. of Cambridge, England, 1986. (1995)

NALOVA LYONGA, *Visiting Assistant Professor of English*. B.A., Univ. of Yaounde, 1973; M.A., Sheffield Univ., Britain, 1974; Ph.D., Univ. of Michigan, 1985. (1995)

NICOS MAKRIS, *Assistant Professor of Civil Engineering and Geological Sciences*. Diploma, Technical Univ. of Athens, 1988; M.S., State Univ. of New York, Buffalo, 1989; Ph.D., *ibid.*, 1992. (1992)

CHRISTIAN R. MOEVS, *Assistant Professor of Romance Languages and Literatures*. A.B., Harvard Univ., 1980; M.A., Columbia Univ., 1989; M.Phil., *ibid.*, 1990; Ph.D., *ibid.*, 1994. (1994)

THALIA M. MYERS, *Adjunct Professor in the Arts and Letters London Program*. A.R.C.M., Royal College of Music, 1967. (1967)

BRENDAN P. O'DUFFY, *Adjunct Instructor in the Arts and Letters London Program*. B.A., Boston College, 1986; M.A., McGill Univ., 1989. (1995)

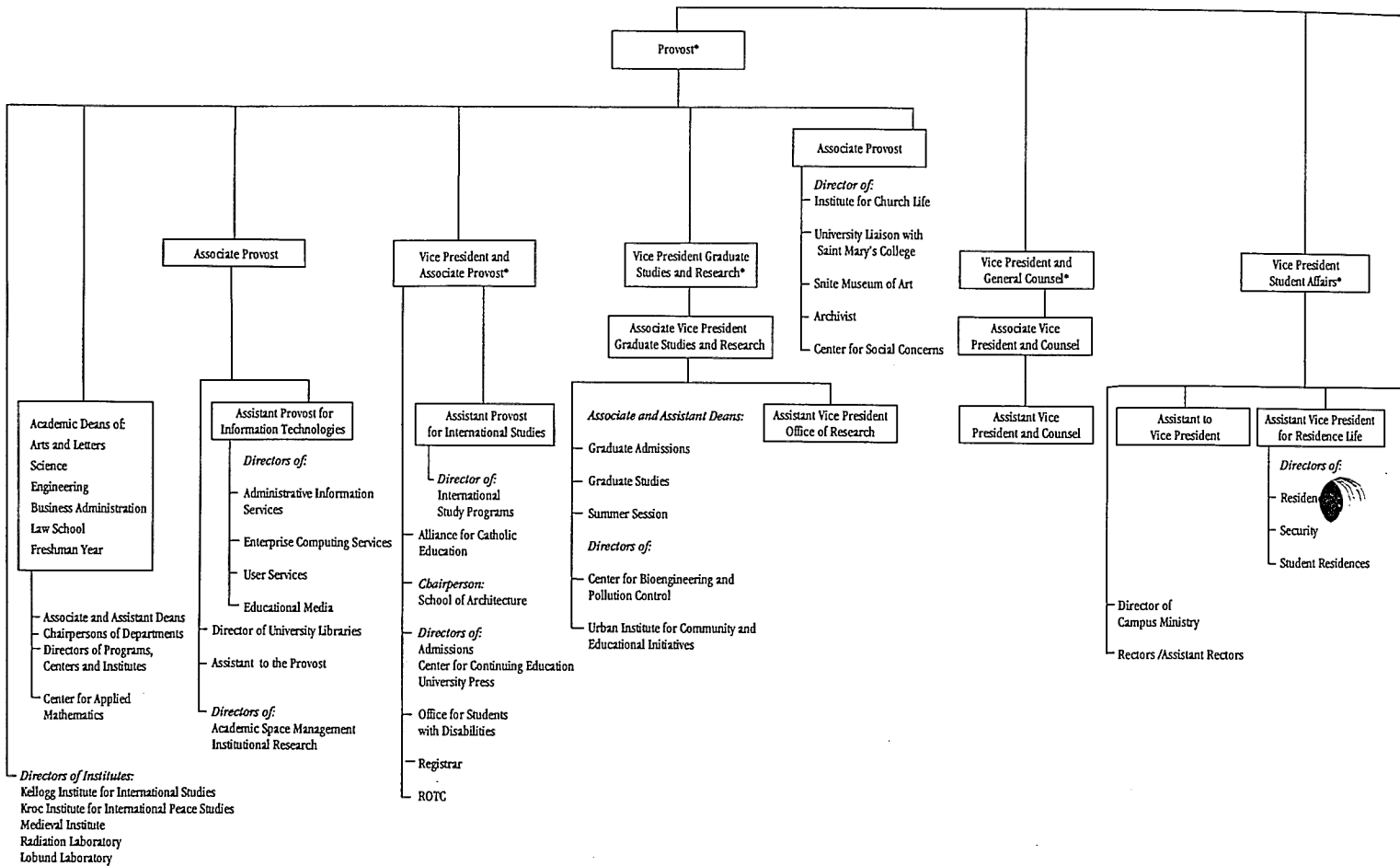
MARK C. PILKINTON, *Chairperson and Professor of Communication and Theatre*. B.S., Memphis State Univ., 1969; M.A., Univ. of Virginia, 1971; Ph.D., Univ. of Bristol, England, 1975. (1984)

TIMOTHY J. SALTER, *Adjunct Professor in the Arts and Letters London Program*. M.A., St. John's College, Cambridge, 1964; Music Teacher Cert., Institute of Education, 1965. (1995)

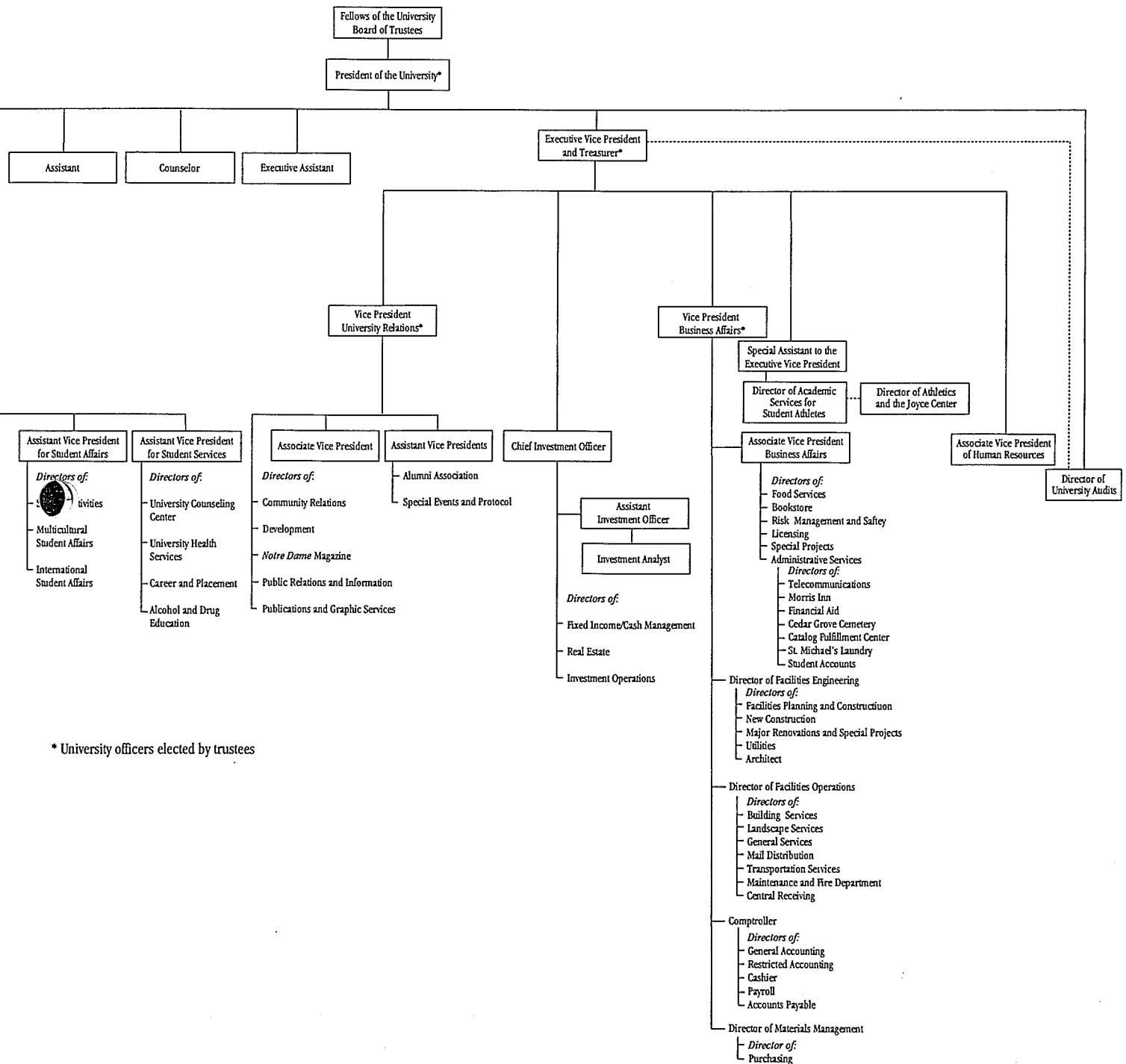
DALE A. SOUTHARD JR., *Assistant Professional Specialist in the College of Science*. B.S., Univ. of Wisconsin, 1990. (1995)

ALAN P. THOMAS, *Adjunct Assistant Professor in the Arts and Letters London Program*. B.A., Univ. of Cambridge, 1987; Ph.D., Oxford Univ., 1995. (1995)

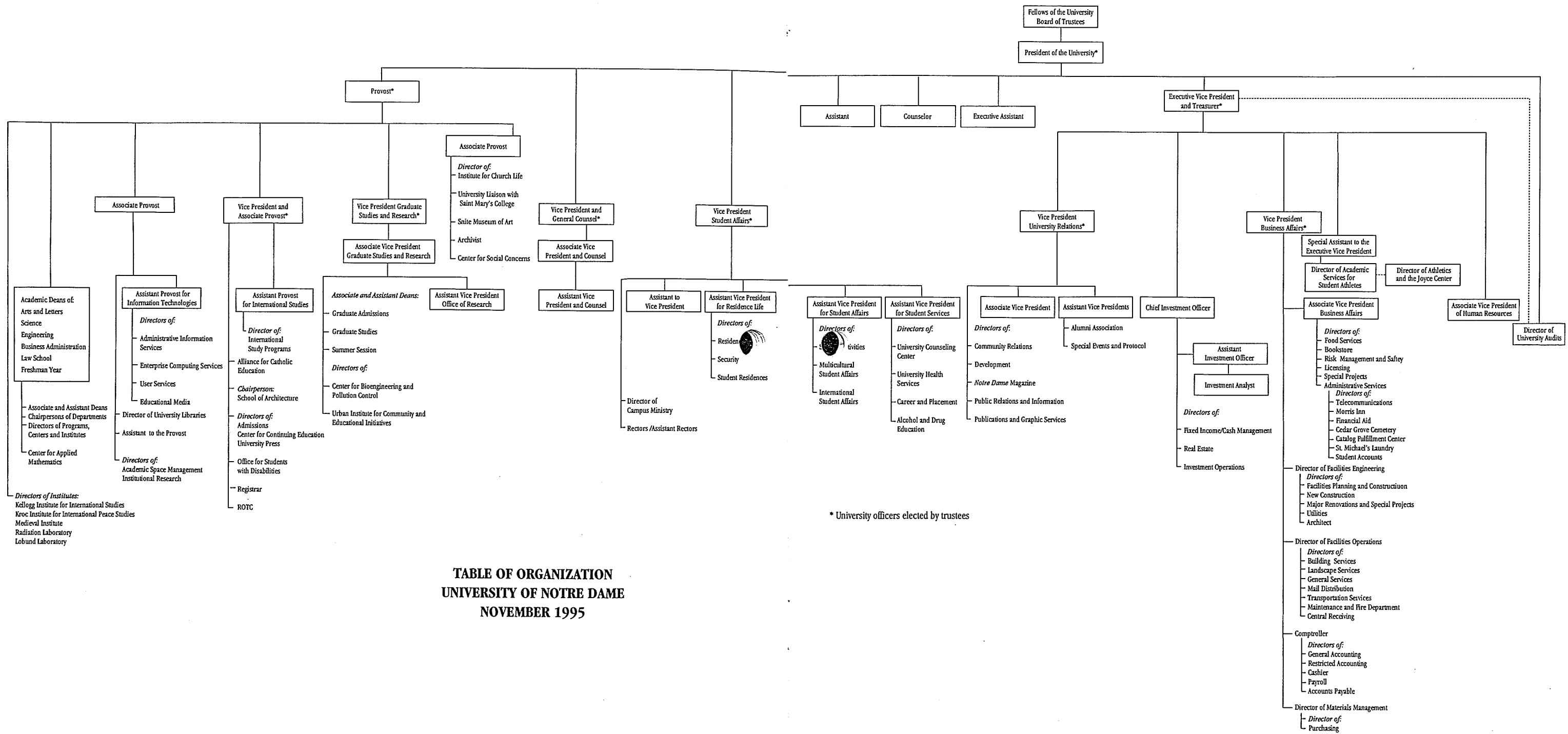
TED A. WARFIELD, *Assistant Professor of Philosophy*. B.A., Univ. of Arkansas, 1991; Ph.D., Rutgers Univ., 1995. (1995)



**TABLE OF ORGANIZATION
 UNIVERSITY OF NOTRE DAME
 NOVEMBER 1995**



* University officers elected by trustees



Directors of Institutes:
 Kellogg Institute for International Studies
 Kroc Institute for International Peace Studies
 Medieval Institute
 Radiation Laboratory
 Lobund Laboratory

Opening Mass Homily Sunday, September 10, 1995

Timothy O'Meara, provost

Readings

First Reading: Wisdom 9: 13-18

Responsorial Psalm: Psalm 90: 3-4, 5-6, 12-13, 14, 17

Second Reading: Philemon 9b-10, 12-17

Gospel: Luke 14: 25-33

My Dear Friends,

Often in the past I have been tempted to change the Scripture readings assigned for this opening liturgy of the academic year and to replace them with ones that I could handle more easily in an academic community. Imagine my pleasure then when I began to prepare this homily and read: *Who can learn your counsel, O Lord; and what is on earth we have discovered with labor; and teach us to count our days, O Lord, that we may gain a wise heart.*

My excitement was shortlived, however, as I continued with Paul's letter to the slave owner Philemon and the difficult reminder of the cost of discipleship in the Gospel.

While reflecting on these readings, in fact while struggling with them, the moment of illumination came when I made a connection with Tom Stoppard's brilliant play *Arcadia* which Jean and I saw in New York in July. The play takes place in two different time frames — 1809 and the present — in the same living room of the same English country house named *Arcadia*. On a first and superficial level it is a detective story about Lord Byron and why he abruptly left England for the continent. On a second level, the level on which the action occurs, the plot is a vehicle for forays into an avant-garde version of what used to be called the two-cultures debate, that is, the debate between the humanities and the sciences. In one of the earlier 1809 scenes there is dialogue, motivated by what must have been a Newtonian triumphalism of the 19th century, concerning predetermination in this sense: the future can be determined right now through the application of mathematics and science. In other words, there is a whole set of equations, if only we could find them and solve them, which would completely describe the future of the world. Subsequently, in one of the scenes from the present, this ideal is found wanting and the play moves on to the inability of science to explain some of the simplest physical realities. All sorts of polarities come to the fore: the certainty of 1809 versus the uncertainty of the present; the poetic versus the scientific; deductive analysis versus intuitive insight; beauty versus substance — as with a snowflake,

as with a flower. The basic elements of the new branch of mathematics called Chaos Theory are discussed at length as part of the search to bring order out of disorder.

But there is a third and more fundamental level to the play, and it is this. The opening motif — imprinted on the curtain, as the play opens — is Adam and Eve and an apple. And *Arcadia* represents the Garden of Eden after the fall, a fall brought about by the curiosity of humankind. The plot represents our insatiable search for knowledge and our yearning for ultimate meaning, for wisdom, in a seemingly chaotic universe. In keeping with this theme, the very structure of the play is one of measured and deliberate chaos. The play ends with a dance by the protagonists, both of resignation and of hope.

Truly, *Arcadia* might be considered as a modern secular commentary on today's readings from Psalm 90 and the Book of Wisdom:

For a thousand years in your sight, O Lord
are like yesterday when it is past,
or like a watch in the night.
We can hardly guess at what is on earth,
and what is at hand we have discovered with labor;
imagine tracing out what is in the heavens!

Who can learn your counsel, O Lord
unless you have given wisdom
and sent your holy spirit from on high?

This poem, praising that mysterious thing called wisdom, says there is a God who is all knowing and wise and by seeking this God we can hope to attain some wisdom. So the poem takes us beyond *Arcadia*, beyond Eden, to God. There is a kind of knowing then that embraces and unifies all our chaotic polarities and, according to the Hebrew poet, cannot be arrived at in any way except through encounter with the mystery of God. Wisdom, personified as a woman, simple and undivided herself, is concerned with understanding the inner workings, with absorbing the total being, of things. The wisdom of God discerns the whole. That should be the task of all of us, particularly in this time when wholeness is so threatened and neglected. The willingness of God to share divine wisdom makes all this possible.

The second reading from Paul reminds me of an incident during my schoolboy days when British troopships would stop at Cape Town during the second world war. When that happened, especially during vacations, we would spend days chasing after soldiers in the city, begging for souvenirs, especially for their badges, and above all for the wings of the RAF. They were our heroes. Then one day Louis showed up in our house in full regalia. He was a heretofore unheard of relative from Ireland serving in

DOCUMENTATION

the British army. The following day he arrived in civies. He had jumped ship. This was not a strike for the freedom of Ireland. This was not Louis the pacifist. The fact of the matter was that Louis had deserted, he needed help, he was family, and there were risks to all who became involved. The dilemma was whether we were to turn him in or find him shelter and break the law.

A similar dilemma, but with far wider significance, is found in the letter from Paul to Philemon about his slave Onesimus who, in addition to having run away, seems to have absconded with some of his master's goods as well. Onesimus had come to Paul, who was then under house arrest because of his activities as a Christian, and was converted by him. By law, Paul should have reported Onesimus who would then have faced punishment and perhaps death. But Paul chose to act beyond the law, risking further repercussions upon himself. In the end, Paul sent a letter to Philemon saying that Onesimus had become a Christian, and that he was therefore his brother. He asked Philemon to welcome Onesimus back as a brother and not as a slave. While omitted from this morning's readings, he concluded his letter with the implication that he might visit someday to check up on how things turned out. For Philemon, too, there was a risk in so far as the precedent of freeing Onesimus might have ultimately led to the loss of all his slaves and his fortune. We do not know if Philemon ever got the letter, what he might have done about it, and, indeed, if Onesimus ever returned to his master. Nor do we know what Paul would have done and how he would have argued with Philemon if Onesimus had not become a Christian. Paul surely did not intervene as an abolitionist. Rather, Paul must have gotten to know Onesimus and to like him. Paul put Philemon on the spot, in the position of acting on his faith. He put the case very clearly: This is what it costs to be holy, giving beyond what the law requires. But today's implications of Paul's actions are greater than this incident. They challenge any structure that would uphold any privileged group of individuals dominating another. This vision of a new society, a new church, a new relationship between the sexes, between peoples and between classes — we know that these await a deeper liberation.

To that end, today's Gospel reminds us that Jesus was a revolutionary for which he was crucified. If we are to follow in the footsteps of Jesus, we must know what that entails and we must be ready. In the parable from Luke, Jesus tells us how to prepare. First, like building tower, we must be sure that we have a good foundation. Then we must realize that the journey will be hard, as hard as carrying the cross. Like a king preparing for battle we must be sure that we are up to it before making a commitment to the life that Jesus envisions. Of course we

must be sure that our actions are not self-serving or willful, and that we are beholden to no privileged group, not even to brother or sister, and least of all to ourselves.

All these readings from the Hebrew and Christian Scriptures speak the truth to this community of ours with singular force and clarity. In particular, all of us dedicated to the University are reminded that education is an affair of the heart, as well as of the will and the mind. And when we engage in the thorny issues of our disciplines or of the times, we must be prepared to question the status quo, to take risks, and even to stir things up when that is necessary. Ultimately we must do this according to our own consciences, bearing in mind that our wisdom must be measured against the wisdom of God. And we must ask God to enlighten us and give direction to our work. That is why we are together in this basilica celebrating this Mass of the Holy Spirit, the Spirit of Wisdom. And that is why we pray again the words of the 90th Psalm:

Teach us to count our days, O Lord
that we may gain a wise heart.
Let your favor be upon us,
and prosper for us the work of our hands.

President's Address to the Faculty October 10, 1995

Rev. Edward A. Malloy, C.S.C., president

Dear Colleagues:

I am pleased to address you at this important moment in the history of the University. We are indeed fortunate that we can look back on an excellent year, that we can identify areas of substantial improvement already in place for the present academic year, and that we can continue to dream about, and plan for, a future that can bring Notre Dame to its rightful place as one of the great universities of the world.

I will divide this talk into two large sections. First, I will focus on a number of specific matters that already impact the quality of our overall educational environment during the 1995-96 academic year. Then I will analyze some issues and challenges that we face collectively as we move toward the year 2000.

I. OUR PRESENT REALITY

I need not dwell for long on the rather bleak climate that has prevailed among American institutions of higher education during the last five to 10 years. Budgets have been cut, staff have been laid off, faculty slots have been reduced, maintenance has been deferred, and building projects have been delayed or abandoned. Some rather prestigious private institutions have been running substantial budget deficits that they are gradually trying to eliminate. In states with high demographic growth patterns (like California, Florida, Texas and Arizona) plans to enlarge the state-wide system of higher education have been put on hold or implemented much more slowly than originally planned. Perhaps most telling is the degree of tuition discounting that some private schools have been forced to adopt just to fill their classrooms and residence halls.

On every side we hear calls for less bureaucracy, more productive faculty, a greater commitment to undergraduate instruction, and a return to the basics.

I, for one, take no pleasure or comfort in any of the problems that have afflicted many of our peer institutions. We have avoided, thank God, the worst of the extremes. But the forces that impact other institutions of higher education are part of our reality as well. If the federal government slashes support for undergraduate financial aid or for university-based research activity, all of us will suffer together. We do not control the state of the national or world economy. We have a limited voice in establishing governmental priorities.

It must remain our hope that the quality of what we achieve together will validate and reinforce the support that we have received, and continue to enjoy, from students, parents and benefactors alike.

Let me begin my concrete reflections about the present reality of Notre Dame with an update on two areas that I took up with special urgency during my address to you on this occasion last year.

(1) The Notre Dame Libraries

It has troubled me, and I'm sure all of you as well, that for years reputational surveys have suggested that the Notre Dame Libraries are underdeveloped relative to the needs of a first-rate faculty and students of top academic caliber. An awareness of this pressing need led me to establish, in the wake of the *Colloquy Report*, a committee to study the situation of our libraries and to make specific recommendations for improvement. When that committee issued its final report, which was reviewed by the Academic Council and the officers, we had a clearer idea of what needed to be done. The unresolved question was how quickly we could find the additional resources to achieve the recommended goals.

I am happy to report that three major steps have been taken that will carry us much more quickly in the right direction. The first has to do with the work of the development office in realizing the fund-raising targets assigned to the libraries as part of the upcoming campaign. The problem was always that the libraries lacked a natural constituency that might have a special interest in this area of benefaction. In addition, the needs were so enormous in dollar amounts that few individuals possessed the resource base to take on the entire sum. But we have discovered in recent years that by seeking monies for endowment for collections development in specific disciplinary, regional or thematic areas, we could achieve the same result through multiple instances of support. Thus, this fall we had a beautiful ceremony while the Library and Law Advisory Councils were visiting the campus in order to dedicate 15 particular collection endowments. The next time that you walk along the concourse in the Hesburgh Library or in the entranceway of the Law School look up on the wall and read the plaques which indicate the nature of the collection and the individual, family, corporation or foundation that provided it. For the celebration in September a very impressive commemorative booklet was prepared that covers all of the endowments that have been received up to now.

I believe that a new momentum has been attained. For the first time in our history the Notre Dame Libraries have become a potential area of major, long range, multiple gift giving. This is one source of renewed optimism.

DOCUMENTATION

A second step of significance to the libraries is the recent decision to convert Flanner Tower into office space for those faculty, centers and institutes that presently occupy needed space in the Hesburgh Library. In other words, we will be able to move almost all non-library functions from the main library facility and thus respond to the recommendations from the post-Colloquy library committee. This will allow an orderly plan for collection development, the expansion of office space for library faculty and staff, and various improvements in present user services.

The conversion of Flanner Tower became possible because of major gifts from two families which will allow us to construct two more undergraduate dormitories adjacent to Keough and O'Neill Halls which will be completed in the summer of 1996. The second set of dorms will become available in the summer of 1997.

The third and final positive component involves incorporating into the base of the operating budget for 1995-96 an additional \$650,000 for the library and \$98,500 for the Law Library over what would have been available if normal increases had prevailed. This means that the libraries will be able to have much more quickly the kind of unit specific operating budgets that are projected in the Colloquy. With the excellent cooperation of the officers of the University we have been able in one year to make great strides. In the long run it will still require the mix of monies from endowment building through fundraising and increments on the operating budget to achieve our ambitious goals.

Once again, last year I asked for a reappraisal of our funding options for the libraries and the results so far have been gratifying.

(2) Graduate Education

A second area that I took up with special concern in my address last year was graduate education. Everyone acknowledged that we had made progress during our modern history in this regard. But relative to the quality of our faculty and our traditions of excellence at the undergraduate level, the consensus was that much remained to be done. Another post-Colloquy committee charted the path and laid out a series of major steps. Some of it had to do with campus climate or the support for research activity in general. But the underlying theme in the committee's final report was that we required a major increase in financial support for graduate education.

The dilemma could again be phrased — Do we have to wait for success in fund-raising efforts or could we jumpstart the process within the allocations of the budget for this present academic year?

In constructing the 1995-96 budget, we were able to provide \$400,000 per year for each of the next five years to the Graduate School as an addition to its base budget. At the end of the five years it would be the equivalent of having a \$40 million endowment at the normal rate of payout.

Related to the explanation of what has been achieved for the Graduate School, it is important to advert to two other problems in the area of postbaccalaureate education that we faced quite acutely at the end of the last academic year.

Both the Law School and the MBA program within the College of Business Administration experienced increasing pressure in competing for the best students and in a correlative decline in reputational surveys primarily as a result of inadequate resources for financial aid. The faculty and administration of these two colleges argued persuasively that something needed to be done to convey a renewed commitment to these two professional degree programs.

The first result of these deliberations was the distribution of one million dollars (\$500,000 each) to MBA scholarship endowment and Law scholarship endowment from excess operating revenues generated during the 1994-95 budget year.

Furthermore, the Law School will be adding \$100,000 per year for each of the next five years to its base budget for purposes of financial aid. And finally, the College of Business Administration will receive a supplement of \$800,000 in this year's budget (\$550,000 in additional budget resources and a \$250,000 reduction in expected tuition revenue).

The combined effect of these budgetary enhancements is that both the Graduate School and the professional degree programs in the Law School and the College of Business Administration will be much better prepared to compete for the best students and to attain a better mix of students than would otherwise be possible.

While the focus of my appeal last year was for greater attention to the financial underpinnings of graduate education, the ultimate concern is for our capacity to move to a new level of quality as a graduate institution. With this in mind all of us were curious to see how we did when the National Research Council recently issued its evaluation of graduate departments at the national level.

The rankings were both sobering and complimentary to progress that had been made in the last five years. Lest we think that we have come farther than we actually have in the eyes of our faculty colleagues elsewhere, we find that

DOCUMENTATION

our two highest ranked graduate departments are theology at 12th out of 38 and philosophy at 16th out of 72. Two other departments are ranked in the 20s, chemical engineering and aeronautical engineering, and two in the 30s, civil engineering and mechanical engineering.

It is true that almost all of our graduate departments were seen as improving over the last five years. But we do not want to fall into the Garrison Keillor trap that brags that all our departments are "above average."

It is my opinion, that the only way we will make significant progress in such a survey five or 10 years hence is by concentrating resources on those departments which have a coherent, comprehensive and realistic plan for how they would use additional funds and which, relative to American higher education as a whole, can best utilize the inherent and particular assets of Notre Dame as an institution. It is no accident that the theology and philosophy departments have succeeded since 15 or 20 years ago they were provided with a major infusion of additional monies.

We want all of our departments, schools, centers and institutes to succeed at what they set out to achieve. But insofar as graduate education is concerned, with all of its necessary commitments for personnel, computing and library resources, laboratory equipment, and staff support, we will not have the resource base in the foreseeable future to do all things well. We need to choose. The conversation, about priorities among graduate programs, distressing as it may be at times, will need to engage all of our attentions.

(3) Financial Aid

I asked last year for special attention to the needs of the libraries and of graduate education. I am quite pleased that I can report so much progress in these areas since that time. Now let me turn to a perennial, crucial and top priority need every year—undergraduate financial aid.

I have announced before that the main obstacle we face in recruiting the best qualified undergraduate students is our limit on financial aid from internal sources. We do not skim off tuition to subsidize those who cannot afford to pay. Our main strategy is to seek to build ever higher levels of endowment for financial aid purposes. Toward this goal we identify Notre Dame scholars and Holy Cross scholars and we promise to meet need according to an internal formula. This allows us to seek vigorously the best students who apply, including members of historical minority groups. Unfortunately, even in these two categories our financial aid package is not always competitive with the best schools in the country. Many others who apply must find financial aid from federal and other sources.

Presently, there are a few types of students who are more fortunate. Full and partial athletic scholarships are paid for by revenues generated by our athletic programs. Participants in the ROTC programs are subsidized by federal dollars, although there has been a reduction in the number of such scholarships and in the maximum level of support. Faculty and staff children, and the nieces and nephews of Holy Cross religious, receive free tuition as part of the benefits package of their respective parents or relatives. The Joyce Scholars from the area around Columbus, Ohio, are specially well supported during their time at Notre Dame.

Despite these special opportunities we have a long way to go in financial aid for undergraduate students. Thus, at the end of the last academic year two things were done to improve our overall situation for 1995-96. We took \$2,000,000 from unrestricted gifts and made it available for expendable financial aid. Then we transferred \$10,600,000 to endowments for undergraduate financial aid from income derived from our TV contract for football, postseason athletic revenue, and licensing and marketing. This is in addition to what was done for graduate and professional school financial aid.

At the officers' summer retreat we devoted a large block of time to the issue of financial aid. Since then a committee has been exploring creative alternatives. We simply cannot afford to fall further behind. Rather we must find resources sufficient to make a Notre Dame education possible for all who want to attend. And we must get the word out that it is worth applying to Notre Dame in the first place because the institution will explore every avenue to put a competitive package together.

Last year we had 9,999 applicants for 1,880 positions in the First Year of Studies. The academic profile of the entering class is the best in our history. But we still lose too many students for whom we are their first choice. We lose too many students with specialized skills, too many students who would enhance our diversity. We must do better and we will.

(4) Colloquy Priorities

It should already be evident that last year was a good one in terms of building a solid structure, financial and otherwise. I would like to conclude the first section of my address by making reference to several other significant decisions or events that have helped us make progress relative to Colloquy priorities.

A recognized need across the University, but with a special claim in particular academic units, is additional faculty positions. The long-range goal of the Colloquy is 150 more faculty by the year 2002. It is planned that this will

DOCUMENTATION

be achieved by a combination of endowed professorships (both junior and senior chairs) and further faculty slots through increases in the budget. With this in mind, 12 additional faculty slots were built into the 1995-96 operating budget. The majority of these were in the College of Arts and Letters. This is in an era when jobs are scarce and several hundred candidates often apply for each position.

Some of you may remember that several years ago we put together a faculty/administrative committee to explore possibilities for a new University bookstore. The committee came forth with a well thought out proposal. Now I am pleased to report that we have a donor for the bookstore which will bring together books and paraphernalia in the same building but in a much larger, user-friendly setting. The building will also include a Visitors Center and the operations of the University Alumni Association. It will be located in the southeast corner of the new quadrangle just north of Cedar Grove Cemetery.

The new Business Administration complex was dedicated in September with appropriate fanfare. Dean Keane and the faculty and staff of the college should take great pride in the final product of their planning work. The complex is elegant, well laid out, functional and technologically in the forefront with regard to pedagogy. All of us will be expecting even greater results from the faculty and students of the college.

The renovation and expansion of the School of Architecture building is on schedule. The temporary inconvenience of the move to the old business building seems to have gone well with a minimum of disruption.

The planned expansion of the Galvin Life Sciences building will be undertaken now that the sources of funding have been clarified.

This past summer, when the officers were meeting at Land O'Lakes, Wisconsin, we dedicated the new UNDERC laboratory facilities. As you can see with your own eyes, we have begun the exterior renovation of the Main Building. The interior renovation will not be undertaken until the summer of 1997.

With all of this activity which carries us a long way toward realizing the goals of the Colloquy, we have been fortunate to run balanced budgets and to have already established a good foundation for our next development campaign. There is much else I could say in summarizing the achievements of this past year, but I want to leave sufficient time to reflect on a few challenges that we face as we move toward the future.

II. PROSPECTS FOR THE FUTURE

If any of us took the time to look over in a sequential fashion drawings or photographs of the whole developed part of the campus at various points in our history, it would quickly become evident that a simple French boarding school has become a full-fledged modern university. The physical expansion of the campus from the Main Building to the new Business School complex symbolizes in a sense an extraordinary level of energy and commitment.

But today, as often in the past, there are some among us who are rightly suspicious. It is not so much that they fear change as that they recognize the temptations that come in the train of increased size and greater resources. They worry about fateful decisions that will be too easily made. They sense the seduction that accompanies playing in the big leagues. Can a Catholic university maintain its heart and soul when its implicit points of reference play by other rules?

The answer to these difficult questions will only become clear with the passage of time. But I, for one, am convinced that we can find our own unique way, that we can strike a healthy balance that will preserve the best of our inherited tradition while forthrightly and courageously pursuing the challenges that loom on the horizon.

Let me speak to three issues that represent this type of unresolved tension. The first is the place of undergraduate teaching, the second is the role of international education, and the third is affirmative action in the recruitment, hiring and financial aid practices of the University.

(1) Undergraduate Teaching

Those of us who serve on the faculty know that contractually we are expected to give ourselves over wholeheartedly to teaching, scholarship and service. This is the multiple standard that is part of regular faculty reviews and that is determinative at the various stages of promotion. In theory, it seems self-evident that the pursuit of excellence in teaching would be a taken for granted essential element in the professional responsibilities of each and every faculty member.

But, as all of us know, there is no more persistent theme in the recent criticisms of American higher education than that the professoriate has become negligent or indifferent in its teaching tasks. Part of this reaction is driven by a combination of statistical detail and anecdotal evidence. The nationwide reduction of teaching loads has, when pictured in sheer hours of classroom involvement, made us look like a lazy lot indeed. Three, six or nine hours a week (not all of which is directed toward the un-

DOCUMENTATION

dergraduates who pay the bills) seems an unnecessary luxury to the factory worker for GM or the owner-operator of a small business. These perceptions are then connected to reports about a decline in office hours, an excessive use of adjuncts and graduate assistants, and an utter preoccupation with the rewards of research and publication.

In some states the resulting citizen revolt has led to legislatures moving toward dictating teaching loads or imposing rigorous reviews of faculty productivity. Even in the private sector, concern about a decline in teaching quality has led some parents and students to question whether the additional tuition burden is worth the investment. More generally across all of higher education one hears a more frequent outside voice that wonders whether the system of faculty tenure is a cause of much of this malaise. And for those who believe that it is, only a major restructuring of the system of faculty review and accountability will suffice to convince them that our institutions of higher education have been restored to their first and primary role.

The combination of concern about teaching quality and the increasing expense of a college education has created a natural market for sources outside of the academy to provide a rating system of their own. Thus we grapple with the growing influence of the *U.S. News and World Report* and other media versions of so-called objective comparison.

With these general reflections in mind, let me speak more concretely about Notre Dame as a teaching institution.

Of all the good things that happened during this past year none pleased me more than the recognition in *U.S. News* that our peers ranked us ninth among national universities in the excellence of our undergraduate teaching. This was the first time that such an appraisal had been undertaken. Along with our overall ranking (18th among national universities—an improvement of one over last year) we find ourselves favorably reviewed in this highly influential rating system. If you, as a parent, were making decisions on the basis of this information, it is obvious Notre Dame is a school worth considering. For those parents and students who probe the data further, they might be impressed by other indicators like retention rank (eighth), alumni satisfaction (fifth), and graduation rate (94 percent).

To you faculty colleagues a special word of credit, thanks and praise. Our present students, our graduates and our faculty peers elsewhere all believe that Notre Dame has preserved its traditional commitment to undergraduate teaching excellence. This is borne out in the acceptance rate of our graduates into the best graduate and profes-

sional degree programs and in the quick entry into the work force for these who seek employment directly after graduation.

But we can do better and I am confident that we will. I would like to point to several new factors that can enhance the quality of teaching that is already present.

First, as the size of our faculty continues to grow while our on-campus undergraduate population remains approximately the same, we should be able to divide responsibility among departments and across colleges more effectively and more equitably. With a good spirit of departmental cooperation the range of undergraduate offerings should be able to be enriched (presuming the proper coverage of graduate courses and dissertation direction).

Secondly, the availability of the DeBartolo classroom building, the new Business complex, and eventually a Science teaching facility, will provide even more opportunities for the creative use of the latest technology as a pedagogical tool. The same is true in the present Engineering buildings and the renovated Architecture building. In a year all of the dormitory rooms will be connected to the fiber optic computer network so that the range of options will be further extended.

Third, and finally, the generous gift of trustee John Kaneb will enable us to establish in the spring semester the new Teaching Center. For the first time in our history we will have a campus-wide center which can focus our efforts in every aspect of our teaching mission. A search committee has been constituted and we are presently looking for a founding director of the center. I am confident that the director will have your encouragement and support. There is every good reason why Notre Dame should be a leader not only in the practice of high quality undergraduate instruction but also in the theoretical reflection about it, including well thought out methods for assisting the next generation of faculty that we will welcome into our midst.

Before concluding these reflections on undergraduate teaching, let me list several issues that I hope the new Teaching Center can take up with some degree of priority.

(i) How can we most effectively evaluate the teaching performance of our faculty? We presently have a long-standing computerized form called teacher course evaluations or TCE's. These are filled out by students in each class and summaries of scores for each item and each course through the years are a part of promotion and tenure packets at the time of review. Any such system has its limitations but up to now we have been able to devise no better system.

DOCUMENTATION

A second form of teaching evaluation is not universal across the campus but some departments have a long and accepted tradition in this regard — that is, in-class visitation by departmental colleagues. For those academic units that include this component, written summaries from each visitor also become part of the files. I personally support class visitation, especially when announced ahead of time and participated in by several other faculty. But we need to find out why this practice has been resisted for so long by a number of departments and colleges.

(ii) How can we best encourage both junior and senior faculty the maximum utilization of the available pedagogical tools? The experience of the DeBartolo classroom facility has been quite instructive relative to this challenge. Even the most optimistic supporters of computer driven technology were surprised by the level of faculty demand that quickly emerged in DeBartolo. The need for additional support personnel became readily apparent. A certain amount of trial and error is inevitable when faculty experiment with classroom content, style and modes of student evaluation. A few of you have told me that you fear that some forms of glitzy, high tech delivery of information promote a passivity in the students so that they are not encouraged to be active learners. If this turns out to be the case, then I am confident that you will continue to probe for the right mix of techniques. In any case we need to learn from each other what works and in what learning contexts.

A second area of technology is the use of computers outside of the classroom or laboratory. As more and more students have on-line capacity in their rooms or dorms, the opportunity exists for faculty-student interaction through e-mail and other uses of our internal campus system. Some of you encourage questions from your students through such technology and have created a kind of extended hours for advising. Materials can be made constantly available through such formats as well.

Anything that the Teaching Center can do to mediate this conversation about the successful use of technological tools will be highly welcome.

(iii) What forms of evaluation of student performance provide the greatest degree of comprehensiveness, differentiation and fairness? We attract very fine students to Notre Dame and generally they work quite hard. At the undergraduate level the greatest risk of poor performance and low grades seems to come in the First Year of Studies. After that, perhaps because they have a clearer sense of direction or more disciplined study habits, the average grade is a B across the University.

In our professional schools, and in architecture and the fine and performing arts, a great emphasis is placed on

study projects, performances, and in some cases team activities. Usually these alternative forms of student contribution are evaluated as they might be subsequently in a professional career. The grade for a course might entirely hinge on the final product after the work of a semester or on the mastery of pertinent cases which appear on a final exam.

In graduate education, individual courses and research projects are component parts toward the final judgment that comes with comprehensive exams and the completion of a thesis or dissertation.

Each course and each program at whatever level of education places a different kind of pressure on faculty when it comes to evaluation of student performance. The collective wisdom of experience suggests that we need to provide the most opportunities for the display of student learning achievement during the first few years of the undergraduate curriculum. But how to plan a course and what type of feedback to provide does not admit of a univocal answer. This too is an area where all of us can use assistance from the center.

(iv) How can we foster a greater percentage of our students working collaboratively with faculty on research and other projects? The genius of the Oxbridge style of British higher education is the relationship between the tutor and the individual student or small group of students. This can be education at its most personal and its most stimulating (and most expensive). This takes place at Notre Dame, and across most of American higher education, primarily at the doctoral level. But there are a surprising number of instances on our campus where advanced undergraduate students, professional students and master's degree students are sharing responsibility (according to degrees of competence) or are working under close supervision with faculty in their own research and scholarly activity.

A good example of this is the summer programs of UNDERC at Land O'Lakes, Wisconsin, where undergrads, graduate students and faculty from several Midwestern universities live and work together in a major center for aquatic biological research. A second example is the Legal Aid Clinic staffed by the Notre Dame Law School which serves indigent members of our local community. Here faculty and law students take on the complexity of the interface between the legal system and the culture of poverty. A third example is the international peace scholars of the Kroc Peace Institute who not only take classes together, but live in a common facility, and prepare a collective plan for resolving some dimension of international conflict, all under the supervision of faculty from the institute.

DOCUMENTATION

I have highlighted three examples but I know there are many more. It is typical for undergraduate majors in the various departments of the Colleges of Science and Engineering to work hands-on in significant research with their faculty mentors. Students in the fine and performing arts and in architecture and in creative writing share space, time and projects or performances with the faculty.

We have a good start in breaking down the barriers of role and function. But carried to the next point of development, this is where teaching could be the most fun and the most rewarding. For it is our hope that some percentage of those students who join us in collaborative work will want to be like us and will someday replace us in the ranks of the professoriate. The Kellogg Center can help us better realize our potential in this regard.

Let me conclude this section on undergraduate teaching by reaffirming the centrality of this fundamental part of our mission. We are indeed fortunate to be entrusted with responsibility for educating good, bright, talented undergraduate students from all over the nation and all over the world. They come to us eager to learn. Their parents support them often at great sacrifice so that their dreams might be realized.

It is up to us to prepare our classes well, to utilize properly all the teaching tools at our disposal, to call our students to high performance, to discriminate fairly among different levels of achievement, and to enter into the lives of our students as mentor, counselor and friend. We should hold one another to these standards so that our ranks might always be peopled by those who share a common commitment to this difficult but rewarding task.

As we aspire to even greater achievement in professional and graduate education and in the development of our aspirations as a center of research and scholarship, may we never lose the quality of excellence in undergraduate teaching that has been our hallmark as a Catholic university.

(2) International Education

Let me now turn to a second major theme — international education. As all of you are aware, the post-Colloquy committee on international education made a number of recommendations, including restructuring the office that oversees that activity. Under Tim Scully's energetic leadership, we have added Iván Jaksic as assistant provost for International Studies and Thomas Bogenschield as director for International Studies. The challenge now will be to build on the programs, and efforts are already in place to do this, and to situate the University for vibrant growth in the international arena.

Notre Dame presently sponsors 18 study abroad programs for its undergraduate students in Europe, Latin America, Asia, the Middle East and Australia. Each year we send hundreds of our undergraduates to pursue their course of studies, for either a semester or a year, in a distinguished academic program outside of the United States. In addition, we have two Law School programs in London and professional business programs in London and Santiago. Noteworthy among the undergraduate programs is the two semesters of architecture in Rome (the only program of its kind).

At the graduate level, and in terms of faculty research activity in the broader global context, we have the Kellogg Institute for International Studies, the Kroc Institute for International Peace Studies, the Center for Civil and Human Rights, and the Ecumenical Institute at Tantur in Israel. Each of these entities contributes substantially to our international visibility and awareness.

The Kellogg Institute has concentrated its attention on Latin America as a region, although there is a growing interest in a broader range of comparative studies as well. I know from my own visits to Latin America that Kellogg is held in high regard. The two most recent symposia sponsored by the Coca-Cola Foundation have brought to the campus leaders from the academic, business, church and government sectors for provocative and helpful conversations.

The Kroc Institute has shifted its focus with the decline of the bipolar superpower configuration to a new emphasis on regional conflicts, sub-nuclear forms of military engagement, conflict resolution and the role of international agencies. The promotion of peace with justice should engage all of our attentions. The work of Kroc is to help all of us as citizens of the world and members of the human family to figure out how to make progress toward peace when such a desirable goal seems so elusive.

The Center for Civil and Human Rights is a much smaller operation than the two previously mentioned institutes, but it has made its mark even with relatively limited resources. The center is located within the Law School and has explored the philosophical and legal foundations of human rights both theoretically and within the practical order. From South Africa to Rwanda, from Israel/Palestine to Lebanon, from Croatia to Chile and Guatemala, the proper defense of civil and human rights has been revealed as highly precarious. The work of the center has been to expose, to critique, to ponder and to recommend. It is another vehicle for a distinctive Notre Dame contribution.

The Ecumenical Institute in Tantur is a center for scholarship, teaching and *in situ* programs intended to foster dialogue and promote understanding among the three

DOCUMENTATION

great religions of the book — Judaism, Christianity and Islam. In fact, despite local geopolitical currents beyond its control, Tantur has functioned well toward its intended purposes. Tantur has an excellent library and beautiful facilities. It houses resident scholars, short- and long-term participants, undergraduate students from Notre Dame and visitors on theological pilgrimage. It is also the site of national and international conferences and symposia. As we approach the year 2000, with all of its numerological symbolism, Tantur may become an even more exciting center of ecumenical interaction.

The post-Colloquy committee on international studies made a number of recommendations. I would like to comment on several of their concerns.

I fully agree that it would be desirable to double the number of our undergraduate students who participate in programs abroad. This needs to be preceded by a thorough review of our present sites. Many of the alternatives require specific language preparation. We need to survey student interest, internal academic resources and comparative cost factors. On the basis of all this evidence we can then plan for an orderly expansion of our offerings.

There is a special urgency to find a new location for our multiple programs in London. Our lease on the present facility runs out in 1997. Fortunately, we have identified several good sites and we are in the process of firming up the required funding. For the foreseeable future, London will be our largest and most academically complicated site in Europe. It is imperative that we have an attractive, functional center at a central location.

The study of the world's languages, literatures and cultures is another dimension of our international responsibility. Several years ago when we divided our one language department into three separate units we took a step in the right direction. This structural change has allowed us to gain greater focus. And I might add parenthetically, the modernization of our language laboratories and a new delegation of responsibility for the labor intensive supervision of these facilities has led to a genuine improvement in on-campus language instruction.

We still need to make decisions about how wide-ranging our language and literature areas can be. We offer two classical languages, Latin and Greek, a variety of modern European languages, including Spanish, French, Italian, German and Russian. We also have smaller sections of Arabic, Japanese, Chinese and Irish. There are also occasional courses that support biblical research and medieval studies. As our student population has diversified, there is growing interest in Portuguese, Vietnamese, Sanskrit, Swahili and various languages of central and eastern Europe.

The recent major benefaction to the Dante Collection has provided a spur to study the evolution of Italian literature. And the establishment of the Keough Center for Irish Studies has opened up the possibility of exploring the cultural heritage of so many of our present day students. The fact that the Irish poet Seamus Heaney recently won the Nobel Prize for literature is an added incentive.

In our on-campus life we have been enriched by the programs sponsored by the International Students Organization. We need more intercultural discussion and entertainment. I know that we could do much more in welcoming new international graduate and undergraduate students into our community and in tapping in the long run into their enthusiasm for the place.

Two years ago we established an International Advisory Council. Its members represent the broad international sweep of the Notre Dame family. They will be assisting the administration and faculty in every dimension of our international outreach. Other officers of the University and I have for many years been traveling selectively to other regions of the world to meet with five constituencies — education, business, government, religion and alumni. In every place we have been received with enthusiasm and real affection. Now we are beginning to see the fruits of this activity in faculty and student exchanges, in the formalization of cooperative arrangements, in the recruitment of talented students and in benefaction for the work of the University. We need to be shrewd in identifying those countries and regions with the greatest potential and we need to engage in all the appropriate follow-through after our visits.

It remains amazing to me that an American university in the flatlands of Indiana, far removed from the two coasts and not located in a major metropolitan area, can have advanced so far as an international institution. With our new support structures and with renewed involvement on all of our parts, I believe that we can realize the recommendations of the international committee.

(3) Affirmative Action

The third and last issue that I will address has become a subject of great contention both on and off the nation's campuses. Affirmative Action as an institutional policy is connected to various claims about history, about justice and about desired goals (whether as good in themselves or as remedies for previous practices). In the wake of the civil rights movement of the 1960s many individuals and groups advocated a sweeping reform of the law of the land and of the policies of institutions that sought federal or state funds to cover the costs of their operations. One proposed method of social change was the establishment of minimum quotas in hiring, promotion and the award-

DOCUMENTATION

ing of grants. This was criticized as excessively mechanistic and bureaucratic, as well as being unable to achieve a greater degree of social peace with fairness.

The preferable alternative in the eyes of many was the implementation of affirmative action policies which specified in advance targets to be pursued and somewhat more elastic standards of success or failure. Affirmative action presupposed good faith and trustworthiness by those charged with the follow through.

In our official documents at Notre Dame we speak of affirmative action goals in the admissions process for all levels of students and in the hiring of faculty and staff. This is intended either to correct past underrepresentation or to preserve important historical linkages with the founding religious community or the Catholic Church and its members.

In the literature defending affirmative action there are three lines of argument — compensatory (to rectify past wrongs of a group), corrective (to bring a past practice into balance) and redistributive (to increase opportunity for disadvantaged groups). At Notre Dame one or more of these arguments could be said to apply to members of racial and ethnic groups and women. The argument for including Roman Catholics and members of the Congregation of Holy Cross in our affirmative action goals spring from different but related concerns.

Now that it is uncertain whether state and federal policies will survive the legislative and judicial process of debate, it is important that we as an institution declare publicly and freely our continued support of our affirmative action goals.

When I became president nine years ago, our percentage of undergraduate students who came from underrepresented minority groups was approximately 7 percent. After receiving a report from the Committee on Minority Students we declared that within five years we wanted to increase that percentage to 15 percent. Within two years we reached that goal and ever since we have been trying to boost it even higher. Because financial aid was a pivotal concern, we established the category of Holy Cross scholars which is restricted to members of historical minority groups and meets the full need for those who qualify.

Our professional schools have had less success in meeting their affirmative action goals, primarily because of a dearth of financial aid resources. The Graduate School has developed a policy which considers African Americans, Asian Americans, Hispanic Americans, Native Americans and women in the sciences and engineering as

eligible for aggressive recruitment, special fellowships, travel awards and periodic analysis of the campus climate for diversity.

The Notre Dame Alumni Association has spawned two new subgroups: Black Alumni of Notre Dame (BA of ND) and Hispanic Alumni of Notre Dame (HA of ND). BA of ND has been a highly active organization which has provided a new mode of participation of African American alumni in the activities of the University, including student and staff recruitment, policy development and fund raising. HA of ND was more recently formed but it is already off to a promising start.

Affirmative action goals have also been set for the various advisory councils of the University and for the Board of Trustees. A quick comparison of the membership for these groups 10 or 15 years ago and today would reveal real progress.

For the first time in our history we have two women vice presidents and a woman dean. In many staff positions women occupy positions of real leadership, this is especially noteworthy in the student affairs and university relations sides of the University.

My two greatest concerns with regard to affirmative action are faculty recruitment of minorities, women and Catholics in general and the presence of minorities and women in positions of senior academic leadership responsibility. I find that a majority of our faculty are in favor of our affirmative action priorities, but this commitment is tested when it puts great pressure on their own academic area. Because hiring of faculty takes place piecemeal over a long period of time, there are always arguments why affirmative action targets do not apply in a given instance. But we easily pass from year to year with little noticeable progress across the board.

We will not be a fully American university unless we attract and employ a fitting percentage of racial/ethnic minorities and women. We will not be a fully Catholic university unless we attract and employ committed Catholics across the departments, colleges and other academic units. We will not maintain our strength as a Holy Cross institution unless we attract and employ talented and available Holy Cross religious.

There must be no pulling back. We remain firmly supportive of affirmative action at Notre Dame because it is the wisest social policy in a time of profound social change.

III. CONCLUSION

Let me end my address with a couple of summary observations.

DOCUMENTATION

Sometime soon I will recommend to the Board of Trustees a person to be the next provost of the University. Since the process is not complete, I cannot tell you who that person might be. But I can assure you that the authorized search committee has performed its labors with great dedication and a major expenditure of time. Many others have assisted in the interview process including the elected members of the Academic Council, the deans, the chair of the Faculty Senate, the deans, the representatives and the officers of the University. We have indeed been fortunate to have been blessed with an excellent group of finalists. My ultimate decision will not be easy.

Whoever the next provost turns out to be, I am confident, will enjoy your full cooperation as the person enters a demanding and pressure-filled job.

Tim O'Meara has served Notre Dame with great distinction for 18 years as provost and we all owe him our gratitude and heart-felt thanks. Later this academic year we will have occasion to celebrate Tim's long service as provost with specific attention to those areas of noteworthy achievement that have characterized his term of office. Let me say here and now that we have worked well together for a total of 14 years. I hope and pray that the transition might go smoothly for Tim and his wife, Jean.

Another search has begun. This time for a successor to Tom Mason as vice president for Business Affairs. Tom has served ably in his present role for 19 years. He too will be difficult to replace. But the greatest tribute I can pay is that Tom will leave his present responsibility with the University in solid financial shape and with an attractive and well maintained campus. To Tom and Mary Ann we also say thanks for a job well done.

To those faculty and staff who are present at this address for the first time I bid you a cordial welcome. We are happy that you have joined our ranks. May you find here a genuine community of scholars and servants of the common life.

These are exciting times at Notre Dame. We are ever closer to building the great Catholic university that has been the object of so much of our speculation and planning. If we remain firm in our sense of purpose, if we keep rooted in our traditions and precious legacy, if we dare to risk a future that will tax our very beings, then surely nothing can hold us back.

I thank you for your friendship and support. And I assure you that you will have my unstinting labor and good will.

DOCUMENTATION

University Committee on Libraries September 22, 1995

The meeting was called to order at 2 p.m. in the office of the director of libraries by Chairman Thomas Fehlner. Also in attendance were Leo Despres, Paula Higgins, Robert Miller, Robert Scheidt, Steven Schmid, Marsha Stevenson and secretary Melodie Eiteljorge.

The first order of business was the election of a chair. John Halloran was nominated and unanimously elected. If he is unable to serve, Thomas Fehlner will continue as chair for another year.

The committee looked at schedules to determine a good meeting time for the semester. There was no time other than the lunch period that all were available. It was agreed that the next meeting will be held Tuesday, October 24, 12:30 to 1 p.m. at the University Club.

There was a brief review of topics to be covered through the year. The Mahaffey Business Information Center will be discussed later in the year. Electronic initiatives will be the focus of one meeting. After the first of the year the libraries will have a space consultant, who will be asked to meet with the committee.

Robert Miller reported that separate letters regarding collection development were sent out under the signature of Thomas Fehlner on behalf of the committee to department chairs and the full faculty.

Miller also reported that Scott Van Jacob has accepted the position of Iberian-Latin American studies librarian. He will begin work November 1. Three candidates have been interviewed for the rare book cataloger position. A fourth candidate will visit October 2. A decision should be made by mid October. A third faculty position, coordinator of instructional services, has been posted.

Funding was received for 2,000 new public chairs in the Hesburgh Library. These will be put in place over Christmas break. The library homepage is now available on the web. Several branch libraries also have homepages. In the near future, we hope to be able to use the library homepage for interlibrary loan and reference requests.

Miller distributed a description of a new collection that has arrived, the Jose Durand Library. He also distributed a statement prepared for the officers on how the first year's budget increase was utilized. He reviewed this document with the committee.

Miller reported that most of the public terminals on the first and second floor of the Hesburgh Library have been replaced by PCs. These are equipped with UNLOC, Netscape, Gopher and OVID. Marsha Stevenson noted that OVID is a powerful search engine with a great deal of potential. Paula Higgins asked if OVID would provide access to Dissertation Abstracts. Stevenson replied that this could be provided through OVID, but it is not at this time. Miller added that General Business File from Information Access Corporation with full text for much material will soon be available at the Business Information Center.

Miller suggested that at the next meeting the committee discuss the budget and planning cycles that are in place in the libraries. He distributed a third document on Strategic Objectives and asked that the committee review it. He and the Library Administrators and Managers Group (LAM) will be putting together a new five-year budget. The enhancement budget will be reviewed each year of the six-year cycle.

There being no further business, the meeting adjourned at 2:40 p.m.

Respectfully submitted,

Melodie G. Eiteljorge
Secretary

THE GRADUATE SCHOOL OFFICE OF RESEARCH

Current Publications and Other Scholarly Works

Current publications should be mailed to the Office of Research of the Graduate School, Room 312, Main Building.

COLLEGE OF ARTS AND LETTERS

Core Course

Neiman, Alven M.

A. M. Neiman. 1995. Wittgenstein, liberal education, philosophy. In *Philosophy and education: Accepting Wittgenstein's challenge*, eds. P. Smeyers and J. D. Marshall, 77-92. Dordrecht, The Netherlands: Kluwer Academic Publishers.

A. M. Neiman. 1995. Wittgenstein, liberal education, philosophy. *Studies in Philosophy and Education* 13:201-215.

Economics

Goulet, Denis A.

D. Goulet, C. Curillo and M. T. Solís. 1995. Debate. *Una Etica y Una Espiritualidad en el Desarrollo*. Heredia, Costa Rica: Cátedra Victor Sanabria. 69 pp.

English

O'Rourke, William A.

W. O'Rourke. 1995. Public funding of arts denounced. Review of *Art lessons: Learning from the rise and fall of public arts funding*, by A. G. Marquis. *South Bend Tribune*, 1 October, sec. E, p. 8.

W. O'Rourke. 1995. Review of Raymond Carver's *Short cuts: Selected stories*, William Stull and Maureen Carroll's *Remembering Ray: A composite biography*, and Robert Altman and Frank Barhydt's *Short cuts: The screenplay*. *Short Story* 3 (2): 71-75.

Government and International Studies

Väyrynen, Raimo

R. Väyrynen. 1995. Erik Allardt — A friend of peace research. In *Encounters with Erik Allardt*, eds. R. Alapuro et al., 189-193. Helsinki, Finland: Helsinki University Press.

History

Smyth, Jim

J. Smyth. 1995. Anglo-Irish unionist discourse, c. 1656-1707: From Harrington to Fletcher. *Bullán: An Irish Studies Journal* 2 (1): 17-34.

J. Smyth. 1995. "The men of no popery:" The origins of the Orange order. *History Ireland* 3 (3): 48-53.

Philosophy

Zimmerman, Dean W.

D. W. Zimmerman. 1995. Theories of masses and problems of constitution. *Philosophical Review* 104 (1): 53-110.

Program of Liberal Studies

Reydams-Schils, Gretchen J.

G. J. Reydams-Schils. 1995. Stoicized readings of Plato's *Timaeus* in Philo of Alexandria. *Studia Philonica Annual* 7:85-102.

Romance Language and Literature

Douthwaite, Julia V.

J. Douthwaite. 1995. Review of *Nature's body: Gender in the making of modern science*, by L. Schiebinger. *Journal of the History of the Behavioral Sciences* 31 (2): 194-197.

Sociology

Christiano, Kevin J.

K. J. Christiano. 1995. Review of *The post-war generation and establishment religion: Cross-cultural perspectives*, eds. W. C. Roof, J. W. Carroll and D. A. Roozen. *Social Forces* 74 (1): 363-364.

Theology

Porter, Jean

J. Porter. 1995. Moral reasoning, authority and community in *Veritatis Splendor*. *Annual of the Society of Christian Ethics* 201-219.

Yoder, John H.

J. H. Yoder. 1995. Primitivism in the radical reformation: Strengths and weaknesses. In *The primitive church in the modern world*, ed. R. T. Hughes, 74-97. Urbana, Ill.: University of Illinois Press.

THE GRADUATE SCHOOL OFFICE OF RESEARCH

COLLEGE OF SCIENCE

Biological Sciences

Craig, George B., Jr.

J. G. Estrada-Franco and G. B. Craig, Jr. 1995. Biology, disease relationships and control of *Aedes albopictus*. Technical Paper No. 42, Pan American Health Organization i-v and 1-49.

Lamberti, Gary A.

G. A. Lamberti, S. V. Gregory, L. R. Ashkenas, J. L. Li, A. D. Steinman and C. D. McIntire. 1995. Influence of grazer type and abundance on plant-herbivore interactions in streams. *Hydrobiologia* 306:179-188.

McIntosh, Robert P.

R. P. McIntosh. 1995. Metaecology. *Bulletin of the Ecological Society of America* 76 (3): 155-158.

Chemistry and Biochemistry

Fehlner, Thomas P.

M. Banares, A. N. Patil, T. P. Fehlner and E. E. Wolf. 1995. Novel cluster-derived catalysts for the selective hydrogenation of crotonaldehyde. *Catalysis Letters* 34:251-258.

Miller, Marvin J.

J. Hu and M. J. Miller. 1995. An efficient synthesis of cobactin T, a key component of the mycobactin class of siderophores. *Tetrahedron Letters* 36 (36): 6379-6382.

P. J. Crocker and M. J. Miller. 1995. Oxidative free-radical cyclization as a method for annulating β -lactams: Syntheses of functionalized carbacephams. *Journal of Organic Chemistry* 60:6176-6179.

A. Ghosh and M. J. Miller. 1995. Synthesis of novel hydantoin analogs of 5'-nor carbocyclic nucleosides: Versatility of a chiral acylnitroso cycloaddition. *Tetrahedron Letters* 36 (36): 6399-6402.

Physics

Biswas, Nripendra N.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1995. Inclusive μ and b -quark production cross sections in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 74 (18): 3548-3552.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1995. Limits on the anomalous $ZZ\gamma$ and $Z\gamma\gamma$ couplings in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 75 (6): 1028-1033.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1995. Measurement of the $WW\gamma$ gauge boson couplings in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 75 (6): 1034-1039.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1995. Search for squarks and gluinos in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 75 (4): 618-623.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1995. Search for W boson pair production in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 75 (6): 1023-1027.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1995. W and Z boson production in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 75 (8): 1456-1461.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1994. Rapidity gaps between jets in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 72 (15): 2332-2336.

S. Abachi et al. Notre Dame (N. N. Biswas, R. C. Ruchti, J. Warchol and M. R. Wayne). 1994. Search for the top quark in $p\bar{p}$ collisions at $\sqrt{s}=1.8$ TeV. *Physical Review Letters* 72 (14): 2138-2142.

Glazier, James A.

B. A. Prause, J. A. Glazier, S. J. Gravina and C. D. Montemagno. 1995. Three-dimensional magnetic resonance imaging of a liquid foam. *Journal of Physics: Condensed Matter* 7:L511-L516.

Kolata, James J.

A. Ozawa, G. Raimann, R. N. Boyd, F. R. Chloupek, M. Fujimaki, K. Kimura, H. Kitagawa, T. Kobayashi, J. J. Kolata et al. 1995. Study of the β -delayed neutron emission of ^{19}C . *Nuclear Physics A* 592:244-256.

Ruchti, Randal C.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1028-1033.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1023-1027.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (4): 618-623.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 74 (18): 3548-3552.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (8): 1456-1461.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1034-1039.

See under Biswas, Nripendra N. 1994. *Physical Review Letters* 72 (14): 2138-2142.

See under Biswas, Nripendra N. 1994. *Physical Review Letters* 72 (15): 2332-2336.

Warchol, Jadwiga

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1034-1039.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1023-1027.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (4): 618-623.

See under Biswas, Nripendra N. 1995. *Physical Review Letters* 74 (18): 3548-3552.

- See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1028-1033.
See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (8): 1456-1461.
See under Biswas, Nripendra N. 1994. *Physical Review Letters* 72 (14): 2138-2142.
See under Biswas, Nripendra N. 1994. *Physical Review Letters* 72 (15): 2332-2336.

Wayne, Mitchell R.

- See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (4): 618-623.
See under Biswas, Nripendra N. 1995. *Physical Review Letters* 74 (18): 3548-3552.
See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1023-1027.
See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1028-1033.
See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (6): 1034-1039.
See under Biswas, Nripendra N. 1995. *Physical Review Letters* 75 (8): 1456-1461.
See under Biswas, Nripendra N. 1994. *Physical Review Letters* 72 (15): 2332-2336.
See under Biswas, Nripendra N. 1994. *Physical Review Letters* 72 (14): 2138-2142.

COLLEGE OF ENGINEERING

Chemical Engineering

Wolf, Eduardo E.

- F. Qin and E. E. Wolf. 1995. Infrared thermography and fourier transform infrared spectroscopy studies of the dynamics of CO oxidation on a Rh washcoat catalysts supported on a metal substrate. *Industrial and Engineering Chemistry Research* 34:2923-2939.
K. L. Yeung, K. H. Lee and E. E. Wolf. 1995. Morphological transformation of Pd thin film catalysts during 1,3 butadiene hydrogenation: An air and UHV STM Study. *Journal of Catalysis* 156:120-131.
See under College of Science; Chemistry and Biochemistry; Fehlner, Thomas P. 1995. *Catalysis Letters* 34:251-258.

Civil Engineering and Geological Sciences

Makris, Nicos

- N. Makris, G. F. Dargush and M. C. Constantinou. Dynamic analysis of viscoelastic fluid dampers. *Journal of Engineering Mechanics, ASCE*, 121:1114-1121.

Sobczyk, Kazimierz

- K. Sobczyk and J. Trebicki. 1995. Maximum entropy closure for nonlinear stochastic systems. In *Proceedings of the 1995 ASME Design Engineering Technical Conferences, 15th Biennial Conference on Mechanical Vibration and Noise*, eds. S. C. Sinha et al., 1025-1028. Boston: ASME DE-84-1.

Spencer, Billie F., Jr.

- S. F. Wojtkiewicz, L. A. Bergman and B. F. Spencer, Jr. 1995. Numerical solution of some three-state random vibration problems. In *Proceedings of the 1995 ASME Design Engineering Technical Conferences, 15th Biennial Conference on Mechanical Vibration and Noise*, eds. S. C. Sinha et al., 939-947. Boston: ASME DE-84-1.
D. C. Kaspari, B. F. Spencer, Jr. and M. K. Sain. 1995. Optimal structural control: A reliability based approach. In *Proceedings of the 1995 ASME Design Engineering Technical Conferences, 15th Biennial Conference on Mechanical Vibration and Noise*, eds. S. C. Sinha et al., 855-862. Boston: ASME DE-84-1.
S. C. Sinha, J. P. Cusumano, F. Pfeiffer, A. K. Bajaj, R. A. Ibrahim, L. A. Bergman, B. F. Spencer, Jr., A. A. Ferri, M. A. Ozbek, A. Soom and D. E. Newland, eds. 1995. *Vibration of nonlinear, random and time-varying systems, Vol. 3, Part A*. In *Proceedings of the 1995 Design Engineering Technical Conferences*. New York: ASME DE-84-1.

Westerink, Joannes J.

- C. A. Blain, J. J. Westerink and R. A. Luettich. 1995. Application of a domain size and gridding strategy in the prediction of hurricane storm surge. In *Coastal Engineering '95*, eds. C. A. Brebbia et al., 301-308. Cancun, Mexico.
N. W. Scheffner, J. J. Westerink and R. A. Luettich. 1995. Applications of a longwave hydrodynamic model generated tropical and extra-tropical storm surge database. In *Coastal Engineering '95*, eds. C. A. Brebbia et al., 327-334. Cancun, Mexico.
R. R. Grenier, R. A. Luettich and J. J. Westerink. 1995. A comparison of the nonlinear frictional characteristics of two-dimensional and three-dimensional models of a shallow tidal embayment. *Journal of Geophysical Research* 100 (C7): 13719-13735.
S. C. Hagen and J. J. Westerink. 1995. First element grid resolution based on second and fourth order truncation error analysis. In *Coastal Engineering '95*, eds. C. A. Brebbia et al., 283-290. Cancun, Mexico.
J. J. Westerink and P. J. Roache. 1995. Issues in convergence studies in geophysical flow computations. *Joint ASME/SME Fluids Engineering Conference*, August. Hilton Head, S.C.

THE GRADUATE SCHOOL OFFICE OF RESEARCH

Electrical Engineering

Bauer, Peter H.

P. H. Bauer. 1995. Absolute response error bounds for floating point digital filters in state space representation. *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing* 42 (9): 610-613.

Sain, Michael K.

See under Civil Engineering and Geological Sciences; Spencer, Billie F., Jr. 1995. *Proceedings of the 1995 ASME Design Engineering Technical Conferences, 15th Biennial Conference on Mechanical Vibration and Noise*, 855-862.

SCHOOL OF ARCHITECTURE

Brandt, Robert J.

R. J. Brandt. 1995. Sculpture. *Classic Rietveld*. New Harmony Gallery of Contemporary Art: New Harmony, Ind.

COLLEGE OF BUSINESS ADMINISTRATION

O'Connor, Ellen S.

E. S. O'Connor. 1995. Paradoxes of participation: Textual analysis and organization change. *Organization Studies* 16 (5): 769-803.

E. S. O'Connor, M. J. Hatch, H. V. White and M. N. Zald. 1995. Undisciplining organizational studies: A conversation across domains, methods, and beliefs. *Journal of Management Inquiry* 4 (2): 119-136.

Accountancy

Rueschhoff, Norlin G.

N. G. Rueschhoff. 1995. International financial reporting standards from a transatlantic perspective. In *Aspassungsprozesse in Wirtschaft und Recht: Europäische Union, Rechnungslegung und Steuern*, eds. C. Djanani, H. Kofler and R. Steckel, 285-298. Vienna, Austria: Linde Verlag Wien.

LAW SCHOOL

Barrett, Matthew J.

M. J. Barrett. 1995. Can a deficiency notice to a non-filing taxpayer shorten the time to claim a refund in the tax court? Preview of United States Supreme Court Cases 1995-96 Term (2): 68-71.

Doran, Eileen M.

E. Doran. 1995. Custody determinations in Indiana. *Indiana Continuing Legal Education Forum* (September 26).

RADIATION LABORATORY

Mezyk, Stephen P.

S. P. Mezyk. 1995. Rate constant determination for the reaction of sulfhydryl species with the hydrated electron in aqueous solution. *Journal of Physical Chemistry* 99:13970-13975.

THE GRADUATE SCHOOL OFFICE OF RESEARCH

Awards Received and Proposals Submitted

In the period September 1, 1995, through September 30, 1995

AWARDS RECEIVED

Category	Renewal		New		Total	
	No.	Amount	No.	Amount	No.	Amount
Research	11	805,996	8	456,316	19	1,262,312
Facilities and Equipment	0	0	2	128,189	2	128,189
Instructional Programs	1	33,823	0	0	1	33,823
Service Programs	0	0	4	48,393	4	48,393
Other Programs	<u>1</u>	<u>10,000</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>10,000</u>
Total	13	849,819	14	632,898	27	1,482,717

PROPOSALS SUBMITTED

Category	Renewal		New		Total	
	No.	Amount	No.	Amount	No.	Amount
Research	6	671,613	22	16,159,238	28	16,830,851
Facilities and Equipment	0	0	2	119,232	2	119,232
Instructional Programs	1	33,823	1	27,771	2	61,594
Service Programs	0	0	1	8,612	1	8,612
Other Programs	<u>0</u>	<u>0</u>	<u>3</u>	<u>46,813</u>	<u>3</u>	<u>46,813</u>
Total	7	705,436	29	16,361,666	36	7,067,102

THE GRADUATE SCHOOL OFFICE OF RESEARCH

AWARDS FOR FACILITIES AND EQUIPMENT

Civil Engineering and Geological Sciences

Pyrak-Nolte, L., Makris, N.
Acquisition of Bi-axial Test System
National Science Foundation
\$116,942 12 months

Electrical Engineering

Stevenson, R.
Image Processing Investigations
Apple Computer Inc.
\$11,247

AWARDS FOR INSTRUCTIONAL PROGRAMS

Psychology

McCabe, S.
Student Experiential Program of Work with Homeless
and Elderly
Retirement Research Foundation
\$33,823 12 months

AWARDS FOR SERVICE PROGRAMS

Center for Continuing Formation in Ministry

Lauer, E.
Center for Continuing Formation in Ministry
Various Others
\$42,627 1 month

Notre Dame Center for Pastoral Liturgy

Bernstein, E.
Center for Pastoral Liturgy
Various Others
\$2,676 1 month
Center for Pastoral Liturgy
Various Others
\$2,546 1 month

Institute for Church Life

Cannon, K.
Institute for Church Life
Various Others
\$544 1 month

AWARDS FOR OTHER PROGRAMS

Institute for International Peace Studies

Power, F.
NAFSA Support for Graduate Student (T. Makogon)
NAFSA/Association of International Educators
\$10,000 12 months

Proposals Submitted

In the period September 1, 1995, through
September 30, 1995

PROPOSALS FOR RESEARCH

Aerospace and Mechanical Engineering

Mason, J.
Dynamic Fracture of Composites
Department of the Navy
\$309,452 36 months

Civil Engineering and Geological Sciences

Kareem, A.
Structural Control
Research Foundation of SUNY
\$95,584 24 months
Silliman, S., Spencer, B.
REU Site in CE/GEOS 96-98
National Science Foundation
\$147,900 36 months

Chemical Engineering

McGinn, P.
Critical Current Density in YBaCnO
Purdue University
\$138,875 24 months
Varma, A.
FSU Infrastructural Supplement
National Science Foundation
\$5,000 12 months

THE GRADUATE SCHOOL OFFICE OF RESEARCH

Chemistry and Biochemistry

Hartland, G.	
Alfred P. Sloan Research Fellowship Sloan Foundation	
\$30,000	24 months
Taylor, R.	
Library Approach to Synthetic Receptors and Enzyme Mimics	
Department of the Navy	
\$291,831	36 months
Hayes, R.	
X-ray Assisted Reactions	
American Chemical Society	
\$50,000	24 months
Smith, B.	
Sloan Fellowship — Research	
Sloan Foundation	
\$30,000	24 months
Basu, S.	
Studies on Prostate and Colon Tumors: cis Platinum Drugs	
Coleman Foundation	
\$9,000	12 months

Computer Science and Engineering

Chen, D.	
Shortest Paths in Computational Geometry and Applications	
National Science Foundation	
\$246,655	36 months

Electrical Engineering

Antsaklis, P., Lemmon, M.	
Efficient Methodologies for DES Control Design	
National Science Foundation	
\$287,523	36 months
Merz, J., Furdyna, J.	
Materials Research Science and Engineering Center	
National Science Foundation	
\$12,187,359	60 months
Porod, W., Lent, C., et al.	
Quantum Cellular Neural Networks	
National Science Foundation	
\$40,893	36 months
Minniti, R.	
REU Site for Electrical Engineering	
National Science Foundation	
\$165,900	36 months
Bandyopadhyay, S., Miller, A.	
Artificial Quantum Solids	
Department of the Army	
\$86,213	36 months

History

Dolan, J.	
The Search for an American Catholicism	
Lilly Endowment, Inc.	
\$58,000	12 months

Mathematics

Hu, B.	
Nonlinear Partial Differential Equations and Applications	
National Science Foundation	
\$83,982	36 months
Yin, H.	
Partial Differential Equations and Applications	
National Science Foundation	
\$80,096	36 months

Physics

Marshalek, E.	
Microscopic Descriptions of Nuclear Collective Motion	
National Science Foundation	
\$289,585	36 months
Schiffer, P.	
Investigations of Colossal Magnetoresistance Compounds	
Department of the Navy	
\$388,500	36 months
Rettig, T.	
REU Site Program for Physics at Notre Dame 1996–2000	
National Science Foundation	
\$393,154	60 months
Glazier, J.	
MRI Study of Three Dimensional Foams	
ACS Petroleum Research Foundation	
\$75,000	36 months
Wiescher, M.	
Interdisciplinary Accelerator Facility Operation Funds	
National Science Foundation	
\$515,905	36 months
Ruchti, R., Wayne, M., et al.	
Large Hadron Collider Physics	
Northeastern University	
\$75,683	12 months
Tanner, C.	
Precision Measurements of Transition Amplitudes in Cesium	
National Science Foundation	
\$30,000	12 months

THE GRADUATE SCHOOL OFFICE OF RESEARCH

Psychology

- Whitman, T., Braungart-Rieker, J., et al.
A Dynamic Systems Analysis of Infant Development
National Institutes of Health
\$195,163 12 months
- Merluzzi, T., Maxwell, S.
Self-Efficacy and Coping with Breast Cancer
Department of the Army
\$531,598 48 months

PROPOSALS FOR FACILITIES AND EQUIPMENT

Chemical Engineering

- McGinn, P.
Thermal Analysis System
Purdue University
\$71,924 12 months

Physics

- Blackstead, H.
Microwave and Optical Studies of HTSC
Purdue University
\$47,308 12 months

PROPOSALS FOR INSTRUCTIONAL PROGRAMS

Chemical Engineering

- Brennecke, J., Stadtherr, M.
Environmentally Conscious Chemical Process Design
Course
C. & H. Dreyfus Foundation, Inc.
\$27,771 15 months

Psychology

- McCabe, S.
Student Experiential Program of Work with Homeless
and Elderly
Retirement Research Foundation
\$33,823 12 months

PROPOSALS FOR SERVICE PROGRAMS

Center for Social Concerns

- Royer, K.
Service Learning Coordinator Chapin Street Clinic
Indiana Campus Compact
\$8,612 12 months

PROPOSALS FOR OTHER PROGRAMS

Aerospace and Mechanical Engineering

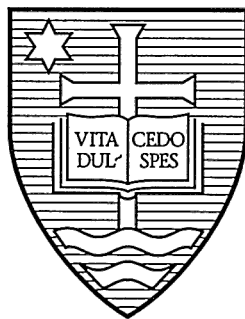
- Mason, J.
Finite Element Investigations of Dynamic Failure
Modes
National Science Foundation
\$0 12 months

Electrical Engineering

- Antsaklis, P.
IEEE CDC Travel Funds
National Science Foundation
\$40,000 12 months

Office of the Executive Vice President

- Roemer, J.
National Youth Sports Program Notre Dame
Indiana Department of Health
\$6,813 12 months



NOTRE DAME REPORT

Volume 25, Number 6

November 17, 1995

Notre Dame Report (USPS 7070-8000) is an official publication published fortnightly during the school year, monthly in the summer, by the University of Notre Dame, Office of the Provost. Second-class postage paid at Notre Dame, Indiana. *Postmaster:* Please send address corrections to: Records Clerk, Department of Human Resources, Security Building, University of Notre Dame, Notre Dame, IN 46556.

Linda M. Diltz, Editor
Marten Schalm, Designer
Julie E. Rogers, Publication Assistant
Gerard Jacobitz, Indexer
Publications and Graphic Services
415 Main Building
Notre Dame, IN 46556
(219) 631-5337

© 1995 by the University of Notre Dame, Notre Dame, IN 46556. All rights reserved.

