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# Notre Dame

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# R E P O R T

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## Contents:

December 4, 1992

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### The University

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- 195 *Parsons Foundation Gives Grant to Chemistry and Biochemistry*
- 195 *Exchange Program Established with Clark Atlanta University*
- 195 *O'Briens, Strake, Sanford to Receive Alumni Awards*
- 196 *University Enrolls a Record 10,126*
- 196 *International Students Represent 76 Countries*
- 196 *N.D. Ranks Third in Football Graduation Rates*

### Faculty/Administrators' Notes

---

- 197 *Faculty Appointments*
- 197 *Faculty Honors*
- 197 *Faculty Activities*
- 201 *Administrators' Honors*
- 201 *Administrators' Activities*

### Documentation

---

- 202 *247th Graduate Council Meeting  
October 28, 1992*
- 204 *Academic Council Minutes  
October 8, 1992*
- 218 *University Libraries' Hours During Christmas/  
New Year's Holiday and Intersession  
December 24, 1992-January 13, 1993*

### The Graduate School

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- 219 *Current Publications and Other Scholarly Works*

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1992-93

# The University

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## Parsons Foundation Gives Grant to Chemistry and Biochemistry

Notre Dame has received a grant of \$100,000 from the Ralph M. Parsons Foundation of Los Angeles for a renovation project in the instructional laboratories used by the Department of Chemistry and Biochemistry.

The grant will enable the department to expand and renovate its laboratories and to acquire new chemical instrumentation for its programs.

The Ralph M. Parsons Foundation was established in 1961 by the late Mr. Parsons, whose global engineering and construction firm built many of the world's largest refineries, chemical plants and metallurgical complexes, as well as three-fourths of all U.S. missile launch facilities.

## Exchange Program Established with Clark Atlanta University

Notre Dame and Clark Atlanta University in Georgia have signed an agreement establishing an exchange program designed to expand ethnic awareness by offering educational opportunities to students in settings different from their home institutions.

Roland B. Smith, executive assistant to the president is project coordinator. This program mirrors a cooperative venture established last year between Notre Dame and Xavier University of New Orleans.

Clark Atlanta is the only exclusive private, coeducational and historically black comprehensive university in the country. It was established in 1988 through the merger of Clark College and Atlanta University.

A primary goal of the program will be to increase the number of African-American students who pursue academic careers. Through student exchanges, joint research ventures and other academic, cultural and social activities, the universities hope to motivate, cultivate and support African-American participation in graduate education. Participants in the program must be juniors in good standing with demonstrated high academic achievement.

The exchange programs with Clark Atlanta and Xavier are among numerous ventures at Notre Dame designed to enhance educational opportunities for minority students and faculty. Others include the Coca-Cola Minority Faculty Fellowship Program, Talent Search, Upward Bound, the Aetna Program and the Balfour-Hesburgh Program for Minority Students majoring in engineering, mathematics or science.

## O'Briens, Strake and Sanford to Receive Alumni Awards

The Alumni Association has announced the recipients of three association awards.

Julie K. and Sean P. O'Brien of Bath, Pa., will receive the Dr. Thomas A. Dooley Award for outstanding humanitarian service. The O'Briens are both 1986 Notre Dame graduates. They were married on campus in 1987 and are active members of the Pocono Mountains Notre Dame Club. Sean O'Brien, an architect, was club president from 1989-92, at which time Julie, an environmental engineer, was club secretary. The couple helped establish the club's first Summer Service Project in Family Home, a drug and alcohol rehabilitation center for women with children in Allentown, Pa. This year the club supported the volunteer work of Christine Rudolph, a Notre Dame junior from Cleveland, Ohio, at the Family Home. The O'Briens will receive the award at the winter meeting of the Alumni Association's board of directors, Jan. 29.

George W. Strake Jr., of Houston, Tex., will receive the 1993 John C. Cavanaugh, C.S.C., Award for outstanding public service. A 1957 graduate, he was elected senior class president while at Notre Dame and was commissioned as a U.S. Navy officer at graduation. Following active duty, he obtained a master's degree from Harvard's graduate school of business in 1961. Active in Texas Republican Party politics, he was secretary of state from 1979-81. From 1983 to 1988 he was state chairman of the Republican Party and a member of the Republican National Committee. Strake will receive the award during halftime ceremonies of the Notre Dame/Michigan State football game, Sept. 18.

Robert G. Sanford of South Bend, Ind., will receive the John Cardinal O'Hara, C.S.C., Award for distinguished service to the University. A 1940 graduate, he was a professor of accountancy during the 1969-70 academic year. He also taught accounting at the University of Dayton from 1970 to 1982 and at Saint Mary's College from 1982-87. He was the class of 1940's class secretary from 1940 to 1951 and has been again since 1956. He was class treasurer from 1973-80 and has been class president since 1985. He writes a class newsletter several times each year. An active Notre Dame fundraiser, he is a member both of the Sorin Society, for those who contribute \$1000 or more annually in unrestricted gifts, and of the Badin Guild, for benefactors who include Notre Dame in their estates. Sanford will receive the award at the Alumni Association's 50-year Club Reunion, June 19.

# The University

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## University Enrolls a Record 10,126

The University has enrolled a record 10,126 for the 1992 fall semester, according to the annual enrollment report compiled by the Office of Institutional Research. The record enrollment includes 7,610 undergraduates and 2,516 postbaccalaureate students. The previous record of 10,085 was established in 1991.

In its 20th year of coeducation, the University also has enrolled a record number of women in the undergraduate student body — 2,938 or 39 percent — and among first-year students — 823 or 44 percent of the freshman class.

Freshmen number 1,879 equaling last year's record for first-year students. Of the four undergraduate colleges, the College of Arts and Letters has the largest enrollment with 2,246. The College of Business Administration has enrolled 1,485; Science 1,001; and Engineering 956.

Among postbaccalaureate students, 1,486 are enrolled in the Graduate School, 576 in the Law School, and 470 in the College of Business Administration. Sixteen students are involved in dual-degree programs.

Notre Dame continues as one of the few truly national universities with a student body drawn from all 50 states. Illinois has the largest contingent with 783 students, followed by Indiana (747), Ohio (591), New York (570) and Pennsylvania (508). Catholics make up 86 percent of the undergraduate student population.

## International Students Represent 76 Countries

International students at Notre Dame represent 76 countries, 10 nations more than a year ago, according to the 1992-93 report from the Office of International Student Affairs. While the diversity of the international student population increased, the number of students from foreign countries decreased from 699 last year to 670.

The country with the most students attending Notre Dame is China with 94, followed by India with 56, Canada with 38, South Korea with 25 and Japan with 18. Thirty-five students come from various nations in Africa.

Most of the international students are engaged in advanced studies. There are 101 undergraduates and 569 involved in graduate and postdoctoral studies and practical training. The most frequent field of study among the undergraduates is business. In advanced studies, the physical and social sciences predominate, followed by engineering.

## N.D. Ranks Third in Football Graduation Rates

Notre Dame ranked third among all colleges and universities playing Division I-A football in the recent NCAA Graduation-Rates Report, the first such report under the terms of a new federal law.

Notre Dame football players graduated at an 82 percent rate as calculated by the NCAA — a mark bettered by only Boston College at 85 percent and Duke University at 84 percent. The NCAA statistics reflect the so-called "unrefined" graduation rate, which regards even students who transfer from a school in good standing as non-graduates, and does not include students who transfer to a school and graduate.

The "refined" graduation rate for Notre Dame football players was 92 percent.

The 627-page NCAA report provided data for student-athletes who enrolled in 1983-84 and 1984-85 at 297 National Collegiate Athletic Association Division I schools.

Reflecting a particular concern of collegiate academic and athletic administrators, the NCAA report revealed that African-American football players graduated at a 34 percent rate, compared with 55 percent of white players.

At Notre Dame, however, 82 percent of African-American football players graduated — the highest rate in the country for Division I-A schools with more than 15 African-American recruits. In addition, the rate for Notre Dame's African-American players was virtually identical to the rate (81 percent) for the University's white players.

The 82 percent graduation rate for all Notre Dame football players was the highest among the sport's traditional collegiate powers. Of the top 25 teams in the country in 1987 — the year most athletes in the survey would have been eligible for competition — the Notre Dame football team finished the season No. 16 on the field and No. 1 in the classroom.

Notre Dame also achieved a higher graduation rate than any of its traditional football rivals — Stanford University, 74 percent; the University of Michigan, 60 percent; Penn State University, 56 percent; the University of Miami, 50 percent; and the University of Southern California, 38 percent.

The graduation rate for all Notre Dame students was 92 percent, a standard bettered by only Columbia, Harvard, Princeton, Yale, Brown and Duke Universities and Dartmouth College.

# Faculty Notes

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## Appointments

F. Richard Ciccone, managing editor of the *Chicago Tribune*, has been named Visiting W. Harold and Martha Welch professor of American studies during the spring 1993 semester. He will teach one class, "News in American Life," and make weekly visits to campus. Ciccone has been managing editor of the *Chicago Tribune* for the past decade, directing coverage of national, international and local news. He is co-author of the book *Who Runs Chicago* and is chairman of the Elijah Parish Lovejoy award committee at Colby College.

## Honors

Rev. David B. Burrell, C.S.C., professor of philosophy and theology, was appointed to the advisory committee of the Center of Theological Inquiry in Princeton, N.J., Oct. 31.

James J. Carberry, professor of chemical engineering, has received the E.V. Murphree Award in Industrial Engineering Chemistry from the American Chemical Society. The award, rarely given to an engineer and not necessarily given annually, recognizes the body of Carberry's fundamental studies which focuses on reaction chemistry and catalysis.

James T. Cushing, professor of physics, has been appointed to the editorial board of *Foundations of Physics Letters*.

Michael N. Lykcoudis, associate professor of architecture, has received a Graham Foundation grant with Stephen Chrisman and Thomas Noble for "Conference on Emerging Classical Architects" in Alexandria, Va., Oct. 30-31. He has been named president and director of the Classical Architecture League of Washington, D.C.

John W. Stamper, associate professor and director of the Rome architecture program, received an award from the Illinois State Historical Society for his book *Chicago's North Michigan Avenue: Planning and Development*.

James I. Taylor, associate dean and professor of civil engineering and geological sciences, was elected a member of the International Advisory Committee for the National Safety Council Defensive Driving Program at the meeting in Orlando, Fla., Nov. 1.

Michael R. Welch, associate professor of sociology, and David C. Leege, professor of government and international studies, received one of the four finalist citations from the Society for the Scientific Study of Religion for the best paper published in the last two years. The citation recognized their article "Dual Reference Groups and Political Orientations: An Examination of Evangelically-Oriented Catholics" in *American Journal of Political Science* 35 (December 1991), 28-56.

## Activities

Craig E. Adcock, professor of art, art history and design, presented the paper "Earthworks and the Domination of Nature" at the conference "Marxism and the New World Order: Crises and Possibilities" sponsored by Rethinking Marxism and the Association for Economic and Social Analysis at the University of Massachusetts in Amherst, Mass., Nov. 14.

Joan Aldous, Kenan professor of sociology, was commissioned by the National Institute on Aging to write a paper on "Grandparents and Intergenerational Relations in Wider Perspective" which will be used to prepare program announcement for research in this area.

Nadia M. Alhasani, assistant professor of architecture, presented an invited lecture "Reconciling Culture and Technology: Possibilities and Impossibilities" to the University of Oklahoma School of Architecture in Norman, Okla., Oct. 30.

Jeffrey H. Bergstrand, associate professor of finance and business economics, gave the invited paper "The Distribution of World Wealth and Equilibrium Real Exchange Rates" co-authored with Ronald T. Balvers of West Virginia University at the Macroeconomics Workshop of the Department of Economics at Indiana University in Bloomington, Ind., Nov. 12.

Rev. David B. Burrell, C.S.C., professor of philosophy and theology, served on a workgroup in Constructive Theology at Yale University in Princeton, N.J., Oct. 16-18. He presented "Friendship with God in al-Ghazali and Aquinas" at the Boston University Institute in Philosophy and Religion in Boston, Mass., Oct. 21.

Joan F. Brennecke, assistant professor of chemical engineering, presented "Pressure Effect on Bimolecular Reactions in Supercritical Fluids" at the annual American Institute of Chemical Engineers meeting in Miami Beach, Fla., Nov. 1-6.

Theodore J. Cachey Jr., assistant professor of romance languages and literatures, gave an invited lecture "The Meaning of the Storm: On a Topos of Transatlantic Discovery and Exploration" sponsored by the Centre for Reformation and Renaissance Studies and the Department of Italian Studies at the University of Toronto in Toronto, Canada, Nov. 5. He chaired a panel on "Editing Italian Sources for the History of Exploration" at the 28th annual conference on Editorial Problems: "Editing Exploration Texts" held at the University of Toronto in Toronto, Canada, Nov. 6-7.

## Faculty Notes

**William Cerny**, professor of music, performed a solo piano recital of American Hemisphere music, consisting of music by Gottschalk, Joplin, Rorem, Villa-Lobos, Gershwin and Ginastera, at Southern Arkansas University at Magnolia, Ark., Oct., 13, at Grambling State University in Grambling, La., Oct. 14, at Xavier University in New Orleans, La., Oct., 19, at the University of Notre Dame, Notre Dame, Ind., Nov. 1, and at Southwestern Michigan College in Dowagiac, Mich., Nov. 8.

**Kevin J. Christiano**, chair and associate professor of sociology, served on a panel of commentators in an "Author Meets the Critics" session on the new book *A Bridging of Faiths: Religion and Politics in a New England City* by N.J. Demerath III and Rhys H. Williams (Princeton, N. J.: Princeton University Press, 1992), at the annual meeting of the Society for the Scientific Study of Religion in Arlington, Va., Nov. 8.

**James T. Cushing**, professor of physics, delivered the paper "Historical Contingency and Theory Selection in Science" at the Philosophy of Science Association meeting in Chicago, Ill., Oct. 29-Nov. 1. He delivered an invited symposium "Bell's Theorem, Quantum Mechanics and the Nature of Physical Reality" in the Physics Department of Michigan State University in East Lansing, Mich., Nov. 5.

**Roberto A. DaMatta**, Joyce professor of anthropology and faculty fellow in the Kellogg Institute, presented "Carnival as Brazil's 'Self-Interpretation'" at the international conference Listening to New Voices in the Americas: 1492-1992 at the University of New York in Albany, N.Y., Nov. 1-3. He gave the conference "On the Cultural Matrix of Inflation: Notes on Inflation, Society and Citizenship in Contemporary Brazil" sponsored by the John Nuveen Center for International Affairs at the University of Illinois in Chicago, Ill., Nov. 5.

**Angel Delgado-Gomez**, associate professor of romance languages and literatures, delivered a paper titled "Hispanism in the USA: A Historical Perspective" at the ALDEEU Conference in Almagro, Spain, June 30. He presented the paper "The Role of Providence in the Chronicles of Mexico, 1522-1650" at the XII conference of the International Association of Hispanists at the University of California in Irvine, Calif., Aug. 29. He gave the opening lecture of the Quincentennial Scandinavian Conference at the University of Bergen, Norway, Oct. 15. He presented a three-session seminar on the New World Chronicles, 1493-1700 at the University of Bergen's Institute of Latin American Studies, Oct. 20-22.

**Leo A. Despres**, professor of anthropology and faculty fellow in the Kellogg Institute, presented an invited paper "Manaus: Industrial Culture and Urban Environment" in the panel on Culture and Environment in "The Process of Culture Encounter 1492-1992" to the Latin American Con-

sortium sponsored by the Center for Latin American and Caribbean Studies and the Helen Kellogg Institute for International Studies held at Indiana University in Bloomington, Ind., Sept. 19.

**Sr. Elaine V. DesRosiers, O.P.**, professional specialist and director of Educational Media, presented a slide/lecture "A Media Director's View of the Changing Trends in Media Use in Higher Education" with special emphasis on the technology in DeBartolo Hall at the 17th annual conference of the Professional and Organizational Development Network in Higher Education in Wesley Chapel, Fla., Oct. 24. DesRosiers and Lisa Hines Berg, assistant director of campus clusters, office of University Computing, gave the invited presentation on the high level educational technology of DeBartolo Hall, with special emphasis on maintenance and security of the equipment. Cosponsored by EDUCOM and Carnegie Mellon at the conference Classrooms of the '90s at Carnegie Mellon University in Pittsburgh, Pa., Nov. 2.

**Jay P. Dolan**, professor of history and director of the Cushwa Center, gave a talk titled "The Clash of Cultures: Protestants and Catholics in 19th Century New England" at Andover Newton Theological School in Newton, Mass., Nov. 19.

**Leonid Faybusovich**, assistant professor of mathematics, gave an invited talk "Rutishauser Approach to Eigenvalue Problems: Control-Theorist's Viewpoint" at NCSU Numerical Analysis Seminar at North Carolina State University's Department of Mathematics and Center for Research in Scientific Computation in Raleigh, N.C., Nov. 10.

**Benedict F. Giamo**, assistant professor of American studies, was interviewed by Clare Bills, Noon Report, Iowa Public Radio, regarding the range of perspectives contained in *Beyond Homelessness: Frames of Reference*, Sept. 1. He was interviewed on the same topic by Barbara Klein, Magazine Show, Voice of America, Sept. 18. He addressed the topic "Representing Homelessness" through a mixture of readings, clarifications and discussion as the opening event for the Catholic Worker Series — Living in the House of God in South Bend, Ind., Sept. 18.

**Prashant V. Kamat**, professional specialist in the Radiation Laboratory, presented the paper "TiO<sub>2</sub> Mediated Photocatalysis Using Visible Light: Photosensitization Approval" at the international conference on TiO<sub>2</sub> Photocatalysis in London, Ontario, Canada, Nov. 8-12.

**Lloyd H. Ketchum Jr.**, associate professor of civil engineering and geological sciences, participated in the opening panel discussion titled "The Diversity of IWPCA Commitment to a Better Environment" and presented a talk, co-authored by Jay M.K. Stone, undergraduate civil engineering student, titled "Pathogen Reduction in Wastewater Treat-

## Faculty Notes

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ment Plant Residual Solids" at the 56th annual conference of the Indiana Water Pollution Control Association in Indianapolis, Ind., Nov. 9-11.

Douglas Kinsey, professor of art, art history and design, gave a slide presentation and participated in a panel discussion titled "Painting: Values which Persist as Styles Depart" at a joint meeting of the Southeastern College Art Conference and the Mid American College Art Association in Birmingham, Ala., Oct. 15-17.

Catherine Klifa, research associate in electrical engineering, presented the paper "Bayesian 3-D Tomographic Reconstruction from Limited Number of Radiographs" at the IEEE Medical Imaging Conference in Orlando, Fla., Oct. 28-31.

Edward A. Kline, professor of English and O'Malley director of the Freshman Writing Program, conducted the annual business meeting as the president at the Indiana College English Association at its annual conference at Indiana University-Purdue University in Indianapolis, Ind., Oct., 30. He conducted a seminar "Managing the Parish Choir" at the annual Liturgy Day of the Diocese of Fort Wayne-South Bend in Wawasee, Ind., Oct. 31.

Douglas W. Kmiec, professor of law, presented an invited paper on the "Reauthorization of the Independent Counsel Statute — The Ethical Unbalancing of the Separation of Powers" at the American Political Science Association meeting in Chicago, Ill., Sept. 6.

David C. Leege, professor of government and international studies, held a workshop for diocesan officials and parish education ministers based on the Notre Dame Study of Catholic Parish Life and gave a colloquium for the graduate programs in sociology of religion and religion and politics, speaking on cultural theories, religious values, and the political behavior of American Catholics, at the University of Wisconsin Catholic Foundation in Madison, Wis., Nov. 14. He delivered the annual Lewis lecture "Catholics and Culture: Will the '60s Work in the '90s?" to the University of Wisconsin Catholic Foundation, Nov. 15.

Michael J. Loux, O'Shaughnessy professor of philosophy, gave the plenary address titled "Aristotle and Parmenides: An Interpretation of *Physics* A.8" at the annual meeting of the Society of Ancient Greek Philosophy at Columbia University in New York, N.Y., Oct., 23.

Michael N. Lykoudis, associate professor of architecture, has been an exhibitor of "Proposal for the Tomb of the Unknown Soldier, Athens, Greece" with Richard Economakis at "A Vision of Europe" in Bologna, Italy, since Sept. 29. He gave the introductory speech and served as principal organizer of the conference on the Work of Emerging Classical Architects in Alexandria, Va., Oct. 30-31. He was an exhibitor on East Hampton Airport Terminal design at that conference.

Diana C.J. Matthias, assistant professional specialist in the Snite Museum of Art, presented "Using the Art Museum as a Classroom" at the annual fall conference of the Art Education Association of Indiana in Fort Wayne, Ind., Oct. 21-23.

Thomas V. Merluzzi, associate professor of psychology and director of the Center for Gerontological Education, Research and Services, presented a colloquium titled "Coping with Cancer: A Self-Efficacy Analysis" to the Department of Counseling Psychology at Ball State University in Muncie, Ind., Oct. 16.

Philip Mirowski, Koch professor of economics, lectured on "What Could Replication Mean in Econometrics?" to the Economic Science Association in Tucson, Ariz., Oct. 24. He presented "How to Stop Worrying and Calculate the Improbable" at George Washington University in Washington, D.C., and at George Mason University in Fairfax, Va., Nov. 6. He presented "The Realms of the Natural" at the University of Quebec in Montreal, Canada, Nov. 12.

Dian H. Murray, associate dean of arts and letters and associate professor of history, presented the paper "The Underground Economy of Maritime China: Pirates, Smugglers and Secret Societies around the South China Sea" at the Midwest conference on Asian Affairs at the University of Wisconsin in Oshkosh, Wis., Oct. 24.

Clive R. Neal, assistant professor of civil engineering and geological sciences, gave the invited talk "Basaltic Volcanism at Mare Serenitatis: A Different Kind of High-Ti Magmatic Event" at the LPI-LAPST sponsored workshop on "The Geology of the Apollo 17 Land Site" marking the 20th anniversary of the Apollo 17 manned mission to the moon at the Lunar and Planetary Institute in Houston, Tex., Dec. 2-4.

James S. O'Rourke IV, associate professional specialist in business administration, presented a paper titled "A Framework for Business Communication Instruction" with co-authors H. Dan O'Hair and Mary John O'Hair of Texas Tech University to the 57th annual convention of the Association for Business Communication in New Orleans, La., Nov. 6.

James J. Rakowski, associate professor of economics, delivered the opening lecture "Can Poland Compete in the International Economy" and lectured for two weeks at the second annual Polish American Summer School of Economics for college teachers of economics at Blazejewko, Poland, July 20-Aug. 7.

Jonathan R. Sapirstein, professor of physics, gave the invited talk "Atomic Physics Calculations of Weak Interaction Effects" at the Division of Particles and Fields meeting at Fermilab, Ill., Nov. 10-14.

## Faculty Notes

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Robert P. Schmuhl, associate professor of American studies, took part in programs focusing on the election on the following radio stations: KSL, Salt Lake City, Utah, Sept. 17, Oct. 20; WTAE, Pittsburgh, Pa., Oct. 9, 12; WCCO, Minneapolis, Minn., Oct. 10; WRC, Washington, D.C., Oct. 13; KTSA, San Antonio, Tex., Oct. 14, 17, Nov. 2, 3; and KING, Seattle, Wash., Oct. 16. Schmuhl analyzed the presidential debates on the "CNN Morning News," Oct. 16. He moderated the Notre Dame Club of Washington's discussion of the 1992 election, featuring columnist Mark Shields and consultant John Sears, which was broadcast by both C-SPAN I and II, in Washington, D.C., Oct. 28. He participated in discussions of the presidential campaign on "Extension 720" on WGN in Chicago, Ill., Oct. 15, Nov. 4.

James H. Seckinger, director of the National Institute for Trial Advocacy and professor of law, served as program coordinator and a faculty member for the NITA/Finnegan, Henderson, Farabow, Garrett & Dunner Law Firm Deposition Program in Washington, D.C., Oct. 22-24. He gave a lecture to the faculty on Effective Teaching Techniques.

John W. Stamper, associate professor and director of the Rome architecture program, delivered the paper titled "Indiana's Architectural Beginnings: Confronting the Arcadian Dream" at the symposium Grecian Architecture and Furniture circa 1842 sponsored by the University of Notre Dame School of Architecture in Notre Dame, Ind., Nov. 6.

William C. Strieder, professor of chemical engineering, presented a paper titled "High Temperature Interfacial Radiative Transport" co-authored by Yong Xia and co-authored the paper "Monte Carlo Calculations of Wall to Random Bed View Factors: Hard Spheres and Fibers" at the 1992 annual meeting of the American Institute of Chemical Engineers in Miami, Fla., Nov. 1-6.

Albin A. Szewczyk, professor of aerospace and mechanical engineering, presented a paper titled "Unsteady Base Pressure Measurements in the Near Wake of a Circular Cylinder" at the IUTAM Symposium on Bluff Body Wakes, Dynamics and Instabilities at the Max Planck Institute in Göttingen, Germany, Sept. 6-11. He delivered invited presentations on "The Near Wake of a Circular Cylinder with a Spanwise Periodic Trailing Edge Splitter Plate" at the Kernforschungszentrum in Karlsruhe, Germany, Sept. 14, and at Laboratoire D'Aerothermique in Meudon, France, Sept. 17.

Rev. Francis S. Tebbe, O.F. M., associate director of the Institute for Church Life, director of the Sabbatical Program for Church Leaders and associate professional specialist, conducted a workshop titled "Models and Methods for Theological Reflection" for religious life candidates in Cincinnati, Ohio, Nov. 15-17.

Anthony M. Trozzolo, Huisman professor emeritus of chemistry, presented the invited lecture titled "Solid-State Photochromism: The Odyssey of an Ylide" at the Department of Chemistry Colloquium at the University of Hawaii at Manoa, Oahu, Hawaii, Nov. 6.

Arvind Varma, Schmitt professor of chemical engineering, presented a paper titled "Mechanistic Studies of Combustion Synthesis" and chaired a symposium titled "Chemical Reactor Stability and Dynamics" at the 1992 annual meeting of the American Institute of Chemical Engineers in Miami, Fla., Nov. 1-6. He co-authored three other papers presented at the meeting: "Instabilities during the Combustion Synthesis of Nickel Aluminides" presented by doctoral student Jean-Pascal Lebrat, "Adsorption and Desorption Studies in the Aqueous Phase for the Toluene/Activated Carbon Systems" presented by doctoral student Dimitrios Chatzopoulos, and "Optimal Distribution of Silver Catalyst in Pellets for Epoxidation of Ethylene" presented by doctoral student Asterios Gavrilidis.

Rev. Oliver F. Williams, C.S.C., associate provost and associate professor of management, presented "South Africa and the U.S. Campus" at the College and University Research Consortium on South Africa at Brookings Institution in Washington, D.C., Oct. 30.

Susan L. Youens, professor of music, presented the invited paper titled "Gabriele von Baumberg, Schubert, and Opera-in-the-Lied" at the international conference on 19th Century Music at the University of Exeter in Exeter, England, Sept. 25. She presented a paper titled "En Route to *Winterreise*: Franz Schubert and the Poetry of Ernst Schulze" as a guest speaker at a lecture series sponsored by the Department of Music at Washington University in St. Louis, Mo., Oct. 23. She chaired a session on "Schubert's songs" at the national meeting of the American Musicological Society in Pittsburgh, Pa., Nov. 7.

Samir Younes, assistant professor of architecture, gave the invited lecture "The Instrumentality of History or Janus the Architect" at the conference "Emerging Classical Architects" at the Lyceum in Alexandria, Va., Oct. 31.

Ewa Ziarek, assistant professor of English, presented the paper "Revisions of Skepticism in the Work of Derrida and Cavell" at the annual convention of the society for Phenomenology and Existential Philosophy in Boston, Mass., Oct. 8-10. She gave a response to the paper "Femininity, Modernity and the Transformation of the Public Space" at the 34th annual convention of the Midwest Modern Language Association in St. Louis, Mo., Nov. 5-7.



# Administrators' Notes

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## Honors

**Sean Donnelly**, publications and graphics coordinator in the Office of University Computing, accepted the first place award for "Education and Training Materials Competition: Curriculum Catalog" at the 1992 SIGUCCS Conference held in Cleveland, Ohio, Nov. 8-11. SIGUCCS is a national higher education computer professionals conference focused on fostering excellence in the delivery and support of computer services to universities and colleges.

**Denis F. Ellis**, executive chef for Food Services, was appointed to the Culinary Arts Technology Advisory Committee of Indiana Vocational Technical College in Fort Wayne, Indiana.

**Marilyn Van Bergen**, project coordinator in the Office of University Computing, was appointed co-chair of the 1993 Program Committee for EDUCOM's Educational Uses of Information Technologies to be held at Snowmass, Colo., August 1993.

## Activities

**Thomas C. Laughner**, consultant/analyst in the Office of University Computing, and **C. Joseph Williams**, educational technology consultant in the Office of University Computing, presented the paper "Integrating Computing into the Curriculum" at the SIGUCCS Conference in Cleveland, Ohio, Nov. 8-11. The paper discussed the new effort at Notre Dame in supporting the development of educational technologies. In addition to specific support activities for faculty curriculum development, the paper addressed an approach to faculty development which builds on the presentation capabilities of DeBartolo Hall.

**Mike W. Miller**, Macintosh consultant in the Office of University Computing, and **Lisa Hines Berg**, assistant director of campus clusters in the Office of University Computing, presented the paper "Bringing Electronic Mail to the Masses, Phase I: Eudora for the Macintosh" at SIGUCCS, a conference for University and College computing professionals, in Cleveland, Ohio, Nov. 8-11. The presentation was an overview of the process of developing a campus-wide electronic mail service for Notre Dame with the focus on the planning, implementation and public roll-out of the first aspect of that service, the Eudora mail application for Macintosh computers.

**Ellen D. Rogers**, assistant director of the Research Division of the Graduate School, was the facilitator of a focus discussion titled "Methods that Motivate: Exploring Faculty Incentives for Research" at the 1992 annual meeting of the Society of Research Administrators in Orlando, Fla., Sept. 12-16.

**Scott W. Siler**, student resource coordinator in the Office of University Computing, presented the paper titled "Student Employees Supporting Campus Computing: Benefits for Everyone" at the SIGUCCS Conference in Cleveland, Ohio, Nov. 8-11. This presentation detailed the structure used in the employment of student consultants by the Campus Clusters division of the User Services Department and the responsibilities at each level (consultant, team leader and manager). Topics covered included hiring, pay and evaluation information. Student job descriptions were discussed as well as the benefits to an organization and to the students received from student employment in the computing areas of higher education.

**Marilyn Van Bergen**, project coordinator in the Office of University Computing, presented the workshop "Ethics in Cyberspace: A Practical Guide" at EDUCOM '92 Charting Our Course in Baltimore, Md., Oct. 28.



# Documentation

## 247th Graduate Council Meeting October 28, 1992

**Members present:** Nathan O. Hatch, chair, Harold W. Attridge, Kimberly A. Gray, Gary M. Gutting, Ethan T. Haimo, Maureen T. Hallinan, John W. Houghton, Gerald L. Jones, Jeffrey C. Kantor, Michael L. Kelly, Chau T.M. Le, Scott P. Mainwaring, Stuart T. McComas, Anthony N. Michel, Robert C. Miller, Wilson D. Miscamble, C.S.C., Kathie E. Newman, Thomas L. Nowak, James H. Powell, Barbara M. Turpin, Chris R. Vanden Bossche, Diane R. Wilson

**Members absent and excused:** Francis J. Castellino, represented by John G. Duman, Jeanne D. Day, John G. Keane, represented by Robert W. Williamson Jr., John H. Van Engen

**Guests:** Steven C. Bass, Norman A. Crowe, Mark D. Jordan, Thomas G. Smith, John J. Uhran Jr., Kwang-tzu Yang

**Observer present:** Peter Diffley

Dr. Nathan O. Hatch opened the meeting at 3:30 p.m. on October 28, 1992, in Room 234, Center for Continuing Education.

### I. MINUTES OF THE 246TH GRADUATE COUNCIL MEETING

Mr. Michael Kelly, a graduate student representative, requested that an honorific be used with the names of all speakers referred to in the last and in subsequent minutes. The request was granted and the amended minutes were approved.

### II. REVIEW OF THE SCHOOL OF ARCHITECTURE

Dr. Hatch called upon Professor Thomas Smith, chair of the School of Architecture, to describe the program.

Professor Smith stated that Notre Dame's graduate program in architecture concentrates on urban design and classical architecture. The three-semester urban design program is open to graduates who hold a first professional degree in architecture. The new four-semester classical architecture concentration is open to graduates with a bachelor's degree in architecture who wish to earn a first professional degree at the master's level. The new professional degree will meet the standards of the National Architectural Accrediting Board (NAAB). Almost all of the tuition scholarships and stipends paid to graduate students are from endowed University accounts.

Dr. Hatch asked Professor K.T. Yang, chair of the internal review committee, to comment. Dr. Yang summarized the report as follows. If the development of classicism and urbanism is successful, the School of Architecture at Notre

Dame will achieve great visibility. What is required is a specific plan covering a definite period of time. Architecture's plan, however, is loose and not sufficiently specific. Since architecture has focused its energies on classicism for only a short period of time, there is insufficient data to evaluate the program. A comparative analysis of resources, placement, etc., cannot be made. Furthermore, there does not appear to be a consensus for judging professionalism in the field.

Professor Mark Jordan, a member of the internal review committee, summarized the external review as follows. The reviewers worried that the mission of architecture had not been clearly enough stated and that the school needed to take further steps to prevent it from being perceived as odd, eccentric, and disconnected from the mainstream. The curriculum required clarification and revision. The committee praised recent faculty appointments but agreed that more were needed, especially faculty who are engaged in classicism and its practical applications. A few students in architecture appeared to be disgruntled with the recent changes in the program. The reviewers agreed that architecture should strengthen its curricular relations with other departments in the University and were unanimous in their opinion that the library and physical facilities were inadequate.

In his comments on the review, Professor Smith said the reviewers may not have appreciated the school's strength in the classical tradition because two members of the faculty were in Rome during the review and another was hired after the review. Future hirings will also complement the classical tradition. He emphasized that while Notre Dame's program is different from the common modernist approach to architecture, it is not reactionary. The faculty consider it to be on the front edge of developments in modern architecture. Professor Smith said that John Geronimo, executive director of the NAAB, considered Notre Dame's classical approach to be different from the mainstream but acceptable nevertheless.

As for the attitude of the current graduates in the program, there have only been eight graduates in the last two years. Therefore, a larger sample size, over the course of five years, will be a better gauge of the program's success.

Professor Smith agreed that the library holdings are inadequate but he also noted that architecture is negotiating the purchase of selected collections with a classical focus. As for departmental liaisons, there are current collaborations with computer science and philosophy. However, architecture needs to be less insular.

Professor Stuart McComas asked about program requirements. Professor Smith replied that in the past, the program was design-oriented. Now the programs are moving toward more intellectual development. The professional degree also has certain requirements dictated by the NAAB. Professor Norman Crowe, director of Graduate Studies,

# Documentation

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stated that course descriptions will be more specific in the future.

Professor Gary Gutting asked if the traditional and classical approaches could both be taught in order for the department not to be considered a maverick. Professor Smith disagreed, saying that Notre Dame should only teach the classical approach, thereby creating a unique niche. However, the faculty, who are neither insular nor reactionary, will use a variety of interpretations and applications to teach the classical tradition in architecture. Professor Crowe said that Notre Dame is only one of several groups that are challenging the basic tenets of modern architecture. Professor Smith stated that this notion of the department becoming eccentric is the result of a poorly constructed statement of purpose. The school is trying to use the classical approach to build upon late 20th-century architecture. It represents progress rather than a reaction to modernism.

Father Wilson Miscamble congratulated Professor Smith for meeting the challenges of this novel approach to the teaching of architecture.

Dean Harold Attridge asked about placement of recent graduates of the program. Professor Crowe said that 24 students had graduated to date and that most of them got the job they wanted. Recently, however, the recession has eliminated most new positions. Dr. Jeffrey Kantor asked if the specialization in the classical tradition had helped students gain employment. Professor Crowe said that the students came to Notre Dame because they felt they needed education in the classical tradition in order to get certain jobs and that the training served its purpose.

## III. GRADUATE PROGRAM PROPOSAL FOR COMPUTER SCIENCE AND ENGINEERING

Dr. Hatch asked Professor Steven Bass, chair of computer science and engineering (CSE), to introduce the department.

Dr. Bass stated that the department began as a spin-off from the former Department of Electrical and Computer Engineering and that the size of the faculty has grown from six to 12. Faculty members have more than 250 publications, been awarded 10 patents, and attracted over \$7 million in research funds. Now that a critical mass of research-oriented faculty has been reached, CSE proposes to offer two degrees, a Master of Science in Computer Science and Engineering and a Ph.D. The M.S. will include a minimum of 24 hours of coursework, research and an oral thesis defense. The Ph.D. will require a master's degree, an additional 18 hours of coursework, a candidacy examination, eight hours of teaching experience, research and an oral dissertation defense. Currently, 23 graduate students enrolled in the Department of Electrical Engineering have major advisors whose primary appointment is with CSE.

Engineering Dean Anthony Michel said that the development of CSE is on schedule and that the department has concentrated its faculty hiring and research interests in two major areas (parallel and distributed computing and parallel algorithms). He was confident that the department is developing an exciting, high-quality and much-needed program.

Professor John Ubran, director of Graduate Studies, said that the graduate program had a good start and great potential, and that it will make the undergraduate program better.

Dean Attridge asked for a description of the teaching requirement. Dr. Bass said that all first-year students will be expected to teach for four hours a week each semester. The students will be assigned to one-on-one tutorials or to undergraduate laboratories. These students will not have grading responsibility.

Professor Thomas Nowak thought that the total of 42 hours of coursework might lengthen the time-to-Ph.D. Dr. Bass stated that he expects graduates to complete their Ph.D.s in about five years. Dean Michel stated that the number of required courses is discipline-specific. The Department of Mathematics, for instance, may require more hours of coursework than does chemistry.

Professor Kimberly Gray warned that not all graduate students, especially foreign students from non-English-speaking countries, can teach American undergraduates. Dr. Bass stated that language barriers tend to break down in one-on-one tutorials but that if a student can't communicate, then he or she will not teach.

Professor Gerald Jones thought that the teaching requirement may not be an important experience for the majority of students, who will graduate into industry and not into the academe. The requirement may in fact be counterproductive to recruiting these kinds of students.

Professor Nowak asked how graduate advisors will be matched to graduate students. Dr. Bass stated that the students would be able to pick their own advisors over the course of the first year of studies.

Professor Kathie Newman asked about the backgrounds of graduate students entering CSE. Dr. Bass said that most have graduated with degrees in electrical or computer engineering, computer science, physics or mathematics.

Professor Maureen Hallinan said that having a department like CSE is a tremendous resource for the University. How can collaborative ventures get started? Dr. Bass said that collaboration is need-driven. If a faculty member's research requires computer help, then he or she should bring the problem to the department. Currently there are interactions between CSE and faculty in the Departments of Math-

# Documentation

ematics, Electrical Engineering, Aerospace and Mechanical Engineering, and Biological Sciences.

Professor Hallinan also asked about the gender/race/ethnic ratio in the department. Dr. Bass said that if they are successful in getting NSF-funding, they plan to invite a woman as a visiting professor. Dr. Uhran said that two of the 23 graduate students are female and that the ratio of women undergraduates is better than that.

Dean Attridge asked how many students CSE will expect to have and how many new positions will be supported by the Graduate School. Dr. Bass said that he expects 60 undergraduates and 40 graduate students and no further support from the Graduate School to achieve this goal. Dr. Jones thought that additional support might be needed if CSE planned to support graduate students with stipends through their first two years. Dean Michel stated that engineering departments in general only support the first year of graduate studies from Graduate School funds and that research grants pay the rest.

Professor Kantor asked about accreditation and placement. Dr. Bass said that the CSE program is accredited. Dr. Uhran said that many of the graduates were hired by IBM. Dean Michel indicated that several graduates received academic appointments at highly regarded institutions.

The question was called whether to accept the request to establish a graduate program in the Department of Computer Science and Engineering.

Dr. Gutting questioned the relevance of a vote for something that is essentially a *fait accompli*. Dr. Hatch stated that a negative vote in this council would send a clear signal to the Academic Council of a problem and that unacceptable programs should not be passed by the Graduate Council.

The motion to establish a graduate program in computer science and engineering was carried.

Mr. Robert Miller warned that if new academic programs are introduced without adequate new support funding, then the department's first external review can be expected to report that the library is inadequate. He then introduced a second motion that new financial resources should be provided by the University to the library for support of this and any new academic programs.

The motion was carried.

Dr. Hatch announced the formation of an ad hoc committee to explore departmental and University requirements for graduate degrees and asked for volunteers.

The meeting was adjourned at 5:20 p.m.

## Academic Council Minutes October 8, 1992

**Members in Attendance:** Edward A. Malloy, C.S.C., Timothy O'Meara, E. William Beauchamp, C.S.C., Roger Schmitz, Patricia O'Hara, Nathan Hatch, Harold Attridge, Francis Castellino, Fernand Dutille, John Keane, Eileen Kolman, Anthony Michel, Robert C. Miller, Richard Sheehan, Molly O'Neill, Frank Bonello, David Burrell, C.S.C., Cornelius Delaney, Maria Rosa Olivera-Williams, Mark Pilkinton, John Roos, Thomas Werge, Robert Hayes, Mario Borelli, William Shephard, Mark Herro, Arvind Varma, Bill McDonald, Carolyn Callahan, Carol Mooney, Maureen Gleason, Regina Coll, C.S.J., Kenneth DeBoer, Edward Marcheschi

**Observers in Attendance:** Douglass Hemphill and Dennis Moore

**Guests:** Francis Gillespie, S.J., and Christopher D. Jones

Prof. O'Meara opened the meeting at 3 p.m. with a prayer of St. Patrick.

1. **Minutes.** The minutes of the meeting of April 22, 1992, were approved as published in *Notre Dame Report*, No. 3, September 25, 1992.

2. **Election of the Executive Committee.** The following members were elected by the council to serve on the 1992-93 Executive Committee: Harold Attridge, Cornelius Delaney, Nathan Hatch, Carol Mooney and Arvind Varma. In addition, members appointed to the committee by Fr. Malloy were Maureen Gleason, Molly O'Neill and William Shephard. (Later William Shephard asked to be excused. Fr. Malloy appointed Francis Castellino in his place.) Timothy O'Meara, Roger Schmitz and Richard Sheehan are ex-officio members.

3. **Appointment of a Panel of Reviewers for Appeals Concerning Alleged Faculty Employment Discrimination Based Upon Sex.** Prof. O'Meara announced that, in accord with the Frese settlement, after consultation with the Executive Committee he has appointed the following faculty members to the 1992-93 panel of reviewers for appeals concerning alleged faculty employment discrimination based upon sex: Frank Bonello, Neal Cason, Yu-Chi Chang, Xavier Creary, Catherine LaCugna, Julia Knight, Patrick Murphy, Vera Profit and Arvind Varma. He stated that he has followed his usual practice of reappointing the previous year's panel, except for individuals who are on leave, when no appeals were brought to that panel's attention. Catherine LaCugna is a new member replacing JoAnn DellaNeva who is on leave.

# Documentation

**4. Announcements by the Provost.** Prof. O'Meara reported on the follow-up of item 8 of the faculty governance agreement of April 1992. He informed the council that, as prescribed by that item, an administrator-faculty working committee was formed and met during the summer to review avenues for further faculty participation in the life of the University. The committee was composed of the president, the provost, five appointed administrators and the seven elected faculty members of the Academic and Faculty Affairs Committee of the Board of Trustees. Prof. O'Meara summarized the committee's conclusion that an advisory group reporting directly to the president was not desirable. Instead, the committee favored forming a group that would be advisory to the provost on academic priorities. Still to be discussed at a final meeting are the specifics on the formation and function of the advisory group.

Prof. O'Meara also announced that the following five faculty members have been elected to the enlarged Provost's Advisory Committee (PAC): Larry Cunningham, arts and letters; Michael Etzel, business administration; Jacek Furdyna, science; Carol Mooney, law; Kwang-Tzu Yang, engineering.

**5. Report by the Chairperson of the Faculty Grievance Committee.** Prof. Schmitz pointed out that Article III, Section 9, requires that the chairperson of the Faculty Grievance Committee report annually to the Academic Council, that report to be limited to the number of grievances and the general categories in which they fall. He read the following written report received from committee chair Stephen Batill.

A single case was submitted to the Grievance Committee during the 1991-92 academic year. This case involved a conflict over departmental-level administrative procedures and was resolved based upon the recommendations of the committee.

**6. Standing Committees of the Academic Council.** Fr. Malloy called the council's attention to the following proposal from the Executive Committee for the formation of standing committees.

The Academic Council will retain three standing committees: Faculty Affairs, Graduate Studies and Undergraduate Studies. Each committee will be composed of 10 members assigned by the Executive Committee — six elected faculty on the council, three *ex officio* members of the council, and one student on the council. Each committee will elect its own chair who should be one of the six elected faculty.

Additional points: 1) Meetings of each committee should be open to all members of the council, but only committee members should be permitted to vote. 2) In advance of the council's first meeting, all members should be polled regarding their preferences for commit-

tees, and the Executive Committee should use those preferences to make committee assignments — making necessary adjustments to achieve appropriate balance. 3) Each committee should set its agenda early in the semester, keep minutes of its meetings, and report to the council regularly.

Following a short discussion of the need for each committee to maintain a record of its work and deliberations, the council approved the proposal without dissent. Fr. Malloy stated that the council members would be surveyed for their preferences for committee membership and that the standing committees would be constituted as soon as possible.

**7. Discussion of a Draft Mission Statement for the Colloquy for the Year 2000.** Fr. Malloy introduced the draft statement (see Attachment A) by informing the council that the Colloquy Committee on Mission, Opportunities and Challenges is seeking reaction and comments from the broader Notre Dame community. He expressed the hope that the council would provide some representative sampling of opinion which can be fed back into the committee processes.

Prof. Varma presented a critique of the draft statement which had been prepared by a task force of the Engineering College Council and subsequently approved by that body. (See Attachment B.) The Engineering Council felt that the draft, which should be able to convey the idea and the ideal of Notre Dame without any introduction, fell short of the mark in terms of focus, conciseness and guidance. The council made three general recommendations: First, rather than fine tuning the draft, the council believed it best to start *ab initio*. Second, the mission statement should proclaim the Catholic character of Notre Dame as one of its most important qualities, rather than adopting a tone that is in any way defensive about the University's Catholicity. Third, the mission statement must strike a better balance between the Catholic identity and the academic nature of Notre Dame. Prof. Varma continued that specific comments in the Engineering Council's critique addressed the need to identify better what it means to be a Catholic university, and they addressed as well the implication that only the humanities are able to inculcate the appropriate discipline and intellectual habits.

Prof. Roos asked how the Engineering Council proposed to define "Catholic identity." Prof. Michel replied that the central point of disagreement was that the current draft seems to equate Catholic identity with Catholic majority. Prof. Varma offered that such equating trivializes the issue. He felt that the qualities which describe the kind of person the University wants on the faculty should be made clear. Dean Castellino said that the Colloquy Committee on Mission, Opportunity, and Challenges needs to resolve this question to provide clearer guidance to the various college committees on appointments, promotions and tenure.

# Documentation

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Discussion continued concerning how to define Catholic identity. Prof. Roos suggested a statement that would refer to a faculty composed predominantly of committed Catholics. Prof. Varma asked how "committed" would be defined. There was general agreement that this issue needs further consideration.

Prof. Delaney questioned the physical position of the prenote in the final document. He stated a preference for one unified mission statement that would include precise theological rationale. Prof. Werge agreed that the ideas in the prenote should be incorporated into the mission statement, and argued that jettisoning the entire draft statement would be a most extreme response. He questioned the apparent contradiction between the second and third recommendations of the Engineering College Council. Prof. Varma responded that the two recommendations carried equal weight. The objective is to strike a balance between the Catholic proclamation and the academic proclamation, he said.

Prof. Pilkinton remarked that several non-Catholics and non-Christians on the faculty feel very excluded by the frequent reference to Catholic and Christian in the draft statement.

Prof. Callahan observed that the language of the second paragraph of the mission statement makes it very inclusive. She offered that it might be made even more so by expanding on what is meant by the term "other traditions."

Responding to a question from Dean Michel, Prof. Mooney said that the purpose of the prenote is to provide a vehicle to convey the context in which Notre Dame works. The subcommittee that produced the draft felt that this was not appropriate in the body of the statement because the characteristics of Catholicism are not part of Notre Dame's mission. However, the subcommittee felt it important to provide some notion of what being Catholic means. Fr. Burrell supported the prenote, arguing that it allows Notre Dame to make a theological statement without putting it in a context that compels compliance.

Prof. Shephard supported the Engineering Council's argument that the mission statement should be concise, inspiring and unambiguous. Although the prenote establishes clearly the importance of teaching and research, scholarship and publications, service and community, he continued, that focus becomes lost in the length of the ensuing statement.

Prof. Herro commented that in his experience, a prenote implies either an apology or a suggestion that what follows is too difficult for a layman to understand. He added that this should not be the impression we want our mission statement to convey.

Dean Kolman spoke in favor of the prenote as a statement of the distinctive characteristics of the University. She did see some difficulty with the ambiguity of the title "prenote," which does not clarify for the reader what it really is.

Dean Castellino argued in favor of a document that would include a very short stand-alone mission statement of two or three paragraphs, followed by any explanations or footnotes that are necessary. Some discussion followed concerning the need to cite the PACE Report from which much of the draft statement was taken.

Observing that short, punchy statements are all the public hears from politicians during an election year, Mr. Miller spoke in support of the somewhat longer draft statement. He argued that although it may be a little long for the University community, it is especially effective in terms of communicating the idea of Notre Dame to the public at large.

Sr. Coll favored a shorter statement followed by some kind of reflection that would inspire commitment to clearly stated objectives.

Fr. Malloy observed that the variety of recommendations and comments indicates the complexity of preparing a mission statement that conveys the message all members of Notre Dame want it to convey. Prof. O'Meara commented that other Colloquy committees are addressing several of the points being discussed here.

Prof. Varma argued that he was still concerned with the lack of balance between the academic and religious missions of the University. Although other Colloquy documents may address academic aspects in greater detail, he emphasized that as the mission statement of the University, this document must reflect a balance that the current draft does not have. He argued that this was important in terms of Notre Dame's academic reputation. Fr. Malloy offered that whatever the shortcomings of the draft statement, at least half of it tries to refer explicitly to the academic mission of the University.

Dean Attridge said that the perception of imbalance may stem from the language in the first paragraph, which speaks of the intersection of Catholic thought with forms of knowledge rather than in terms of its intersection with the creation of knowledge. He suggested that rephrasing of that sentence might help to achieve balance.

Prof. Roos argued that the statement, regardless of its length and complexity, tackles the right problems. Separating the religious and academic natures of the University is a mistake, he said; the two must be integrally connected. There must be a consequence for the life of the mind from religious belief and commitment.

# Documentation

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Prof. McDonald spoke in favor of conciseness, noting that the mission statement of the College of Business is only 56 words in length. He asked if other mission statements had been considered. Prof. Mooney replied that the subcommittee had looked at mission statements from several other universities, and that these had varied from very short to very lengthy to situations in which every department in a university had its own standard. The draft statement for Notre Dame is about average in length, she said.

Fr. Malloy suggested that mission statements of many institutions are relatively unknown. One of the dilemmas about having a mission statement in the first place, he said, is deciding what role it will play. It might be kept in the public eye through incorporation in the major documents of the University, or kept as a reference to consult in times of crisis or major disagreement. Dean Keane responded that the mission statement must still be written in a way which will make it understood and remembered. He agreed that the key point is what the University wants to accomplish with the mission statement. Conventionally, he added, a mission statement is written to point out why the institution exists. If it cannot be remembered and restated and paraphrased by people, then it fails to distinguish one organization from another. Notre Dame's mission statement should be a framework that will provide guidance and reference for decision making, presumably keeping decisions in line with the University's long-term objectives.

Prof. Sheehan commented on the need for the mission statement to bring to the forefront the idea of intersection between Catholic thought and commitment and academic knowledge. This, he said, should be the kernel of a mission statement that is short and pungent. He commented also on the difficulty of crafting a mission statement that would distinguish Notre Dame from such schools as Boston College and Georgetown.

Addressing the comment made by the Engineering College Council concerning the eighth paragraph of the draft mission statement, Fr. Burrell suggested that the key point in that paragraph is its reference to the role of residence life in developing a sense of community and responsibility that prepares students for subsequent leadership in society. He argued that such formation is definitely a part and a goal of Notre Dame, because it deals with the way in which the students actually live their lives rather than simply how they think. Its inclusion implies a challenge to the Office of Student Affairs to engage faculty more significantly in residential life through such means as a revived Hall Fellows Program.

Prof. Varma replied that the language used to articulate such ideas must be clear if it is to convey the message without confusing the reader. The level of confusion experienced by several reasonably bright people who read this draft implies, he said, that the current document may be be-

yond correction and should be redrawn. Prof. Werge disagreed, reiterating his opposition to jettisoning the document and arguing that disagreement does not mean that the document is fatally flawed. Certain disagreements may continue, he said, regardless of how issues are reworded.

Prof. Borelli commented that much of the discussion so far may stem from the different way in which humanities faculty and engineering or science faculty express ideas. He supported Dean Castellino's suggestion of a short statement followed by explanatory material, and he added that the current draft is too defensive of the Catholicity of the University.

Prof. Olivera-Williams argued that the objective of brevity is not compatible with the need to articulate the balance between the academic and religious sides of the University. The need to do the latter, she said, takes precedence over the desire to be brief. Dean Michel argued that a mission statement is not the place to define a Catholic university. It should be taken as a given that Notre Dame is a Catholic university, without apology or defensiveness. Consequently a mission statement can be very short.

Prof. Varma commented that the subcommittee drafting the mission statement had included no representatives of the Colleges of Science, Business Administration or Engineering. He suggested that a member from each of these colleges be added to the subcommittee so that the views of these colleges could be heard. Fr. Malloy replied that although the subcommittee had not been constituted to include representatives from all the colleges, the committee itself did. The draft was completed only after vigorous discussion in the committee, and passed to another committee with another set of representatives from all of the colleges for further discussion. The expectation was that the best kind of document would be one which elicited just the kind of participation and interest which the Engineering College Council showed. Fr. Malloy added that discussions will continue at various levels and in various committees in the months ahead and that individual contributions to those discussions are welcome.

**8. Undergraduate Education and Research at Notre Dame.** Prof. O'Meara introduced this topic by referring to the two purposes its discussion was to serve: to examine the relationship between teaching and research at the University, and to provide a vehicle for changing the nature of discussion at council meetings. He emphasized that input, discussion and presentation of points of view were the objectives; conclusions should be sought only after all discussion has been considered.

Prof. Delaney, who chaired the committee that reviewed the student report "Back to Basics," sketched the background for the discussion of undergraduate education at Notre Dame. Attachment C gives the text of his presentation. He



# Documentation

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was followed by Prof. Bonello, a member of the committee, whose presentation provided background information on other reports on undergraduate education, statistical information, and suggestions for improvement. The text of Prof. Bonello's statement is in Attachment D.

Fr. Malloy began discussion of the two presentations by emphasizing that the goal of the council's deliberations should be to bring to the surface individual perspectives about undergraduate education. Discussions, he stressed, should not be constrained by time.

Ms. O'Neill advised the council that copies of "Upholding the Mission," a recent report by the current student government to the Board of Trustees, would be sent to all members shortly. She emphasized that the undergraduate students should not be seen as unappreciative of the need for and significance of research. Undergraduate concerns are not with the fact that research is conducted at Notre Dame, but with what they see as its growth at the expense of undergraduate education.

Mr. Marcheschi questioned the benefit to students of requiring all undergraduates to do research. He suggested that accommodating so large a number of students would pose its own set of problems in terms of the time available for individual technical instruction and guidance. It may be better, he said, to have a smaller number of students who are interested in doing research, and who ask questions and pursue their topic. He agreed, however, that students who avoid courses that have laboratories which stimulate critical thinking are missing out on that experience.

Prof. Sheehan asked the student representatives for their opinion on how to decide between the apparently conflicting calls for increased numbers of faculty on the one hand and the consistent impression emerging through the Colloquy that the highest priority is to increase financial support for students. Ms. O'Neill replied that the students understand that financial resources are limited. The concern is not so much that limitations on the number of faculty require use of graduate teaching assistants, but that the quality of graduate student teaching is not at the level it should be. Fr. Malloy added that Ms. O'Neill's remarks concerning graduate student instructors do not apply across the board. In several colleges no classes are taught by graduate students as such, he said. Graduate teaching is most prevalent in the College of Arts and Letters because of its coverage of the required curriculum.

Responding to a question from Prof. Hayes. Fr. Malloy said his purpose in asking Profs. Delaney and Bonello to begin discussion of this topic was to get the council started in a common reflection which eventually would lead to some kind of action, presumably through the standing committee structure. Prof. Hayes agreed that there are many things

wrong with undergraduate education which should be discussed, but said that did not necessarily constitute a "crisis." Prof. Bonello replied that the council should not focus on whether or not a crisis exists, but on the problems that clearly are present. The undergraduates have brought forward problems that were in fact previously identified by other reports, he said. One of these problems concerns the question of average class size and the number of small classes students have in the course of an undergraduate curriculum.

Prof. O'Meara commented on the need to examine the hypothesis that small classes are inherently better. It may be, he said, that the optimum is a certain mix of smaller and larger classes. What has to be measured is whether the typical student has too many large classes in his or her mix of classes. The council should also discuss whether too many graduate students and adjuncts are teaching, whether smaller classes are being combined to form larger ones in order to lighten teaching loads, and similar questions.

Prof. Varma expressed interest in the study concerning class size. Given the comparability of student populations between Princeton and Notre Dame, for example, he suggested that it might be fruitful to learn how many large and small classes Princeton has and how many of their classes are taught by teaching assistants.

Fr. Burrell stated that emphasis on undergraduate teaching should be incorporated into the existing focus on developing scholarship and developing graduate programs. A key element that may be the development of a culture at many levels that thinks more creatively about what teaching involves. He remarked that the question is not simply one of teaching and research, but is a three-body problem that requires maintenance of the proper tension among undergraduate teaching, graduate teaching and scholarship.

Dean Kolman expressed hope that the council would look at the issue of student involvement with learning. Numbers are relevant, she said, to the extent that they reveal something that we value as learning experiences. Beyond the Freshman Seminar class, students have very little opportunity to do intensive writing. Many students seem to come to the end of their undergraduate experience and comment that they have no faculty member who knows them well enough to provide a letter of recommendation. She questioned what kind of opportunities the University has encouraged for students to interact with faculty members on an intellectual level. Class size is a factor, but clearly not the only factor.

Prof. O'Meara added that it is important to determine how much of the problem is real and how much is myth. Anecdotal evidence cannot be ignored, but neither should it be the only basis for a course of action. Institutional research



# Documentation

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must be sharpened in order to see how extensive these problems are. It is also important, he said, to learn from faculty experience. He emphasized that it was important to continue discussion in these directions.

Dean Castellino suggested that discussion should extend into the graduate realm. While undergraduates complain that the graduate school stresses the undergraduate curriculum, some graduate departments have been forced to downgrade graduate level courses to the 500-level so that undergraduates can get a wider selection of courses. Not enough graduate courses are being taught. As the Academic Council for the whole University, not just the undergraduate curriculum, this body should start talking about the very heavy strains that are being placed on the graduate curriculum.

Ms. Gleason wondered whether great variations exist in the size of classes within single departments, and whether such variations were reasonable or indicative of failure to satisfy demand.

Mr. Marcheschi commented that a student in a large class can learn as much as a one in a small class. The important thing, he said, is to encourage small group study. If a student leaves a lecture in a subject like Organic Chemistry and goes to the 10th floor of the library and studies by himself, he or she is going to lose something by not communicating and studying with other students. Prof. Bonello said this was precisely why good statistical data was important. As part of this process of examination, he said, we need to identify what kinds of questions require data and analysis.

Fr. Malloy commented on the difficulty and the importance of data gathering. Data gathering should include correlations between Notre Dame and other schools, by area or perhaps by college. Within Notre Dame a great deal of discrepancy exists in terms of teaching loads, in terms of the existence and size of departmental graduate programs, and in terms of the level of research that is conducted. All of that is relevant to determinations about the way in which faculty make their overall contribution. Another variable that has to be factored in is the cost of tuition and related expenses. In comparison with other schools, he said, Notre Dame is underfunded to do some of the things we would like to do. All of these things need to be addressed in concert.

Ms. O'Neill agreed that class size per se does not define the problem. Appropriate feedback on individual work is much more important than the number of people in a class, she said, agreeing with Dean Kolman that this does not often happen with written work beyond the Freshman Writing Program. Ms. O'Neill went on to explain that "Upholding the Mission," is not intended to replace "Back to Basics," but rather to keep undergraduate concerns on the table.

Prof. Varma commented anecdotally that a change several years ago in the College of Engineering which combined several small class sections into one very large class had extremely positive results because of the quality of the teacher. This would not work for every course, he said, but it does show that in certain courses it can be a solution. Prof. Schmitz observed that this and other examples indicate that the focus should be on the quality of teaching, not just on class size alone. Dean Castellino concurred, saying that putting really strong teachers in large classes has diminished the volume of problems within the College of Science.

Dean Kolman agreed with the stated concept, but pointed out that it has led to unexpected consequences. A freshman engineering student may now have four classes of at least 200 people. Prof. Roos commented that the previous discussion implies that our teaching standards are too lax if the only answer is to group students in large classes taught by a few good teachers.

Prof. Mooney spoke about the "culture of the total experience" in the Law School as something which diminished the problems normally associated with large class size. In addition to the classroom experience there is a whole cultural experience of interaction between student and professor that need not leave students with a sense of isolation and inaccessibility to their professors.

Fr. Malloy observed that there are pluses and minuses associated with having a departmental building. While such a facility permits greater interaction with students, it diminishes the opportunities to interact with colleagues in other departments.

Prof. Pilkinton saw the problem as a perception on the part of the junior faculty that teaching does not really count. They see that teaching need only be one notch above mediocre, but what really counts is publishing. The University has not emphasized teaching nearly as much as it has emphasized the importance of getting those things done that will establish the national aspect of one's career. Junior faculty have bought into that, he argued, and that affects the quality of their work in the classroom and their perception of what their obligation is to the undergraduate students.

Dean Michel referred to a self-study done a few years ago by the Department of Electrical Engineering which indicated that the engineering schools with which Notre Dame compares itself have a significantly greater faculty-to-student ratio.

Dean Attridge wondered if some assessment of outcomes could be included as part of the reflection on undergraduate education and on collecting data about that problem. It would be interesting, he said, to see whether in fact students do write better coming out of a certain kind of course pattern, or reason mathematically in a better way if they come out of a certain set of courses.

# Documentation

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Fr. Malloy remarked that outcomes are the highest pressure points in the public university system, and one of the ways in which legislatures think they can hold the faculty to the fire. He offered that while outcomes are something we may have to pursue vigorously, there is also reason for caution.

Fr. Beauchamp commented that we often talk about Notre Dame's lack of Rhodes Scholars as an indication of possible shortcomings. He felt that it would also be informative to look at what happens to Notre Dame students after they graduate, in terms of their successes in professions or in graduate schools. This information might provide an enlightening comparison between Notre Dame and our peer institutions.

Fr. Malloy stated that the Philosophy Department had raised that same question. Referring to the success in nurturing and preparing academic competitors claimed for Frank O'Malley, he observed that success in terms of Rhodes Scholars may not be a function of the whole institution but rather of departments and colleges. It is in that area, he said, that we can do a better job.

Prof. Roos observed that except for recent innovations like the Honors Program, undergraduates today get less attention and cultivation than he experienced here in the 1960s. Prof. Hatch agreed, but stated that part of the problem now is that fewer students are willing to interrupt professional training for a Rhodes.

Fr. Burrell said that the first step toward creating a teaching culture is correction of the reward system. He also offered that although faculty all are acclimated to continuing education when it comes to improving personal scholarship, they are not so well acclimated to the need to learn how to teach better. That is something that requires encouragement.

Prof. Borelli said that it was not a question of teaching better, but a question of teaching differently. Today's students differ from those of the 1960s in terms of background and experiences, and teaching must adjust to that difference.

Mr. Marcheschi remarked that the issue of student-faculty relations in a large class is a two-way effort. The student has to make the effort to approach the professor, but the professor must also make the effort to be approachable.

Fr. Malloy concluded the meeting by saying that this was not the end of the conversation, but it would be an appropriate stopping point for the meeting.

The meeting adjourned at 5:32 p.m.

Respectfully submitted,

Roger A. Schmitz  
Secretary of the Academic Council

## Attachment A

Dear Members of the Academic Council,

During the past academic year a small subcommittee of the working group on Mission, Opportunity, and Challenges (MOC) of the Colloquy for the Year 2000 drafted a mission statement for the University. We discussed this draft with the members of the MOC group of which we are a part and with the Committee for the Whole of the Colloquy. We now feel ready to share that draft with the larger Notre Dame community for your comments, suggestions, and recommendations.

To the left of the mission statement we have added a "Prenote" which sets out the theological understanding that undergirds the mission statement itself. That "Prenote" intends to express our understanding of the word *Catholic* which is part of our self-understanding of Notre Dame as a national Catholic university. It is not the mission statement but the context out of which the mission statement arises.

Our purpose in sending this draft to you is simple: We invite you to help us produce a final statement and purpose that will be part of the final document produced by the Colloquy. We would invite you to communicate any reactions you may have to any member of the subcommittee whose name is listed below. We would like such a response before the fall break October 16.

Gregory Butrus (Student Body President)  
Lawrence Cunningham (Professor: Theology)  
Carol Ann Mooney (Professor: Law School)  
Thomas F. O'Meara, O.P. (Warren Professor: Theology)  
Mark Poorman, C.S.C. (Assistant Professor: Theology)  
Kathleen Maas Weigert (Academic Coordinator: Center for Social Concerns)

# Documentation

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**Draft:**

## ***Prenote: The Context of the Mission***

*The following statement of purpose and definition will speak of the University of Notre Dame as a place of teaching and research, of scholarship and publication, of service and community. These components follow quite naturally from certain distinctive characteristics of Catholicism. The first is sacramentality. The Catholic vision encounters God in all things — people, events, the world at large, the whole cosmos. It is in and through the visible world and our endeavors within it that we come to know and experience the invisible God. The second is mediation. The Catholic vision perceives God to be not only present in, but also working through persons, events and material things. The Catholic believes there is an intelligibility or coherence to all reality, discoverable through the mind and the imagination, and through the sciences which give shape and discipline to both. The Catholic further believes that all human activity is called into collaboration by God to bring this world to its completion. The third is communion. The Catholic vision sees the way to God and God's way to us as communal, not individualistic, and that the consummation of the world lies in a communion of persons. That is why the Church as a community has had such a significant role in Catholicism, and why Notre Dame has always conceived of itself as a family and has fostered familial bonds at every level of its institutional life.*

*These three characteristics find their source and reality in Jesus Christ, the incarnation of the divine in the human. He is the sacrament of divine presence among us. He is the mediator who manifests God's love to humanity and who teaches the way to salvation. He is the Lord who formed a new kind of community to preach the coming of the Kingdom. A Catholic university, then, draws its basic inspiration from Jesus Christ as the source of wisdom and its mission from the conviction that all things can be brought into their completion in Christ.*

*As the University draws its inspiration from Jesus Christ, it understands the imperative for higher education to be heightened by critical developments that have made of this planet one world. Religious and cultural, technological and environmental, economic and political challenges make up that world. Free women and men and the communities they form will direct this world into its next millenium. The shape it takes will reflect their knowledge, their skills and their commitments — in a word, their education.*

**Draft:**

## **The Mission Statement of the University of Notre Dame**

The University of Notre Dame is a Catholic academic community of higher learning, animated in a special way from its origins by the Congregation of Holy Cross and dedicated to the communal pursuit and sharing of truth. This University exists that through free inquiry and open discussion the variant lines of Catholic thought might intersect with all the forms of knowledge found in the arts, sciences and professions. This University is Catholic in its deliberate determination to render to the Church and to the world this unique service in Christian wisdom.

This purpose is concretely realized in the intellectual interchange that constitutes the life of the University, the development of its students and faculty, and the advancement of knowledge through distinguished teaching, research, scholarship, publication and service.

Therefore, the University of Notre Dame essentially includes within itself the presence, the voices, and the contributions of diverse scholars and students, both those who represent the Catholic intellectual heritage and those from other traditions. The diversity of Notre Dame is further enhanced by the presence of different races and ages, nationalities and genders. This pluralism enables and enriches the exchange that forms the University community. The continuing presence of a predominant number of Catholic intellectuals is crucial for the Catholic identity of the University. What is asked of all scholars and students, however, is not a particular creedal affiliation, but a respect for the objectives of Notre Dame and a willingness to enter into the conversation that gives it life and character. The University, consequently, insists upon that academic freedom which makes this open discussion and inquiry possible.

The University fosters the development in its undergraduate students of those disciplined habits of mind which are inculcated by the liberal arts and which characterize educated, free human beings. Such skills are: to read with critical understanding; to think and express oneself with clarity and coherence in speech and writing; to frame problems of theoretical inquiry or practical action with a sense of the relevant evidence, historical context, and procedures appropriate for a reasonable resolution; to possess an understanding of quantitative thinking and scientific method; to comprehend something of the great discoveries of science and technology as well of their contemporary promise; to think in a manner that is both insightful and creative and to recognize this in others; to analyze issues philosophically back to their fundamental presuppositions; to grasp the significance of God's self-revelation in Jesus Christ and to apprehend the theological implications of knowledge gained in other disciplines as these relate to the great questions of human existence.

# Documentation

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Together with these liberal capacities of mind, the University cultivates in all its students a humane sensitivity both to human accomplishment and to human misery: an appreciation of such great achievements of human beings as are found in art and literature, history and sociology, mathematics, technology and science; a disciplined sensibility to the poverty, injustice and oppression that burden the lives of so many of their fellow human beings. Such a sense of human solidarity and a developed concern for the common good reaches its fulfillment as learning becomes service to justice.

As a research university, Notre Dame takes the responsibility not only for the diffusion of knowledge through the academic formation of its undergraduates, but also for the advancement of knowledge in a search for truth through original inquiry and publication. This objective particularly engages the faculty and the various divisions of the graduate program, but also its professional schools and special institutes. As a university committed to public service, Notre Dame sponsors professional schools that equip their students for a particular career with the skills and disciplines proper to each. The University also sponsors special institutes whose focus is research and science on pressing contemporary social issues. The graduate programs, the professional schools and these special institutes, aided by the general ethos of the university, also foster in their students those intellectual habits and humane sensibilities that the University expects from all its graduates.

The Catholic character of Notre Dame as an academic community depends upon the seriousness with which the religious dimensions of all human learning are recognized, given priority, and explored throughout the University.

The University embodies its deep concern for the religious and moral education of the students not only in the academic reflection brought to bear upon ethical and social issues but also in its encouragement of a manner of life consonant with a Christian community. Residential life contributes significantly to develop in the students that sense of community and of responsibility which prepares them for subsequent leadership in building a society that is at once more human and more divine. As a Catholic community, liturgy and retreats, spiritual direction, volunteer work and the continual promotion of service, permeate the life of the University and contribute to the complete education of the human person.

In all of these dimensions of the University, Notre Dame pursues its objectives through the formation of an authentic human community graced by the Spirit of Christ.

## Attachment B

### Engineering College Council Reaction to the Draft Mission Statement

The Engineering College Council recognizes that the task of formulating a Mission Statement for the University of Notre Dame is a very difficult one. We thank the subcommittee of the working group on Mission, Opportunity and Challenges for their efforts in drafting such a statement and for inviting the College Council to comment on their product. We recognize that the College Council has the relatively simple task of critiquing the current draft but does not bear the large responsibility of formulating the final document. Nevertheless, we believe that our responsibility to contribute to the document requires that a candid assessment of the draft mission statement be formulated. In this spirit we offer the following general and specific comments concerning the Draft Mission Statement.

#### General Comments

A mission statement should be concise, inspiring, and unambiguous. The current statement is none of these. The text rambles and lacks focus. The prose is convoluted. The need for a prenote to provide context for the mission statement casts doubt on the ability of the Draft Mission Statement to convey "Notre Dame" to its readers. The College Council believes that these shortcomings cannot be overcome by fine tuning the current document. We would like the Mission Statement to be a tightly crafted and forceful two to three paragraph document, that clearly defines the present and future mission of the University. Therefore we make the following recommendations:

**Recommendation 1.** Discard the Draft Mission Statement and prepare a focused clear statement of the mission of the University of Notre Dame.

The University of Notre Dame is a Catholic University. The Draft Mission Statement has a tone of defensiveness about this fact. The Catholic character is not something to be hidden, apologized for, or ashamed of. Therefore we make the following recommendation:

**Recommendation 2.** The Mission Statement should proclaim the Catholic character of the University of Notre Dame as one of its important qualities.

# Documentation

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Notre Dame is a university as well as a Catholic place. The academic and scholarly pursuits of the Notre Dame faculty and students seem to be of secondary importance to the religious character in the Draft Mission Statement. However, it is these pursuits that make Notre Dame a university. Therefore we make the following recommendation:

**Recommendation 3.** The Mission Statement should be more balanced between the Catholic nature and the academic nature of the University of Notre Dame.

## Specific Comments

The comments in this section are not presented in order to undermine Recommendation 1 above, they are provided to give some insight into the specific thoughts of members of the Engineering College Council that may help provide direction to the formulation of a new Mission Statement. Paragraph numbers correspond to those in the Draft Mission Statement.

**Paragraph 3.** This paragraph seem to equate "Catholic identity" with "Catholic majority." At a University which is so eager to declare its "Catholicity," a better job must be done in defining the essential aspects of a Catholic identity. To reduce this identity to a headcount is to trivialize the issue.

**Paragraph 4.** This paragraph states that a student's "disciplined habits of mind . . . are inculcated by the liberal arts . . ." By omission, this implies that such habits cannot be learned through study in the sciences, engineering, or business. Furthermore the statement later in the paragraph that students should "comprehend something of the great discoveries of science and technology . . ." implies that students need only dabble in such disciplines. It is also certainly better to speak of the "discoveries of engineering" rather than the "discoveries of technology."

**Paragraph 5.** The listing of some areas of study (i.e., art and literature, history and sociology, mathematics, technology, and science) is intrinsically exclusionary. Why are four specific areas from the College of Arts and Letters listed by name? Why is science listed in general and not in component form? What has "technology" discovered? Why are specific subdisciplines in Business and Engineering not listed?

**Paragraph 7.** In this paragraph, Catholic character seems to overwhelm the concept of intellectual inquiry, independent thought and search for knowledge. It is not clear that this statement provides the "mission" of the University.

**Paragraph 8.** This paragraph is not part of the mission of the University but does indicate, at least for now, some of the activities of the University that are organized to allow (undergraduate) students the opportunity to explore the impact that professing to be Catholic may have on an individual's life.

## Conclusion

The College Council of the College of Engineering appreciates the opportunity to offer its comments on the Draft Mission Statement of the University of Notre Dame. We are hopeful that the committee assigned with the most difficult task of capturing the essence of Notre Dame will accept our suggestions in the spirit of constructive engagement with which they are offered.

Approved October 8, 1992

## Attachment C

### Undergraduate Education at Notre Dame Presented to the Academic Council by

Prof. Cornelius F. Delaney

October 8, 1992

Occasioned by the student reports "Back to Basics" and "Upholding the Mission," the Academic Council is to discuss undergraduate education at Notre Dame. Prof. Bonello and I have been tapped to set the framework for the discussion. More specifically, I will sketch what I think is the appropriate background for the discussion while he will focus in a more detailed way on undergraduate education proper.

I will begin by calling to mind the obvious differences between an undergraduate college and a university. Colleges such as Swarthmore, Amherst and Williams are very single-minded institutions. Their sole mission is undergraduate instruction, and certainly the ones I mentioned do an excellent job of precisely that. Universities are much more complex institutions. They are intended to be "centers of learning" in a much broader sense. In addition to the undergraduate operation (not infrequently referred to as "the college") there usually is the whole range of graduate programs, professional schools (Law and Medicine), research institutes (Rad Lab, Lobund Lab), national and international centers of scholarship (Kellogg Center, Center for Philosophy of Religion, Peace Center), and units such as our CCE which serve the broader professional community. In short, at institutions like Harvard, Stanford and Princeton, the undergraduate operation is set against a background of scholarship, research, teaching and service that is much broader than the undergraduate colleges. Notre Dame has been, is, and will continue to be a university. So our specific question is — the status of undergraduate education at a university, specifically, this university. At this point I would like to recommend something I send to my prospective honors students, namely, Ch. 5 of Henry Rosovsky's *The University: An Owners Manual* in which he makes the case that the most important consideration in the mind of a high school student should be "Am I more suited for an undergraduate college or for a university college?" and then he lays out the differences between them and the relative advantages of each.

This having been said, it is important to note that there are important structural differences between Notre Dame and most elite universities. Only 40 percent of Stanford students are undergraduates, 30 percent of Harvard's and 20 percent of Chicago's. Seventy-five percent of our students are undergraduates. Only Princeton and a few other major universities have a ratio that resembles ours. As universities go we are a very modest operation. Both in number and size of programs our graduate school is small; our professional schools are few and small; and in terms of the research dollars we attract we are smaller than small. All the

"numbers," i.e., students, programs courses, activities, etc., are on the side of the undergraduate operation. This is unusual for universities; and to the best of my knowledge Notre Dame intends to keep it that way. For a whole variety of reasons this will continue to be our style.

But there has been change in recent years. Since Fr. Hesburgh's era there has been a concerted effort to make Notre Dame a major university. His administration was animated by the belief that given the Church's role in the history of universities there should be at least one Catholic institution among the top universities in the nation if not in the world. The view is that we alone have the resources to achieve this, so that if we don't make that quantum leap forward as a university there will be no Catholic voice in the upper echelon of higher education and no major center of learning in the Catholic tradition. Accordingly, the university began to build — graduate programs, professional schools, research institutes and national and international centers of scholarship received new attention, and there was a concomitant emphasis on scholarship and research as absolutely necessary to this scholarly development. There has been a modest growth in quantity and a much more substantial growth in the quality of these various dimensions of the university over the last 30 years, but it is surely still the case that in terms of all the normal measures (production of Ph.D.s, number of professional students, research dollars) we are still a very modest university operation. The goal seems to be selective qualitative improvement rather than quantitative growth.

Much of the recent talk and effort has focused on the improvement of the graduate and professional operations, and on the scholarship and research absolutely necessary for these; and this focus was mainly because these dimensions of the university were perceived to be in need of the most attention. The perception has been that we have been doing a reasonably good job with regard to undergraduate education. But lately attention has been justifiably called to problems in our undergraduate operation.

Given limitations on time and energy there are tensions. Notre Dame, like all the elite universities, has a unified faculty. We don't have an undergraduate faculty as distinct from a graduate faculty — and we shouldn't. The whole *raison d'être* for a university college would be undermined by the employment of a distinct college faculty. At a university college one should expect to be taught by a university faculty. This being the case, as the quality of the faculty and the quality of the graduate students improves, one would expect this fact alone to have a very positive influence on the undergraduate operation. However, things are never quite this simple. If the faculty is expected to be the principal contributor to this broader mission of Notre Dame as an aspiring university, clearly teaching loads had to be adjusted to at least approximate those at major universities,

# Documentation

and faculty have to be recruited who are interested in and capable of operating at all these levels. At a major university there are equally legitimate pulls in very different directions, and it behooves us to be vigilant lest one or more of these dimensions be shortchanged.

I would prefer to pose our question this way. What steps can we take to ensure that as Notre Dame grows as a university, its undergraduate operation continues to grow apace. It is obvious that there are clear problems with the undergraduate operation — problems of class size and availability have attracted the most attention. But these may not even be the deepest problems: many faculty are concerned that our undergraduates are not being challenged sufficiently in terms of the amount of critical writing or involvement in research that is expected of them and many more are concerned about the general intellectual (or non-intellectual) climate of campus life. I am no subscriber to "The Myth of the Golden Age" — I think that undergraduate education is much better now than when I came here 26 years ago — much better. But I also think that it is not nearly as good as it should be. There are forces within a developing university that pull in different directions and I think that we have to be much more imaginative in our efforts to see to it that the undergraduate operation continues to improve as the university does. For example, what should the balance between graduate and undergraduate teaching be? My department has recently decided that faculty can expect to teach only two graduate courses over a three year period. This means that five-sixths of our teaching responsibility is with our undergraduate effort. I also think that undergraduates at a major university should get a university education, one that involves them seriously in scholarship and research. How can we more effectively get our advanced undergraduates involved in real scholarship and research? Should all undergraduates be required to do a serious thesis or research project as the culmination of their undergraduate experience — as is the case at Princeton? Or should it at least be the case that a senior honors thesis or research project is required for graduation with any level of honors — as is the case at Stanford? Should our best undergraduates be taking graduate seminars? Obviously all these suggestions would involve considerable faculty time but I think they would substantially improve the quality of education our undergraduates receive. In short, as the university matures, have we been sufficiently attentive to the ways in which our undergraduate operation can mature along with it? We can't just assume it will.

The issue is not teaching vs. research. The issue is — our responsibility to undergraduate education (including undergraduate involvement in real scholarship and research) in the context of our responsibilities to graduate education, professional education, and our developing role in the broader intellectual community. As you grow up you have to assume more responsibility — and you are judged by how you handle it.

## Attachment D

### Status of Undergraduate Education at Notre Dame Presented to the Academic Council

by Prof. Frank J. Bonello

October 8, 1992

#### I. Situation of student report in the context of other local reports and national studies.

*Back to Basics* identifies problems with the state of undergraduate education here at Notre Dame and advances recommendations to redress these problems. This past weekend Student Government presented a new report *Upholding the Mission: Teaching and Research at a National Catholic University* to the Board of Trustees. This latest report reaffirms student concerns and advances an expanded list of recommendations.

In regard to problems and recommendations, *Back to Basics* and *Upholding the Mission* are not unique, either in the context of Notre Dame or in the context of national undergraduate education. In the context of Notre Dame, several of the recommendations offered in *Back to Basics* and *Upholding the Mission* are very similar to recommendations advanced in "The Report of the Task Force on the Quality of Teaching in a Research University" (also known as the *Foley Report*) published in the April 8, 1988, special issue of *Notre Dame Report*. Let me offer several examples.

First, *Back to Basics* recommends that "The University should drastically increase the size of the undergraduate teaching faculty" while the *Foley Report* recommends that "The University needs to increase substantially the size of the faculty."

Second, *Back to Basics* recommends that "The University should expand, rename, and advertise Educational Media" while the *Foley Report* recommends that "A Center for the improvement and support of teaching should be established at Notre Dame."

Third, *Back to Basics* recommends that "The University require every department to conduct a teaching workshop each semester with a formal follow-up session" while the *Foley Report* recommends that "Each department should be mandated to devote at least one meeting a year to teaching."

Fourth, *Back to Basics* recommends that "The University should reconsider its tenure process" while the *Foley Report* recommends that "The Deans should mandate that every department devise for itself procedures to govern the evaluation of teaching in reappointment and promotion decisions."



# Documentation

There are other local reports concerning undergraduate education. These include the report by the Committee on Teaching by Doctoral Students (the Goerner Report) and the Arts and Letters Committee on the Quality of Undergraduate Education (the Warlick Report). Like the *Foley Report*, these other reports offer recommendations similar to those found in *Back to Basics* and *Upholding the Mission*. Both the Warlick Report and the Goerner Report endorse the establishment of a center for the improvement and support of teaching while the Warlick Report concludes "that the chief threat to the quality of undergraduate education is the relative shortage of faculty." In short, the problems identified in *Back to Basics* and *Upholding the Mission* as well as the recommendations contained therein are not surprising to anyone familiar with other recent analysis of the status of undergraduate education at Notre Dame.

Turning to the national context, there have been any number of books attacking the quality of undergraduate education in the United States. They range from the more intellectual *The Closing of the American Mind* by Allan Bloom to the more sensational *Prof Scam* by Charles J. Sykes to the more philosophic *The Moral Collapse of the University* by Bruce Wilshire to the most recent *Impostors in the Temple* by Martin Andersen. The attacks on the quality of undergraduate education are not limited to best selling books however; there are any number of articles, institutional self-studies, and speeches devoted to this same topic. In this regard *Back to Basics* shares less of its recommendations but its concerns and problems: the tension between research and teaching, the unavailability of classes, large class size, and the lack of interaction between faculty and undergraduates. This is not to say that other individuals and studies do not offer recommendations similar to those found in *Back to Basics* and *Upholding the Mission*. For example, Donald Kennedy, while President of Stanford University, issued (March 3, 1991) an essay to the Stanford Community entitled "The Improvement of Teaching." In that essay, he asked, "How can we revise the appointment and promotion process so that it gives broadened scope to scholarly activity, reward the kinds of research we really want to do, and gives more credible examination to the various forms of teaching." This seems consistent with the *Back to Basics* recommendation for a reconsideration of the tenure process.

Thus *Back to Basics* and *Upholding the Mission* are not unique whether viewed in a local or a national context. In terms of preparing "a program for council discussion and possible action," I would suggest that the local reports be read or reread by the council members. If it is completed in time, the report by the Academic Life Committee of the Colloquy for the Year 2000 would also be reviewed. I would also recommend *Scholarship Reconsidered: Priorities of the Professoriate* by Ernest L. Boyer, President of the Carnegie Foundation for the Advancement of Teaching. This would provide a common ground for discussion and action.

## II. Statistics about undergraduate classroom teaching.

*Back to Basics* contained a number of statistics from several different sources including (i) a survey sent to every faculty member, (ii) a survey of 1,500 randomly selected students, (iii) the University Bulletin, (iv) the DART registration booklet, and (v) conversations with individual faculty members and administrators. Efforts to obtain data from the Office of Institutional Research on such matters as "The percentage and/or number of courses taught entirely by graduate students (by college)" and "Breakdown of faculty rank and courses taught" were unsuccessful. Another effort was made to obtain data from the Office of Institutional Research by the students preparing *Upholding the Mission*, and this effort was also unsuccessful.

Although the Office of Institutional Research did not provide data to the undergraduates, it has begun to compile such information. It has completed a series of reports (92-1 through 92-9) focusing on

- section size analysis (92-1);
- faculty involvement in teaching (92-2);
- student-in-course events based on course characteristics (92-3);
- student-in-course events based on course characteristics (92-4);
- student experience of section size (92-5);
- student and course level comparisons (92-6);
- student experience of instructor type (92-7)
- number of courses taken per student (92-8); and
- teaching load analysis (92-9).

All of these reports pertain to the fall semester of the 1990-91 academic year.

These reports provide interesting information:

- (i) average (mean) undergraduate section size is 34;
- (ii) 62.6 percent of undergraduate sections are taught by regular teaching and research faculty;
- (iii) 35.4 percent of the 10,512 student-in-course events at the 100 course level were in courses with enrollments greater than 100;
- (iv) 32.3 percent of the 8,892 freshman student-in-course events were in courses with enrollments of 35 or fewer students;
- (v) 14.9 percent of the undergraduate majors had no classes with 35 or fewer students;
- (vi) 25.1 percent of senior student-in-course events were in lower level courses;
- (vii) 81.9 percent of majors had at least three classes with regular teaching and research faculty;
- (viii) the average number of courses taken during a semester is five; and

# Documentation

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- (ix) there are differences in teaching loads between colleges, between departments, and between faculty members.

In terms of preparing "a program for council discussion and possible action," the reports completed by the Office of Institutional Research can serve as a starting point. Our committee believes that an informed discussion of *Back to Basics*, *Upholding the Mission*, and the quality of undergraduate education requires statistical information in three dimensions.

First, information is needed regarding teaching loads of the various faculties. This information would be broken down by college as well as by faculty rank and also distinguish between graduate and undergraduate classes.

Second, information is needed regarding class size. This information would also be disaggregated in several dimensions: by department, by college, and by level (freshman, sophomore, etc.).

Third, information is needed regarding quality student-faculty classroom contact as reflected by schedule profiles; for example, what percent of freshmen have schedules with only one small class?

Besides determining exactly the kinds of questions that the Office of Institutional Research needs to be asking, there is a need to ensure that terms are clearly understood by all those involved and that the terms are used in a consistent manner. For example, *Back to Basics* defines a small class as a class of 25 or fewer students while the Office of Institutional Research defines a small class as a class with 35 or fewer students. The Office of Institutional Research, at least in its teaching load analysis, counts a special studies or a senior honors essay as one course in calculating a faculty member's teaching load. There is also the question of the proper accounting for lab classes and discussion classes.

### III. Undergraduate research.

Any assessment of undergraduate education should include an analysis of the extent of undergraduate research as part of regular undergraduate courses but, more importantly, as a part of special studies courses, senior honors essays, research theses, internships, etc. This is important for several reasons. First, undergraduate research would normally involve a greater quantity of student-faculty interaction, for whatever reason, in regular undergraduate courses. Second, it would extend the concept of a research university to the undergraduate student population; that is, a research university is a place where everyone, not just faculty, are involved in a common pursuit. Third, it would provide students with an appreciation of the fact that learning is not the passive receiving of information but an active process where their

own contributions are important. Fourth, it would allow students to understand better what it is we as faculty members do when we are not teaching classes.

I could list additional reasons, but I think these are sufficient. In terms of preparing a "program for council discussion and possible action" the steps might include the determination of avenues currently available for undergraduate research, an evaluation the extent to which undergraduates are involved in research and the various modes in which that involvement is exercised, and the actions that might be taken to enhance the undergraduate research experience.

### IV. Suggested ways of improvement.

Assuming the status of undergraduate education at Notre Dame is not ideal brings me to the fourth and final point suggested ways of improvement. Here two broad avenues are available: intrinsic, meaning a change in what we do in our classrooms, and extrinsic, meaning everything else. In the intrinsic category there are any number of possible considerations: an emphasis on collaborative learning, more written assignments, more interactive arrangements, greater exploitation of educational technology, more feedback on student performance, use of self paced learning procedures, greater emphasis on critical thinking, etc. Indeed there are studies of what works and what doesn't work in the classroom-assessments by discipline (in economics we have a journal, *Journal of Economic Education*, which publishes such assessments) as well as assessments across the curriculum such as the Harvard Assessment Seminar.

In the extrinsic category there are also a variety of possible considerations including the establishment of a center for the improvement and support of teaching, the use of gates for entry into colleges and departments to control enrollments, increase in faculty size, reduction in the size of the undergraduate student body, greater reward for effective teaching, and so on.

In terms of preparing "a program for council discussion and possible action," consideration would be given to both intrinsic and extrinsic elements. But consideration of ways to improve teaching and undergraduate education must rest on the identification of current deficiencies. The students have indicated that they believe such deficiencies exist and this is consistent with other local reports. The Council needs to determine whether it agrees with these conclusions. If the Council does, then it can take up the matter of actions to correct the deficiencies.

# Documentation

## University Libraries' Hours During Christmas/New Year's Holiday December 24, 1992 - January 4, 1993

	Building	Services	Branches
Thursday, December 24	closed	closed	closed
Friday, December 25	closed	closed	closed
Saturday, December 26	9 a.m.-10 p.m.	closed	closed
Sunday, December 27	1 p.m.-10 p.m.	closed	closed
Monday, December 28	9 a.m.-10 p.m.	10 a.m.-4 p.m.	10 a.m.-4 p.m.
Tuesday, December 29	9 a.m.-10 p.m.	10 a.m.-4 p.m.	10 a.m.-4 p.m.
Wednesday, December 30	9 a.m.-10 p.m.	10 a.m.-4 p.m.	10 a.m.-4 p.m.
Thursday, December 31	9 a.m.-10 p.m.	10 a.m.-4 p.m.	varies
Friday, January 1	closed	closed	closed
Saturday, January 2	9 a.m.-10 p.m.	closed	closed
Sunday, January 3	1 p.m.-10 p.m.	closed	closed
Monday, January 4	Begin Intercession Hours		

## University Libraries' Hours During Intercession January 4-13, 1993

### Hesburgh Library

	Building	Public Services
Saturday	9 a.m.-midnight	9 a.m.-5 p.m.*
Sunday	1 p.m.-midnight	closed
Monday through Friday	8 a.m.-midnight	8 a.m.-5 p.m.**

\* The following public services will be open:

Circulation  
Current Periodicals/Microtext  
Reference

\*\* Current Periodicals/Microtext will be open until 10 p.m., Monday through Thursday.

### Branch Libraries

	Architecture	Chemistry/Physics	Engineering	Life Sciences	Mathematics
Saturday	closed	closed	noon-4 p.m.	closed	closed
Sunday	closed	closed	1 p.m.-5 p.m.	closed	closed
Monday through Friday	10 a.m.-3 p.m.	8 a.m.-5 p.m.	8 a.m.-5 p.m.	8 a.m.-5 p.m.*	8 a.m.-5 p.m.

\* Life Sciences will be open until 9 p.m. on Monday.

Wednesday, January, 13, all libraries return to regular schedule.

# The Graduate School Research Division

## Current Publications and Other Scholarly Works

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

### COLLEGE OF ARTS AND LETTERS

#### Anthropology

- DaMatta, Roberto A.  
R.A. DaMatta. 1992. *Antropologia da Saudade*. M.H. Bomeny, ed., *Um Americano Intranquilo* (Homenagem a Richard M. Morse). Editora da Fundacao Getulio Vargas-CPDOC, Rio de Janeiro, Brazil.  
R.A. DaMatta. 1992. Preface for *O Jeitinho Brasileiro*, by L. Barbosa. Pages 1-20 in, Editora Campus, Rio de Janeiro, Brazil.  
R.A. DaMatta. 1992. *Relativizando o Interpretativismo*. M. Correa and R. Laraia, eds., *Homenagem a Roberto Cardoso de Oliveira*. University of Campinas Press, Campinas, Sao Paulo, Brazil.  
R.A. DaMatta. 1992. *Religion and Modernity: Three Studies of Brazilian Religiosity*. *Journal of Social History* 25(2):389-406.  
R.A. DaMatta. 1992. *Um Individuo sem Rosto*. Brasileiro, Cidadao? Cultura Editores Associados, Sao Paulo, Brazil.  
R.A. DaMatta. 1991. *The Literary Work as Ethnography*. R. Reis, ed., *Toward Socio-Cultural Criticism: Luso-Brazilian Literatures*. Center for Latin American Studies, Arizona State University, Arizona.  
R.A. DaMatta. 1991. Preface for *Marginalia Sagrada*, by F. Brumana and E. Gonzales. University of Campinas Press, Campinas, Sao Paulo, Brazil.  
R.A. DaMatta. 1991. Review of *Jocks and Burnouts: Social Categories and Identity in the High School*, by P. Eckert. *American Anthropologist* 93(4):1005-1006.

#### Center for the Study of Contemporary Society

Wang, Li

See under COLLEGE OF ENGINEERING, Electrical Engineering; Alcock, Charles B. 1992. *Solid State Ionics* 53-56:39-43.

#### History

- Biddick, Kathleen A.  
K.A. Biddick. 1992. Review of *The Navigator: A Medieval Odyssey*, a film by V. Ward. *American Historical Review* 97(10/92):1152-1153.

Wegs, J. Robert

J.R. Wegs. 1992. Review of *Studenten und Politik: Der Kampf um die Vorherrschaft an der Universität Innsbruck 1918-1938*. *American Historical Review* 97(1):243-244.

J.R. Wegs. 1992. *Working-Class Adolescence in Austria, 1890-1930*. *Journal of Family History* 17(4):439-450.

#### Program of Liberal Studies

Austern, Linda P.

L.P. Austern. 1992. *Music in English Children's Drama of the Later Renaissance*. Gordon and Breach, Philadelphia, Pennsylvania. xix + 374 pp.

#### Psychology

Merluzzi, Thomas V.

T.V. Merluzzi and P.A. Carr. 1992. *Cognitive Science and Assessment: Paradigmatic and Methodological Perspectives*. Pages 79-97 in, D.J. Stein and J.E. Young, eds., *Cognitive Science and Clinical Disorders*. Academic Press, San Diego, California.

#### Sociology

Christiano, Kevin J.

K.J. Christiano. 1992. Review of *Partial Visions: Culture and Politics in Britain, Canada, and the United States*, by R.M. Merelman. *American Journal of Sociology* 98(3):708-709.

#### Theology

Cunningham, Lawrence S.

L.S. Cunningham. 1992. A Decade of Research on the Saints. *Theological Studies* 53(9/92):517-533.

L.S. Cunningham. 1992. Family Resemblances: Religious Booknotes. *Commonweal* 119(10/92):27-29.

L.S. Cunningham. 1992. Review of *The Difficult Saint: Bernard of Clairvaux and His Tradition*, by B. McGuire. *Theological Studies* 53(9/92):593.

Ulrich, Eugene C.

E.C. Ulrich. 1992. The Old Testament Text of Eusebius: The Heritage of Origen. Pages 543-562 in, H.W. Attridge and G. Hata, eds., *Eusebius, Christianity and Judaism*. Wayne State University Press, Detroit, Michigan.

VanderKam, James C.

J.C. VanderKam. 1992. The Birth of Noah. Pages 213-231 in, Z.J. Kapera, ed., *Intertestamental Essays in Honour of Józef Tadeusz Milik*. The Enigma Press, Krakow, Poland.

# The Graduate School Research Division

## COLLEGE OF SCIENCE

### Biological Sciences

- Craig, George B., Jr  
C.B. Pumpuni, J. Knepler and G.B. Craig, Jr. 1992. Influence of Temperature and Larval Nutrition on the Diapause Inducing Photoperiod of *Aedes albopictus*. *Journal of the American Mosquito Control Association* 8(3):223-227.
- R.S. Copeland and G.B. Craig, Jr. 1992. Interspecific Competition, Parasitism and Predation Affect Development of *Aedes hendersoni* and *A. triseriatus* (Diptera: Culicidae) in Artificial Treeholes. *Annals of the Entomological Society of America* 85(2):154-163.

### Chemistry and Biochemistry

- Gellene, Gregory I.  
K.S. Griffith and G.I. Gellene. 1992. Non-Mass-Dependent Isotope Effects in the Formation of  $O_4^+$ . Evidence for a Symmetry Restriction. *Isotope Effects in Gas-Phase Chemistry* 210-224.
- George, Manapurathu V.  
D. Ramaiah, K. Ashok, R. Barik, D. Venugopal, N.P. Rath, K. Bhattacharyya, P.K. Das and M.V. George. 1992. Interesting Phototransformations of Aziridylmaleates and -fumarates. Steady-State and Laser Flash Photolysis Studies. *Journal of Organic Chemistry* 57(22):6032-6037.
- Pasto, Daniel J.  
See under Physics; Rettig, Terrence W. 1992. *Astrophysical Journal* 398:293-298.
- Schuler, Robert H.  
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- See under RADIATION LABORATORY; LaVerne, Jay A. 1992. *Journal of Physical Chemistry* 96:7376-7378.
- See under RADIATION LABORATORY; Pimblott, Simon M. 1992. *Journal of Physical Chemistry* 96(20):7839-7841.

### Mathematics

- Sommese, Andrew J.  
C. Wampler, A. Morgan and A.J. Sommese. 1992. Complete Solution of the Nine-Point Path Synthesis Problem for Four-Bar Linkages. *ASME Journal of Mechanical Design* 114:153-159.
- M. Beltrametti, M. Schneider and A.J. Sommese. 1992. The Threefolds of Degree 11 in  $P^5$ . *Complex Projective Geometry, London Mathematical Society Lecture* 179:59-80.

## Physics

- Blackstead, Howard A.  
H.A. Blackstead, D.B. Pulling, D.G. Keiffer, M. Sankararaman and H. Sato. 1992. Renormalized Non-Linear Flux-Flow and Phase-Slip Resistivity in Polycrystalline Bi-Sr-Ca-Cu-O. *Physics Letters A* 170:130-136.
- Garg, Umesh  
T. Lauritsen, Ph. Benet, T.L. Khoo, K.B. Beard, I. Ahmad, M.P. Carpenter, P.J. Daly, M.W. Drigert, U. Garg, P.B. Fernandez, R.V.F. Janssens, E.F. Moore, F.L.H. Wolfs and D. Ye. 1992. Feeding of Superdeformed Bands: The Mechanism and Constraints on Band Energies and the Well Depth. *Physical Review Letters* 69(17):2479-2482.
- W. Reviol, M.P. Carpenter, U. Garg, R.V.F. Janssens, I. Ahmad, I.G. Bearden, Ph. Benet, P.J. Daly, M.W. Drigert, P.B. Fernandez, T.L. Khoo, E.F. Moore, S. Pilotte and D. Ye. 1992. Shape-Driving Effects in  $^{193}\text{Tl}$  from the Spectroscopy of Yrast and Near-Yrast States. *Nuclear Physics A* 548:331-352.
- McGlinn, William D.  
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- Pulling, David B.  
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- Tegler, Stephen C.  
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## COLLEGE OF ENGINEERING

### Aerospace and Mechanical Engineering

- Yang, Kwang-tzu  
Y.C. Michael and K.T. Yang. 1992. Three-Dimensional Mach-Zehnder Interferometric Tomography of the Rayleigh-Benard Problem. *Journal of Heat Transfer* 114:622-629.

### Chemical Engineering

- Brennecke, Joan F.  
C.B. Roberts, J.E. Chateauneuf and J.F. Brennecke. 1992. Unique Pressure Effects on the Absolute Kinetics of Triplet Benzophenone Photoreduction in Supercritical  $\text{CO}_2$ . *Journal of the American Chemical Society* 114:8455-8463.

# The Graduate School Research Division

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## Computer Science and Engineering

Li, Baozhen

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C.B. Alcock, B. Li, J.W. Fergus and L. Wang. 1992. New  
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E.C. Ballalta. 1992. Chosen to Represent Landscape  
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## COLLEGE OF BUSINESS ADMINISTRATION

### Management

Goltz, Sonia M.

S.M. Goltz. 1992. A Sequential Learning Analysis of  
Decisions in Organizations to Escalate Investments  
despite Continuing Costs or Losses. *Journal of Applied  
Behavior Analysis* 25(3):561-574.

Vecchio, Robert P.

W.R. Norris and R.P. Vecchio. 1992. Situational Leader-  
ship Theory: A Replication. *Group and Organization  
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## LAW SCHOOL

Kmiec, Douglas W.

D.W. Kmiec. 1992. Of Newsracks and the First Amend-  
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Praeger, New York, New York. 256 pp.

## RADIATION LABORATORY

LaVerne, Jay A.

J.A. LaVerne and R.H. Schuler. 1992. Track Effects in the  
Radiolysis of Water: HO<sub>2</sub> Production by 200-800-MeV  
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Chemistry* 96(20):7839-7841.

Pimblott, Simon M.

S.M. Pimblott, R.H. Schuler and J.A. LaVerne. 1992.  
Diffusion-Kinetic Calculations of the Effect of Nitrous  
Oxide on the Yields of Ionic Species in the Radiation  
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Pec, Jean A.

J.A. Pec, et al. 1992. Syllabus for Serials Cataloging Unit.  
*ALCTS Newsletter* 3(7):89-91.

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# Notre Dame REPORT

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