

Minnesota Management Review

March 1987

Research: How important is it at a management school?

The faculty and administration at the Carlson School of Management have been exploring this question recently, partly as a result of current university-wide long-range planning activities. President Kenneth Keller's Commitment to Focus program has also stirred up debate throughout the university on what it means to be a research-oriented institution. In fact, every unit has been charged with identifying how they meet or plan to meet the scholarly values a high-quality research university should have.

Minnesota's Governor Rudy Perpich has also taken a stand on research, committing his support to making the state a center of research activity. One reason to emphasize research on a statewide level is that it seems to create jobs. According to an article in the Feb. 2 *Fortune*, large cities with the culture and education cen-

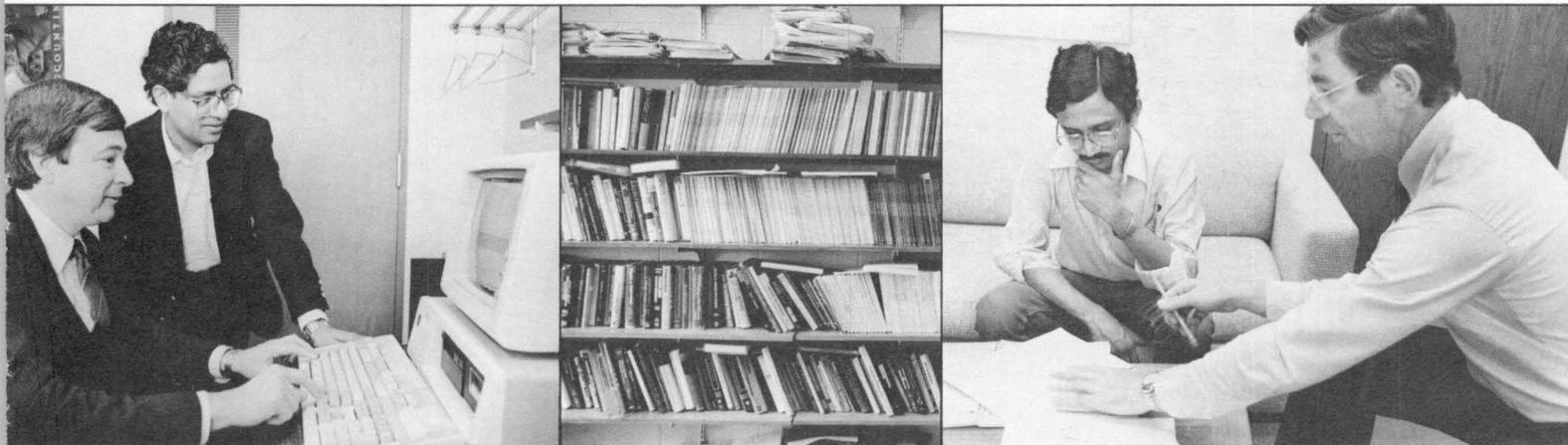
ters to attract and keep the country's best minds will be the top job producers in the 1990s. "The most promising spots of all seem likely to be near prestigious, research-oriented universities—magnets for brain power," the article said.

Research does make a difference, and here at the Carlson School of Management as we continue our drive to become a top public business school, we are taking a careful look at how it fits into our goals. We are raising questions about what makes high-quality research and how it relates to our teaching, faculty promotion and community service standards.

On pages 2-13, a series of articles about management research explores some of these issues and describes how research happens. Dean Townley has devoted his regular column to discussing the critical role research plays in the

school's drive to the top. In a roundtable discussion, three of our alumni who are distinguished academicians talk about the difficulties business schools face because their researchers must serve both the practitioner and the academic communities. Profiles of six faculty members give a picture of the researcher's job. Other articles discuss the role research centers play in creating a high-quality research environment, how research is funded and the role of academic publishing.

Business school research does influence how business functions and Carlson School of Management faculty have a tradition of making exciting contributions to the field. This is a good time to acknowledge the importance of research. ■



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The **Minnesota Management Review (MMR)** is published by the External Affairs Dept. for alumni and friends of the Curtis L. Carlson School of Management, Univ. of Minnesota. Direct correspondence to: Martha Douglas, editor, **MMR**, Office of the Dean, 271 19th Avenue South, Minneapolis, MN 55455. Tele: (612) 625-0843.

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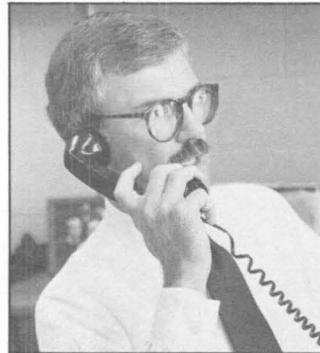
The **MMR** was designed by Dawn Mathers. Special assistance was provided by Laurel Christianson.

from the dean

How research fits in

*Research plays a critical role
in our school's drive to the top*

by Dean Preston Townley



Our mission at the Carlson School includes a strong concern for developing knowledge in the field of management. This is what distinguishes a research university from schools that are primarily teaching entities. And it is this difference that most clearly sets us apart from other schools in our area.

Ours is a research faculty.

What does this mean to our students and the management community we serve? First, contrary to one viewpoint, it does not diminish the quality of teaching. We challenge our faculty to be both outstanding teachers and excellent researchers. In individual cases we can accommodate excellence in one or the other area, but our potential to achieve real quality in management education lies in obtaining balance between the two—the inspiring teacher who leads students to knowledge through exposition of the latest work of which his or her efforts are a part.

Second, research does affect how management functions. The significance of business school research may be less obvious to the public than the headline-producing work on artificial hearts or speculative cures in biotechnology. But we have our own significant examples, academically-developed approaches that have clearly made an impact on the world of business. Today's expanded financial trading instruments emerged from academic research, as did the introduction a generation ago of discounted cash flow analysis in company financing decisions. But breakthroughs, while exciting, are not really what we seek. Instead, we are dedicated to research as the crucial element in our academic package because it is so vitally connected to the overall educational process.

Third, research is the driving force in building the strength and reputation of the Carlson School of Management. Leading academics and practitioners are drawn to those who contribute to the development of knowledge through innovative, quality research. This, in turn,

attracts top-quality students. The cycle continues, creating a pool of talented faculty and students that benefits the management community by providing outstanding employees and advisors. And, nourished by essential resources, the cycle continues. It can be slow to build and difficult to maintain, but it is wond-

erfully productive if all the ingredients come together. And it all begins with quality research.

Finally, let me expand a bit on what we mean by quality research by summarizing some thoughts on the subject recently expressed by Professor Mike Houston, chairman of the Department of Marketing and Business Law. Mike describes quality research at the individual level as research that provides incremental knowledge about a central theme, theory or construct. The collective effort of many such projects provides a significant body of knowledge about the central research issue. A quality research program should influence other researchers and, ultimately, the practice of the field. It provides knowledge that others use to guide their research and their practice.

Performance here is difficult to assess because it takes time for the impact of a research program to reveal itself. The first gauge of quality is acceptance of the work for publication in a reputable journal. Beyond that, if the work is significant, it attracts attention and its impact builds.

A school's reputation in the academic community is heavily related to its research program. Research is its communication device to peer schools and to prospective students, especially Ph.D. students. And, as its graduates fill the openings in industry and the academic world, its reputation grows and builds upon itself. Again, the cycle of growth with research as the driving force.

In our drive to become one of the top management schools in the country, research plays a critical role. ■

Business school research: serving two masters

Business schools are caught in a particular kind of problem because of the dual function business research fulfills. On one hand, there is a practitioner community saying "help us solve the problems we're having right now." On the other hand, academic colleagues and a university administration say the focus should be on pursuing rigorous, theory-based research oriented toward solving long-term problems.

What is the proper stance for a business school to take toward research and its two constituencies, and what is the proper balance between research and teaching?

To explore these concerns, Paul Johnson, professor of management sciences and psychology and director of the Ph.D. program, talked to three Carlson School of Management alumni who are distinguished in both the academic and business communities, and we've put their comments together here.

Earl F. Cheit ('47 B.S.B., '49 L.L.B. (J.D.) and '55 Ph.D.-economics, University of Minnesota), is the Edgar F. Kaiser Professor of Business and Public Policy and former dean at the Schools of Business Administration at the University of California, Berkeley, and senior advisor of Asian-Pacific Economic Affairs for the Asia Foundation.

Richard M. Cyert ('43 B.S.B., University of Minnesota; '51 Ph.D.-economics, Columbia University) has been president of Carnegie Mellon University since 1972 and was formerly dean of the Graduate School of Industrial Administration.

Robert K. Jaedicke ('52 BBA and '52 MBA, University of Washington, and '57 Ph.D.-accounting, University of Minnesota) is dean of the Graduate School of Business at Stanford University. He was assistant professor of accounting at Harvard University before becoming associate professor of accounting at Stanford in 1961.

Johnson: How would you summarize this problem of the dual role business research should fulfill?

Cheit: The special nature of a professional school within a university is that its work is subject to two sets of criteria by two sets of constituencies—the university and the practitioner. I would summarize the matter this way: In principle the interest of the academy and the profession are in harmony. Both want excellent instruction, research and service. But in practice service in the academic discipline competes with service to the profession, and an inward orientation to theory and scholarship competes with an outward orientation to applied problems and operations. Faculty members who follow the inward direction eventually come to a research agenda that is shaped by the non-business school members of the discipline and ultimately come to questions about the nature of man. Whereas, faculty members who go in the other direction, an outward orientation to applied problems and operations, find themselves working on problems about what is the best way to get things done. So one leads you to questions about the nature of man and the other to questions about the best way to get things done. And I think in a good business school it's important that both kinds of questions be reflected in research.

Johnson: Can academic business research influence how business functions?

Cyert: Business research conducted at the university level is critical to the practice of management and it should be leading business today. It should have an analytic approach that anticipates the kinds of problems managers will be facing and we need to have solutions ready for them. Business school faculty need to realize that what they have to say is important in influencing management.

The field of management information systems is an example of what I'm talking about. Ten or fifteen years ago, management wasn't even aware of the importance of the field, yet good business schools should have anticipated that computers were going to be critical because they facilitated control and decision making.

Johnson: What is the difference between research done in a business school on a topic like decision making

from research on the same topic in a psychology or computer science department?

Cheit: There are many business faculty members who do research similar to the work done in disciplines that inform the various functions of the business school. Economists in business schools are doing work similar to that done by economists in an economics department in schools of letters and science. Organizational behaviorists in business schools do work similar to that done by psychologists in psychology departments.

But in the business school it's important to ask yourself how you differ from an economics or psychology department. You must justify the existence of a professional school and not simply be a copy of an academic department. And the difference, of course, is that professional schools have a second constituency with different expectations, and our goal is to meet those expectations in the most advanced way. We want to be in touch with advanced practice; we want to know what's going on and be informed.

Jaedicke: If a faculty member's interest is basic research to extend the boundaries of the theory, they would more likely align themselves with an economics department than with a business school. But if your interest runs in an applied direction, for example, if you're interested in capital markets, you may still be developing the underlying theory, but the focus will be more on the capital market issue. A good example is the work done on the capital assets pricing model or the options theory—the Black-Scholes model, for example. This was done by business school people working on issues that arise in capital markets, even though the people themselves are very good economists.

Cyert: I would say that business school research is more normative in its orientation, whereas the scientific disciplines tend to be empirical. Ideally we should have projects that combine these activities. Interdisciplinary research is the essence of how research should be done when you are working on real-world problems. Knowing how to build a model can be very helpful for understanding current practice.

Johnson: I have seen some rigorous experimental work done on decision bias in auditing that is much publicized in academic journals, but doesn't seem to tell us much about what auditors do. How do you set up a scientific model that reflects actual practice?

Cyert: It is possible to do rigorous scientific analysis based on research in actual settings and looking at real problems, although you may have to adjust your methodology to get your results. For example, I did some work on statistical sampling in auditing that was based on actual auditing experience. I had to develop new methods for sampling approaches and I had to modify the method for calculating variances, but it is possible to do.

Jaedicke: We're talking about issues that are fundamental and more generalized, and not the sort of consulting that aims to solve a particular problem. And with these more fundamental issues, you want the methods used to be rigorous in the sense that it makes the conclusion valid and provides the basis for additional work. The more you emphasize that, the more you find you have to rely on either developing the theory that you need or using one that's already available.

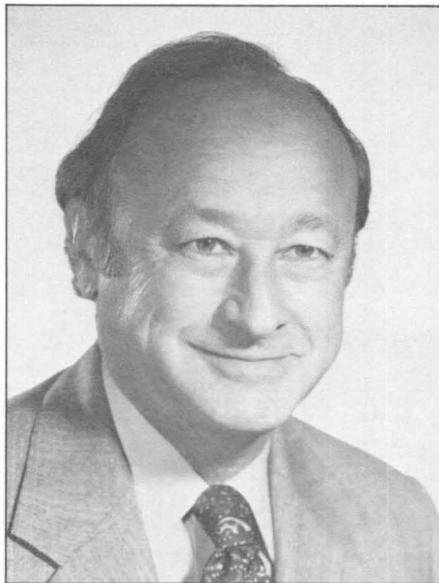
Johnson: I can see how that works for studying tasks that are well defined, such as in auditing. But how do you study the tasks of, say, a general manager in a controlled setting?

Cyert: Again, this has been done. Henry Mintzberg has done a rigorous study of the way executives allocate their time. We have a student who is studying some very interesting propositions on personnel policy and is going into firms like Westinghouse and the Mellon Banks to do it. I think the key here is that you need good relationships with business so that you can get into the firms. It is critical for management that we do this kind of research because managers will not improve unless there is some real change academically in the education and that comes through research.

Johnson: What about the expectations of the business people you are cooperating with? Won't they expect that the results of the research should be applicable fairly quickly to their operation?

Cyert: I haven't found it to be the case. I think, on the other hand, that managers do not realize how much academic research can do for them. And part of the reason is that in the past there hasn't been that approach.

Now over time, I think that is changing. An example of research that has made an obvious impact on them is the



Earl F. Cheit

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— Cheit

work done on computers. But the thing that really needs to be emphasized is that those people in academic institutions who may never have managed themselves do have something to say about the way managers should behave. I have found in my work on boards and among my contacts in high levels of management that it is just more and more clear that management has to depend on the people in business schools to come through with the ideas that are eventually going to change practice.

Cheit: I think it's important, when it's demonstrable, that the connection between theory and practice be pointed out. A lot of the work, for example, on the nature of risk has become basic to work in financial markets. Finance is a very clear case where work that began as highly theoretical is now being applied. Secondly, it's also important to communicate to your constituency the nature of the university and the importance of its job of creating knowledge. Universities are places set aside precisely for this reason. Professional schools should be part of this endeavor and have some basic work going on.

Johnson: Some faculty members who feel pressured to be relevant to management practice will convert that into consulting, thinking that what you mean is

to go out and offer rules-of-thumb advice that is immediately useful. What I hear you saying, though, is that in fact we need to be much more innovative and that we need to recognize that there's a middle ground between the practical consulting level and the more theoretically rigorous work.

Cyert: Right, exactly. In consulting, you do the same thing over and over. And I have no objection to writing up a project done in consulting if there's a normative point that can be made. But what we need are more developed methods with an emphasis on the normative. We should be giving much better advice to people for example on how to organize. And it should be done not just by an individual going out and looking at a particular situation and giving particular advice but we should be able to say more generally, "what are the characteristics of an organizational structure that leads to an innovative organization?"

We want to influence practice but we want to do so on a sound foundation. We should know enough about the profession to know the kinds of problems businessmen face as managers. We can improve practice through research by anticipating the problems that managers are going to face in the future. If we do good research there will be solutions available by the time managers recognize the problem exists. There should be a relationship between business schools and management that is similar to that existing between physics and engineering.

Jaedicke: I think the exciting part about a professional school is that while you are tied to the profession and you observe that, you are also in a very good position to take on the responsibility for doing the fundamental work that over time will advance the state-of-the-art knowledge in the profession.

Johnson: So if a business school wants to make a convincing argument to the business community that it merits their support, how would you characterize the core of that argument?

Cyert: I would say that you're not going to improve the management of any corporation without research into the management process. Management should feel obligated to make some financial contribution to enable management research to go ahead. It may not benefit them directly, but it will improve management in the U.S. Given the international competition we're now facing, everyone will benefit from it. Another example, in a softer area, is in strategic planning. This area is one of the most significant in management, and there are relatively few managers who do an outstanding

job of strategic planning. They're not looking ahead because they're so wrapped up in what's going on currently. Some CEOs think they can turn the strategic planning process over to a vice president and a committee, whereas it's crucial that the CEO be deeply involved in it. There are ways in which we can be much more quantitative in strategic planning. This is one area that we should work on vigorously because it's a key to future competitiveness in American corporations.

Johnson: One thing that seems to be critical as we think about this vision is the transfer of technology or knowledge. What kind of mechanism is needed that allows research results not only to appear in the journals but somehow bridges the gap between academics and practice?

Cyert: The transfer of technology is critical for our society. We in universities have to worry about how we get the results out into the world as soon as we can, so that we can make an impact on our society more quickly. We've taken far too long in the past and the time is just not there for us anymore. We've got to cut that time down so that we can get a jump on our competitors.

There are several ways to do this. A method I've seen in manufacturing is to have a consortium of firms sponsoring a project. The firms have representatives who are also involved in the research and who are charged with the responsibility of taking the results back to the firm. Or, you can make an impact through people who have legitimacy and prestige in the business community and who are also associated academically, as full- or part-time faculty.

Cheit: The question of what is the best way to share research findings is very important. In your decision to emphasize research you need to recognize that it carries with it the obligation of a professional school, which is to inform practice and to stay in touch with the most advanced practice. As dean at Berkeley, I required each department to have a continuing link to the profession through conferences, research seminars and publications, activities that bring practitioners and academics together. These types of executive education activities are very important.

Jaedicke: The dissemination of research results through undergraduate and MBA teaching is also a very powerful means. For one thing, firms are hiring new grads who come into these organizations with new ideas. Another important point is that research is really the main activity by which faculty members add to their intellectual capital



Richard M. Cyert

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— Cyert

and that finds its way into the teaching program. When we look at the rate of change in our course offerings, over the past 20 years we probably have 100 different electives in the MBA program and half of those are new every five years. Now if you step back and ask where that rate of change comes from, you can almost always trace it to the research done here by faculty members or by the larger academic community. So it helps drive the curriculum. It affects business and it affects management practice. An example of this is the work that was done in the late 50s and early 60s on managing a large decentralized organization, with problems such as dealing with transfer pricing or evaluating divisions. At that time the work was just being done, but now the whole set of notions is pretty much part of both teaching and practice.

Now, another point to make here is that economic and behavioral phenomena are complex and continually changing. And we need to think about how you help somebody build an educational base from which they can manage these changes through the 30 years experience they're going to have in the practical world. It seems to me that one way we do that is to educate the student so that they experience the process of discovery. And a research-oriented faculty is more likely to teach in a way that involves the student in that thinking process.

Johnson: Do you think this is the case with MBA students as much as it is with Ph.D. students?

Jaedicke: Yes. At the Ph.D. level you immerse them immediately in that process. But even the MBA, who may not be headed for a Ph.D. degree, still has the problem of how do you keep up? How do you learn? How do you keep on the cutting edge of learning as you go through that long career? And a lot of that has to do with the teaching process itself. And people who are doing research are more likely to convey that method of thinking to a student.

Johnson: How should a school that is beginning to place more emphasis on research manage this transition organizationally?

Cheit: The important goal is to maintain balance—between research and teaching, between research that's aimed at application and research aimed at theory, between graduate and undergraduate work. There's a wide variety of balancing to do and it's a highly dynamic situation.

Cyert: You have to worry about your own strategic planning. You have to look at what your goals are. If you feel it is critical to not only be training practitioners but also to be training researchers and doing research, then you have to face the fact that graduate students are a crucial element to doing research. And that means you've got to allocate some funds for attracting outstanding graduate students because if you have mediocre graduate students you're probably going to have mediocre research.

Cheit: You have to look at the advantages and disadvantages of a research orientation. The advantages include improved teaching as a result of faculty who are active researchers. There is a great line that applies here: “research is to teaching as sin is to confession. If you don't do much of the former, you have very little of interest to say in the latter.” Research improves teaching. It attracts better graduate students, adds to knowledge and eventually to practice.

The disadvantage of placing more emphasis on research is that you lose some friends who want you to be more applied; they'll be less attracted to you, at least in the short run.

Johnson: And you have to be able, I suppose, to reward faculty for research as well as teaching.

Cyert: In a research institution, you have to have research contributions as a major element in the promotion process. You can't live in this kind of an institu-

tion as half free and half slave. You can't have half the faculty members saying, well we're teachers and we have the bulk of the teaching, and another part saying we're researchers so we spend the bulk of our time doing research. You've got to get people who can do both and in a real sense that's a virtue because teaching is improved. In addition it eases the process of technology transfer. If you had half the faculty doing teaching and half research, there wouldn't be much connection between them.

So you really need the kind of person who can do both, which means to some extent the teaching loads have to be reduced. The criterion I developed as dean and the one we try to hold to here at the university overall since I've been president is that a person who is satisfactory on research and an outstanding teacher can be promoted. Conversely, someone who is satisfactory on teaching and outstanding as a researcher can be promoted. But as a research institution I would not like to have the bulk of my faculty in the former category. Those should be the exceptions, and there should be evidence of true excellence within the teaching. You also have to have a high standard of what it means to be satisfactory in teaching or research so that you don't get a lot of mediocre people who are slipping in because your standards aren't high enough.

Cheit: I think the best approach is to require that candidates meet university standards in each of the criteria, and that they excel in at least one of them. That's a good approach because no one is going to be the very best at teaching, service and research. Another thing to consider is the lifespan of the faculty. Junior faculty members do less in the service category because they are working on their teaching and scholarship. Their early research will tend to be more discipline-oriented and theoretical because they don't yet have the resources or the link to the business community. But as faculty members mature and learn more about the business world and its operations and form links to it, their opportunities to do more applied work grow.

It's rare to find one person who is outstanding in all three—teaching, research and service. So you must have a mix in your faculty and it will change over time. I always said as dean that it was important to have some faculty members whose work was presented at meetings where the fundamental research was reported to colleagues in the discipline,



Robert K. Jaedicke

“Research is really the main activity by which faculty members add to their intellectual capital and that finds its way into the teaching program.”

— Jaedicke

but it's also important that there are faculty members who are recognized and feel at home in executive suites in business.

Jaedicke: In considering tenure, we say that if they're going to be outstanding in research we want them to be highly acceptable teachers. If they're going to be outstanding teachers we like them to be highly acceptable researchers. So it seems to me there's room for emphasizing one or the other. Occasionally you find the superstar who can do both with just outstanding ability. I think the two processes feed on one another and you get researchers who can teach and teachers who are doing research.

Johnson: What are the important characteristics of an outstanding business school research program?

Cheit: A short answer would be that the members of the department are recognized at the important meetings of the basic disciplines—economics, finance, accounting, or whatever the field is. They are presenting research papers and are frequently cited by others doing work in these fields. At the same time, these people are sought by businesses as speakers and by the business press for a quote on an important story. They are recognized both where advanced

practice is under discussion and where contributions to knowledge are concerned. In that respect, that's how a business school differs from, say, an economics department.

Cyert: I think that to get recognized as an outstanding business school you've got to be contributing on the research side. I also think there is more recognition now by managers that there is research a business school can do that is different from anything that goes on in management and that the research can make a real contribution. Also, I want research faculty who understand what goes on in management and who have the capacity to analyze and anticipate problems. That is really what you want in academic management research.

Jaedicke: The criteria I would use to judge an academic program would have a lot to do with the way the university envisioned themselves in terms of the extent to which they are a pure research university or whether they also want to fulfill an obligation to be of service to the community. In other words, aiming their teaching and research at the industry of that area.

Johnson: Do you think a business school has an unusual burden in communicating to the university administration why it deserves university resources?

Cheit: Yes, there are difficulties, and they stem from the fact that in the academic pecking order, business schools aren't at the top. And people in the sciences would observe that this is also true of the applied fields in engineering or physics. There's an inherent loyalty in universities to things that are fundamental and theoretical.

Jaedicke: When you're dealing with the internal administration of a university, the more fundamental your research is, the better off you are.

Cheit: It's a dilemma. One early critic of business schools said that they would become either a place for training clerks, or highly applied economics departments. Alfred North Whitehead states it this way. “The danger in an excellent technical education is its tendency to destroy those energies of mind needed to direct the skill.” When dealing with the central administration, I've always tried to teach that a business school should be technically sound in its research and its approach to its work, but it must also generate those energies of mind needed to direct the skill. That's the essence of our task. ■

Faculty profiles reveal a multifaceted picture of the researcher's job

The faculty at the Carlson School of Management are not only teachers or observers of business practice. They are also researchers. And, as Dean Townley pointed out in his column on page two, this is what distinguishes a research university from a school whose primary mission is teaching.

One difficulty in describing what it means to be a researcher is that research can take many different forms. A profile of each of our 104 faculty members would paint 104 different pictures of the job. With that in mind, the following sampling of faculty profiles will give some idea of the variety of research activities conducted at the school.

Gerardine DeSanctis: Managing a long-term group project

Assistant professor of management information systems Gerardine DeSanctis says that some days she feels more like a manager than a university professor. What she's referring to is her Group Decision Support Systems (GDSS) project and the management that's involved in keeping it running.

The GDSS project, which is determining how computer technology can support decision making in group situations, is fairly large in terms of its budget, the number of people involved and the length of time it will take to complete. Now in its third year, plans have been projected for at least three more years.

So far, software and other materials used in experiments have been designed, refined and tested. A laboratory facility has been designed and constructed. And a series of experiments has begun in which groups conduct meetings under conditions that range from low to high decision-making struc-

tures, with varying degrees of technological support.

As one of the principal researchers for the project, DeSanctis is responsible for raising research money, managing the budget, hiring and supervising research assistants and other personnel, setting project goals, designing and running experiments, coordinating data, communicating with team members and analyzing and reporting results.

The GDSS budget has increased from \$20,000 in the first year to \$70,000 currently. An additional \$40,000 is represented by equipment donated by NCR and IBM. A major portion of the budget goes for salaries—for graduate and undergraduate research assistants, summer faculty salary support, programmers, computer consultants, coders and clerical support. Other expenses are hardware and software development, computer maintenance, data entry and analysis, system use fees, security, video and audio tapes and other supplies.

Finding financial support for such projects is an ongoing effort. "You're scanning the horizon all the time for sources of funding to keep the project going," says DeSanctis. "And, you have to support your graduate students while they complete their dissertations." GDSS has received funding from the Graduate School, the MIS Research Center, the

Dean's Innovation Fund and the American Association of Computing Machinery.

"You spend a lot of time raising money and then convincing the organizations that they made a good investment," says DeSanctis. "I submit reports and make presentations to the Graduate School, to the School of Management and to participating companies."

DeSanctis began the GDSS project in 1984 as an outgrowth of a Ph.D. student's research. She then contacted Scott Poole, professor of speech communications, to tap his expertise in group dynamics and communications, and he became interested in the project as well. Since then, professor of MIS Gary Dickson and three new graduate students have become involved. Ilze Zigurs, Ph.D. candidate in MIS, is using the findings to study how technology affects leadership behavior. DeSanctis is also interested in involving a Humphrey Institute scholar, because of potential applications in the public sector.

This interdisciplinary approach is what DeSanctis feels is a primary benefit of team projects. "With multiple perspectives and broader knowledge represented, the results will be more useful. Other people give you ideas for applications for your discoveries. For example, an MIS person might ask how software design affects the decision-making quality of a group. And then the communications person will ask how the technology becomes a member of the group and how it is useful for conflict resolution. Suddenly I find I'm studying conflict, interpersonal communication and verbal dialogue, which have important implications for teleconferencing systems and the design of electronic technology and software."

DeSanctis says she gets most of her "personal charge" from conducting research, and feels that it keeps her up-to-date as a teacher. "In MIS, the rapidly changing technology means that you have to work hard to keep current. The stimulus research provides for doing this really pays off in your teaching."



Gerardine DeSanctis

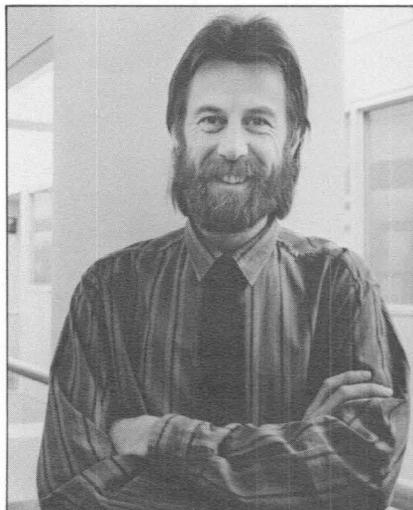
Dennis Ahlburg: Conducting research that affects South Pacific policy

Through a series of recent research projects based on the South Pacific Island nations, industrial relations associate professor Dennis Ahlburg has revealed trends in population growth and labor supply that could be very important to the area's policymakers in avoiding economic crises.

The Pacific Island nations Ahlburg is interested in range from Papua New Guinea, with a population of more than three million, to Nauru and Tuvalu, with less than 10,000 people. "These and similar countries—termed micro-states because of their small size—don't get much attention," Ahlburg commented, "but although they contain less than one-half percent of the world's population, they represent 25 percent of the United Nation's membership."

These islands have become independent countries relatively recently, and although they are generally well endowed with natural resources, their economies are, according to Ahlburg, in a fragile, early developmental stage.

Ahlburg's research on this part of the world began in 1985 when he was a visiting fellow at the National Center for Development Studies at the Australian National University. His work at that time involved forecasting population growth and its effect on economic growth. In discussing this study, Ahlburg and two other researchers at the Australian center realized that several of these countries were building up population pressures which, if further ignored, could create critical economic problems. They decided to look more closely at the human resources development of these nations in all its forms, and especially as far as jobs, health and education are concerned. To fund the project, they applied



Dennis Ahlburg

for and received a grant from the Economic and Social Commission for Asia and the Pacific (ESCAP), a research and policy initiative division of the United Nations.

The three researchers looked at population trends in the area, the demand for labor, education, population planning and health policies, international migration and special regional issues. They found that human resource development policies would be essential to managing the supply of labor in the Pacific, and to increasing productivity and living standards. In their report to the United Nations, they stressed the need for policy improvement and made several recommendations.

The United Nations published their report and distributed copies to officials in the countries involved. Ahlburg also presented the findings at a conference in Australia attended by the policymakers. One month later they met again to discuss how to implement changes.

Just as one idea leads to another, one research project often uncovers yet another problem to pursue. Ahlburg is now collaborating on a study of the migration patterns of South Pacific Islanders to the United States, using data from the 1980 census. He has found that the people who migrate tend to be better educated, and Ahlburg's concern is that the people who could best help the countries solve their problems are leaving.

And, to pursue the issue even further, Ahlburg is studying fertility determinants in Papua New Guinea. "Issues such as migration and fertility are all related to the job market," he commented. "It's just as important to study the creation and movement of a country's human resources as it is to study how to manage them. Especially in developing countries, the population processes are very important to planning all other stages of human resources, such as putting people through schools, meeting the demands of the labor market, and so forth."

Whether or not policy or economic change will result from Ahlburg's research is hard to predict. "As an economist, my job is to get the analysis out and bring it to the appropriate audiences," he says. "As far as actually implementing new policies is concerned, that is based in large part on political compromise and is really out of my hands."

Ahlburg says he often applies what he's learned from the Pacific Islands research to his teaching and other research projects closer to home because labor markets around the world share some common problems.

Jack Kareken: Making an impact as the Minnesota Banking Industry Chair

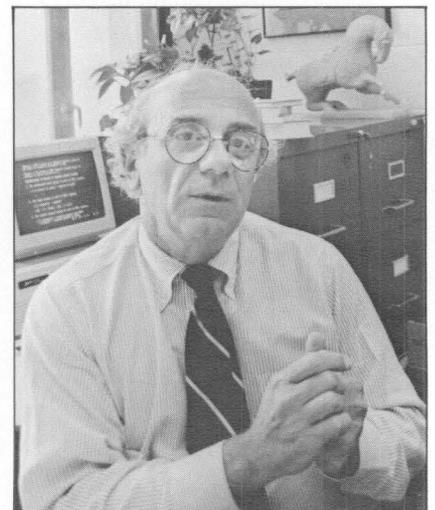
Every department would like to have at least one faculty member whose name, when mentioned, is recognized nationally by others for making important contributions to the field. Jack Kareken is one of these people in the Department of Finance and Insurance. When he was named the Banking Industry Chair Professor in 1981, he gave the department "instant credibility," according to Professor Tim Nantell, department chairman.

Kareken is known for his revolutionary work on monetary policy and bank regulation. He has contributed to the rational expectations theory of international exchange rates and is one of the pioneers in the application of finance theory to the regulation of banks and other financial institutions.

Kareken was an advisor to the president of the Minneapolis Federal Reserve Bank for 15 years and is credited with building their research department into one of the strongest in the system. He attended monthly Open Market Committee meetings during that time and was awarded a Guggenheim Fellowship in 1979 to write a practitioner's guide on conducting monetary policy.

Because of his expertise, Kareken is in high demand as an advisor to government on important banking regulation policy issues. He has testified before many Congressional committees and was in Washington recently to consult with the Federal Home Loan Bank Board.

"There's a continuing stream of legislation, actual or proposed, on the regulation of banks and other financial institutions," Kareken explained. "For years, Congress has debated what kinds of activities banks should engage in.



Jack Kareken

Underwriting securities, for example, is one aspect of a large problem that comes as a result of insuring deposits."

As a recognized scholar and distinguished chairholder, Kareken's responsibilities extend beyond teaching and research. He developed the school's banking curriculum, creating a banking concentration in the MBA program and new undergraduate courses. And, he is the department's principal liaison to the Minnesota banking community and is a director of First Banks System.

Kareken has also helped build the finance department by attracting other high quality faculty and students. "Jack has a sixth sense for recognizing research that is going to go somewhere," said Nantell. "He sees spots of creativity, or people who are handling things in interesting ways. He knows who to encourage and what risks to take. Several of our faculty members are here because of Jack."

Kareken believes it is important for a school to create endowed academic positions because they are symbols of the school's commitment to research in those fields. Furthermore, he said, "Having a good finance department is important to a school because, as one of the most popular concentrations among MBA students, it contributes disproportionately to a school's reputation. It seems that a topnotch finance department is necessary for being recognized as a topnotch school of management."

With recent contributions from several local financial firms, the commitment to the Banking Chair has been augmented and redefined as the focal point for a newly-established Center for the Study of Financial Markets and Institutions.

Barbara Loken: Applying marketing research to a community health program

Barbara Loken, associate professor of marketing, is applying marketing research expertise to a health problem through the Minnesota Heart Health Program (MHHP), a research program designed to accelerate population-wide changes in identifying coronary risk factors and disease. It is based on the premise that people will change their attitudes and behavior about heart disease if they know more about it.

Several innovative educational techniques aimed at raising people's awareness of heart disease and its prevention are being used in three Minnesota communities. One is to label products in grocery stores that are low in salt and fat. A similar method is used in restaurants, where heart stickers are placed alongside menu items that are "heart healthy." A "quit and win" campaign and contest

gives incentives to help people stop smoking.

Loken's job, as MHHP associate director of education evaluation, is to measure just how effective these techniques have been. Her work involves comparing results from the three communities with three other similar communities that have not had contact with the program.

Loken and her research assistants decide what kind of information they need to determine the success of MHHP, design surveys that will solicit the information and hire personnel to conduct them. "We conduct a different survey every two weeks—about 25 a year," she said. "For example, we've done surveys that looked at the effectiveness of direct mail and cable TV on changing people's attitudes." Afterwards they analyze the data and submit their findings in a written report.

Loken's work with MHHP ties together several research interests and applies them to a health problem. "My background is in social psychology and research design," she explained. "In graduate school I studied models of attitudes and behavior with Martin Fishbein, who helped develop a theory of reasoned action that is used in marketing, psychology and other disciplines. I've also done work on testing survey methodology and on consumer attitudes and behavior in relation to product package design."

About 20 faculty members from throughout the university are involved with different aspects of the MHHP. They come from anthropology, communications, medicine, public health, psychology and marketing. "These many different perspectives bring a real richness to the work," Loken commented. "And, with people from so many different fields working together, papers on the project can be positioned for publication in a variety of academic journals."

The interdisciplinary contact has also



Barbara Loken

led Loken to explore new research interests. "I did a study that looks at how cigarette advertising affects decisions about whether or not to smoke, and I may pursue it further," she said.

Loken balances her work for MHHP with other research and teaching responsibilities, and she feels that each activity enhances the other. "MHHP is an applied research problem, which has been very valuable to my MBA teaching. Other, more theoretical projects, on the other hand, have been more relevant to my Ph.D. teaching.

"I think any good theoretical research will ultimately work its way back to applied issues and could have an impact on how business functions," Loken commented. "Both kinds of research are valuable."

Mario Bognanno: Forming international research ties

Being on a first-name basis with people like Korea's deputy prime minister and minister of economic planning is one reason industrial relations professor Mario (Mike) Bognanno gets so excited about his research ties to that country. It means he can communicate his findings directly to the individuals most likely to implement economic policy changes.

There are other reasons, as well. "Korea has an extremely dynamic economy and society," he said. "In 10 or 15 years it could be a serious rival to Japan as Asia's industrial leader." With the current economic focus on Pacific Rim countries, the opportunity to be close to that kind of environment and to influence its direction really can't be passed up by a labor economist.

Bognanno travels frequently to Korea as a visiting scholar, conference participant and consultant to business and labor leaders. He spent fall quarter 1986 at the Graduate Institute of Peace Studies conducting research in bargaining processes.

Earlier this month Bognanno attended a conference on the employment effects of technological development, sponsored by the Korean Labour Economics Association and the German Friedrich Ebert Research Institute. He presented a paper on production and non-production labor demand in Korea's manufacturing sector, which will be published in both English and Korean. In May he'll return to participate in a Korean-Japanese-German-American symposium on collective bargaining sponsored by Sogang University. Two scholars from each country have been invited to make formal presentations. Then, in September he'll return again to attend an international conference on the reunification of the two

Koreas, and will present a paper based on his work on negotiating incentives.

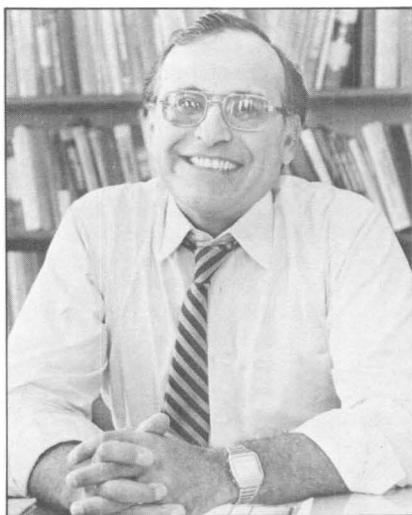
Contacts like these also create new sources for research funding. Bognanno is currently negotiating a collaboration with the ILHAE Foundation, a world-class Korean research institution. The research project, a continuation of Bognanno's work on Korea's employment demand, would also support a research associate.

Bognanno feels international research is essential for today's managers and business scholars. "The world is getting to be a smaller place and anyone interested in macroeconomics must consider international interests and change," he commented. "Without it, the value of your research is reduced. And if managers rely on limited sources of information about other countries without having a good understanding of the cultural and economic factors that drive their trading rivals and partners, they could be misled."

He says one way scholars can help is to give a realistic picture of world conditions. "You have to be in a country for awhile to discover what's really going on," he said. "It's also good to go abroad and find out what other people think about us. It gives you a new perspective, and then when you return home you can better critique what you read or hear."

Shyam Sunder: Playing a key role in ground-breaking accounting research

According to accounting chairman David Dittman, "the big shaker of the 80s in accounting" is experimental economics,



Mario Bognanno

which is a new approach several of our faculty members are taking to test accounting, economics and finance theories. And, judging by publishing activity and requests for conference participation, our research group is clearly recognized as *the* leader nationally in the field.

One of the key players in developing the experimental methods, Professor Shyam Sunder, modestly claims that he was exposed to the ideas accidentally. "One morning in 1980, when I was on the faculty at the University of Chicago, I walked into the lounge for my morning cup of coffee and overheard a presentation by visiting professor Charles Plott on experimental economics," he recalls. "Then two weeks later I found myself sitting next to him on a plane to Detroit, and we started talking."

They discussed a question Sunder had run into while writing his dissertation. In his dissertation, which looks at how accounting information affects stock prices and how the information gets to the marketplace, Sunder examined some assumptions of the efficient market theory, but he realized the empirical evidence he was using had limitations. "In a field study, you have realism, but not control," he explained. "And one problem with the field studies is that your findings are biased by something researchers call 'self-selected sampling,' which makes it difficult to accurately determine cause and effect."

Sunder and Plott collaborated on a study of the proposition that a competitive market can aggregate diverse information possessed by various individuals and disseminate it among all participants. They created controlled situations in a lab, manipulated them and examined the effects.

Since then, Sunder and other Minnesota accounting faculty members and graduate students have applied these experimental methodologies to test other theories basic to accounting and finance. For example, Sunder is also studying the Grossman-Stiglitz hypothesis that it is impossible to have an informationally efficient asset market when information is costly, and Bayes' Theorem, which has to do with how human beings intuitively combine their prior beliefs with newer information. Sunder and Professor Gordon Duke are looking at auction theory in the marketplace. Professor John Dickhaut, who has also been a key player in developing the methodology, is interested in finding out more about environments in which there is

asymmetric information, and the potential for understanding various accounting phenomena in such settings.

Two lab facilities with specialized software have been established to carry out experiments for testing these theories, and Sunder and Duke recently received a grant from IBM to develop additional software.

"Using experimental methods is a way to look at problems that you can't approach by other means," Sunder points out. "It gives you new windows to peek through at problems. There are three ways to gain knowledge—in the lab, in the field and through introspection or mathematical modeling. Ideally a researcher will combine all three methods to gain a better understanding of phenomena."

He cautions that it is "perilous" to translate experimental lab findings to the field without taking other factors into consideration. "But it allows you to test the theories and sort out the ones that are probably more valuable," he says.

Sunder and Dickhaut have been invited to discuss their research in experimental economics at the American Accounting Association's Doctoral Consortium from 1985-88. In 1986, the president of the American Finance Association asked Sunder to organize and preside over a session on experimental finance at the annual meeting of the American Finance Association. And besides publishing in the most prestigious economics journals, Sunder has been invited to speak at many major universities in the U.S. and Canada.

Acceptance of a researcher's work by other academic colleagues is one of the best measures of the quality of that work. The Minnesota research group has clearly passed the test. ■



Shyam Sunder

Research results are best shared and measured through academic publishing

We've all heard the common myths about academic publishing: Academicians are in an ivory tower and their writing is out of touch with reality. Academic writing is so boring and esoteric that only a few people read the articles. Young faculty members must endure a "publish or perish" system. You have to know someone to get published. But what is the real story?

"On the whole, the academic publishing system works and is the best way for researchers to share important findings," believes Michael Houston, research professor and chairman of the Department of Marketing and Business Law. Houston is on the editorial boards of the *Journal of Marketing Research*, the *Journal of Marketing* and the *Journal of Retailing*. He also reviews articles for the *Journal of Consumer Research* and recently edited an issue of the *Review of Marketing*.

"Because of the special nature of academic journals and the process for reviewing articles, the work reported in them is credible and has the greatest potential for impact," he said.

Articles are "refereed," or peer reviewed, for publication. A faculty member submits an article to an appropriate journal. The editor then sends it with the authors' names removed, to three or four reviewers considered knowledgeable in the subject and well-regarded in their fields. They are usually members of the editorial board.

The reviewers evaluate the paper as to the importance of the topic, the quality of the thinking that went into it and the quality and validity of the research procedures. Each reviewer then makes a recommendation to the editor.

Houston said these recommendations usually fall into three categories. One is, "Great stuff. Important and meaningful to the field. I recommend publishing." This category is probably the least frequent. Another is, "This has promise, but I recommend these revisions." Or, "I can't judge if the quality of the work is significant. Please respond to these concerns." The third is, "I don't recommend publication." He said the third category is the

most frequent, and he estimates the acceptance rate to be no more than 10-15 percent of submissions.

After all recommendations are returned, the editor will examine them, and, based on a collective assessment, decide whether or not to publish the article. The editor contacts the author and in some cases asks to have certain issues resolved or revisions made before a decision about publishing can be made. Some authors will revise papers and resubmit them, or, if rejected, submit them to another journal.

The only major pitfall with the system, as Houston sees it, is that some reviewers may reject an article because they disagree with the findings. "Philosophical disagreements can lead to valuable, but radical, ideas being rejected," he commented. "A good editor should recognize this and request another review from someone with a different viewpoint."

But Houston believes that good work will eventually get published and bad work will stay rejected. "Researchers

need to hold the view that if they're trying to say something meaningful and important and are doing the research well, then publication should be forthcoming. The main perspective should be on contributing to the field."

Although academic journals are the primary conduit for researchers to share their work among themselves, Houston doesn't think practitioners necessarily need to subscribe to them to realize the ideas presented there, because ideas first presented in journals can reach practitioners in other ways. "If an idea is meaningful to practice, faculty members will read it and communicate the essentials through teaching and consulting. The idea may not be linked to the originator, but what's important is that it gets out."

Most scholars read the major journals in their field, and in this way work influences and builds on other work. "Incremental advances are provided by academic research studies," Houston said. "Collectively and ultimately they provide a body of knowledge."

Can the library keep pace with academic research?

According to the University of Pennsylvania library's 1980-81 annual report, the cost of academic periodicals increased 398 percent between 1969 and 1979, and book prices increased 273 percent. This compares with an inflation rate of 66 percent for clothing, 112 percent for transportation and 140 percent for medical costs. For the Pennsylvania library, it meant a 27 percent reduction in new materials and a 15 percent staffing decline between 1971 and 1980.

University of Minnesota library director Joe Branin said this is a typical scenario. "In the 60s, libraries had ample resources and expanded their staffs, materials and space. Then in the 70s, the bottom fell out. And one of the biggest problems became the cost of periodicals." A national report on scholarly communication says that the amount of money libraries spent on serials between 1976 and 1982 increased 128 percent, but the number of serials purchased only went up 1.7 percent.

When a library subscribes to a periodical, it usually makes a commitment for the life of the publication. Added to that are costs for maintenance—checking in materials, binding them and providing space. An information explosion and an increase in specialized journals in all fields adds to the difficulties of keeping pace with academic output.

Other changes at the library that affect research include the use of computerized technology to streamline operations and information gathering. The Nexus system, for example, contains the complete *New York Times* and can locate particular articles by single word or phrase searches. Disclosure information is now available on a CD-ROM, which uses laser disk technology. The library buys the necessary hardware and periodically receives a compact disk with updated information. But electronically stored information is often more expensive than print, which could limit access to materials that are only available electronically. If a library cannot afford the technology, it will no longer be able to distribute the information. Or, it might have to charge user fees, which limits access to patrons who are able to pay for it. This problem is central to current controversy over whether the federal government should switch to electronic information distribution.

Research centers help create an environment for high-quality research

Research centers are an important part of the research environment at the Carlson School of Management. Basically administrative organizations that support researchers, facilitate their coming together and communicate their findings, the centers are symbols of the school's commitment to research and academic leadership in a particular field. And this is what is important in attracting top faculty members and graduate students.

A scholar needs to have other scholars around for high-quality research to take place. You can't do it in a vacuum," says David Dittman, chairman of the Department of Accounting and director of the Accounting Research Center. "Establishing a research center shows that you value research, and scholars you want to attract will know they'll have colleagues."

Centers at the Carlson School of Management include the Industrial Relations Center, founded in 1945; the Management Information Systems Research Center, founded in 1968; the Accounting Research Center, founded in 1977; the Strategic Management Research Center and Operations Research Center, both founded in 1983; and the Center for the Study of Financial Markets and Institutions, founded this year.

Facilitating interdisciplinary study

Centers like the Strategic Management Research Center (SMRC) and the Industrial Relations Center (IRC) that are highly interdisciplinary facilitate certain kinds of research that couldn't otherwise take place because their researchers study issues that cut across functional and organizational lines. The SMRC is supported jointly by the Carlson School of Management, the Humphrey Institute of Public Affairs and the Department of Agricultural and Applied Economics, with researchers from 14 different academic departments currently engaged in projects. Projects conducted within the

IRC have brought together scholars from economics, psychology, sociology, history and business administration to collaborate with IR faculty members.

Interdisciplinary ties are also important for researchers in well-defined fields like accounting. "Many of our faculty members work with scholars from other basic disciplines, such as economics and psychology, to gain a more complete understanding of certain issues," Dittman says. "For example, the way people process information and how they use it to make decisions is a psychology problem that influences how accounting data should be presented."

By sponsoring workshops, seminars and conferences, centers bring together people who are interested in similar topics and stimulate new ideas through interaction.

Umbrellas for related research

Some research projects are very large in scope and can involve many different scholars working on specialized aspects of the general topic. Research centers are ideal for bringing these people together and keeping the project going over a long time period.

The SMRC's Minnesota Innovation Research Program is this kind of project. It began in 1983 with a grant from the Office of Naval Research. The project's researchers are studying how innovations develop over time and are identifying the factors that influence their successful development. Thirteen related but different studies have tracked a wide variety of technological, product, process and administrative innovations. Interdisciplinary research teams involving 15 faculty members and 19 doctoral students from eight academic departments and five schools at the university are carrying out the studies. They have met regularly since 1983 to develop a common research framework, and to evaluate and redirect work being done. So far the project members have published 86 related theoretical and empirical papers. A conference in May will present major research findings, and two books are scheduled for publication in 1988.

Another example is the IRC's Work Adjustment Project, which has involved IRC and psychology faculty members since the 1960s. The project began with a group of industrial psychologists who

wanted to find a way to better match personal needs and interests with job characteristics that create job satisfaction. They constructed a model of individual adjustment to work, looking at how people's interests and motives matched their jobs. In the next phase of the project, researchers ran experiments to test the model and followed up by looking at whether or not well-matched people tended to stay with their jobs longer. Finally, tests were developed that job counselors could use. These tests are now commonly used in practice, and counseling students are trained in the methodology.

Providing administrative support and a reputable backing

A center's administrative staff provides specialized assistance to researchers for time-consuming tasks such as applying for grants, managing project budgets, coordinating project teams and planning conferences. Centers are also a clearinghouse for information on funding sources and they frequently provide seed money for new projects.

Perhaps even more important for funding purposes is that a research center acquires a reputation among practitioners for doing credible work, which can be very helpful when seeking funding from the business community. The IRC research project carried out in conjunction with Northwestern Bell (see the December *MMR*) is a good example of how a center's past performance inspired confidence in a funder and created an excellent opportunity for research.

"There are many factors that have helped the IRC build its excellent reputation within the business community," points out IRC director John Fossum. "First, we have an ongoing record of performance on all dimensions by individuals associated with the center. We are recognized by other academics for our research contributions and we sponsor research that makes an impact on the field and its direction."

Fossum says the IRC is recognized by practitioners as the *locus* for developing the field. "Because of our concern for the practice, professionals think of us when they need answers to problems," he said.

Benefits to the community

A vital research environment enhanced by research centers is not only beneficial to faculty members, but also rubs off on the community at large. Timothy Nantell, chairman of the finance department, puts it this way. "A community needs independent, long-term thinkers to create ideas and knowledge, and universities are one of our only institutions established for this kind of thinking.

"Now, these ideas eventually make their way into practice. An idea such as efficient markets may be difficult for private individuals to capture, but it is now part of the public domain. The work done on pricing options 15 years ago started out as scholarly research and is now so much a standard part of the practice that professionals buy calculators with the formula built right in."

A strong research orientation benefits the business community in other ways, too. It attracts the best scholars in the field, who are then available for consulting. It attracts top students from good schools, who are then likely to become employed locally. And, with an outstanding management program located here, professionals who are progressing in their careers and looking for additional training don't need to leave town to get it.

Each of the school's research centers is dedicated to outreach activities that disseminate research information among executives so that it can improve how business functions. These activities include lectures, seminars and conferences, as well as formal certificate training programs.

"Conferences that bring together executives and academics are good forums for discussing very early, frontier work that eventually may prove to be important," says Nantell. "A researcher can take a chance with discussing up-and-coming ideas. When you're teaching an MBA class, on the other hand, you usually have to stick to what's known." Interaction with the business community is also very helpful to faculty members for keeping in touch with current practice.

The centers also publish and distribute "working papers," which are discussions of recent research that hasn't yet been published in academic journals.

Establishing a center

The school has made a commitment to research in a new field this year with the creation of the Center for the Study of Financial Markets and Institutions (CSFMI). Its goals are to sponsor high-quality research on the creation and pricing of financial securities and on innovation and regulation of financial markets and institutions, and to promote the

interplay of ideas between researchers and practitioners.

According to Nantell, setting these goals was the first step in establishing the center. "Then we worked out how best to provide these services," he said. "For us that meant, first, that we needed devices to attract faculty, such as endowed chairs, summer research support and other salary augmentations. A problem in the finance field is that bright people can demand very high salaries in the financial community. We can't offer as much money, but we can offer the environment and opportunity for doing interesting research."

Other activities of the center will include sponsoring visiting professors, holding an annual conference to communicate directly with the banking commu-

nity, developing a banking program with an advanced banking curriculum and establishing a student internship program. The center will also develop an innovative master's program in finance that will train professionals with more highly specialized skills than is now available in MBA programs.

After structuring the goals and determining how to meet them, the next step, of course, is to go out and raise money. Nantell worked with Dean Townley and Associate Dean Anne Benisch on making contacts, discussing the center's plans and working out an appropriate contribution. Funders for CSFMI so far include the First Banks, Norwest Corporation, Northwestern National Life Insurance Company and the Minnesota Banker's Association.

Financial support provides the means to conduct research

Research is expensive. Books, journals, photocopying, computer time, microfilming, equipment, supplies and travel all cost money. Research assistants and other personnel need to be paid. And the major item in most project budgets is summer salary support. Many faculty members devote their summers to research, but academic salaries are usually based on 9-month appointments.

Coming up with funding is the researcher's responsibility. A variety of grant programs are available, but each has its own restrictions and eligibility requirements. Grants can range from \$100 to over \$100,000. Some are intended only for summer salary support while others pay only for materials. "Seed" grants fund projects just starting up. Others require a track record of work. Some are intended only for scholars beginning their careers or are limited to specific disciplines. When applying for grants, researchers need to know these specifications. They will often apply for several and can sometimes piece funding together with more than one grant. But completing the applications takes time. Proposals must be carefully thought out and must show evidence, through documentation, references or other means, that the researcher will carry out the project goals and will contribute to the field.

The Carlson School of Management administers three competitive grant programs. The McKnight program, administered by the Dean's Office, is funded by a \$1,000,000 endowment fund. In 1986-87, the program partially funded 16 research projects, chosen from 28 proposals. The Dean's Innovation Fund (DIF), supported by private contributions, is used to stimulate innovative projects that are highly interactive with the management community. Seven faculty members have received DIF grants since the program began in 1984. Bureau of Economic Research grants are administered by the school's Research Committee, made up of one faculty member from each department. George Benson, chairman of the Research Committee and management sciences professor, said that around eight projects, out of about 20 proposals, receive funding each year.

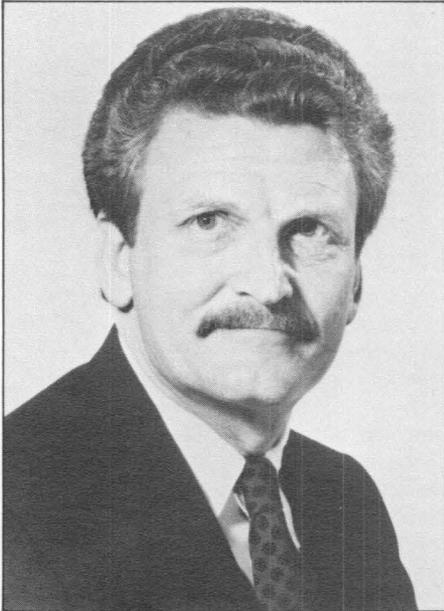
The university's Graduate School administers a grant program that is intended mainly as "seed" money to develop projects to the point of attracting more complete, external funding. Highest priority goes to junior faculty.

Large grants from agencies like the National Science Foundation (NSF) have generally not been available for management school researchers, unless the project overlaps with a "basic" discipline, such as psychology. But with the implementation of a new NSF grant category, this may change.

Benson said that even with these established grant programs, there is never enough money for all the projects that warrant support, and the amount of money available from institutional sources is limited. "Our faculty looks to the local business community as a logical source for additional funding. Private contributions can make an enormous difference in the amount and quality of research that takes place at the school, providing the leverage we need in our drive to the top." ■

New firms: Endangered species or hardy survivors?

by Maggi Aitkens



Paul Reynolds, professor of sociology and an associate of the Strategic Management Research Center, has been the principal investigator for this research. Initial project design was developed with the assistance of Bruce Erickson, Bill Rudelius, Al Wickesberg and Andy Van de Ven. The initial 1984 survey was supported by funds provided by the University of Minnesota Center for Urban and Regional Affairs (CURA) and McKnight research funding from the Carlson School of Management. The first followup, in 1985, was supported by CURA. The second followup, in 1986, was supported by the Strategic Management Research Center. Brenda Miller served as project manager and analyst for the 1986 followup.

While some people are concerned about protecting species such as the whale and bald-headed eagle from extinction, economic developers, bankers and entrepreneurs worry more about a different type of endangered species—new business firms and their probability of survival in competitive environments. And for good reason, since some statistics have shown that this population is plagued by an annual mortality rate of 80 percent. Another analysis, by Dun and Bradstreet, indicates that over 50 percent of business failures are less than five years old.

Paul Reynolds, professor of sociology, an associate of the Strategic Management Research Center and principal investigator of recent research on new firm survival, has found, however, that this population is doing much better than most people think. Reynolds surveyed a representative sample of 549 new Minnesota firms from all industry categories that had their first sales between 1978 and 1984. He found that over 90 percent of them survived each year.

Reynolds says that although Dun and Bradstreet's 50-percent figure is accurate, it is misleading. "It tells you only that among all firms that failed, half were less than five years old. But this doesn't tell you anything about *probability* of failure. Let's say, for example, that you have 2,000 firms that failed, and 1,000 of them were less than five years old. But, during those five years, there were 10,000 firms that started up. Then new firms would have experienced only a 10-percent failure rate."

As for the 80-percent failure rate mentioned above, Reynolds suspects it comes from such organizations as the Small Business Administration, which reports failures based on non-repayment of its loans to new businesses. "In order to get loans from the Small Business Administration," he says, "you have to prove that you can't get it from a traditional source. That means the administration automatically screens out those firms with better prospects and bases its statistics on loans granted to higher risk firms."

Using data based on incorporation statistics can also be misleading, Reynolds

says. "Since it only costs a minimal amount of money to incorporate, a large number of individuals file the papers but never really start the business. Is this failure? It doesn't seem to me that it is, since they never got started."

Reynolds began his project in 1984 and asked the 549 sample firms for information on products and services, choice of location, start-up problems, financing, current management emphasis, employment policies, sales and financial history and organizational structure. One year later, these firms were contacted a second time to determine sales, employment, exports, cost structure, formal financial support and the nature of the start-up teams. In 1986 they were contacted a third time to determine sales, employment, exports and competitive strategy. The study revealed much valuable information about new firm survival, in addition to survival rates.

Determining a firm's date of birth is a difficult task, Reynolds points out, since gestation periods can vary anywhere from one month to six years. He associates at least four major events with new firm gestation, often occurring in this order: a major commitment by the start-up team, formal financial support, hiring employees and sales of a product or service. "It's fascinating to discover, however," Reynolds says, "that some firms start by getting substantial sales, then hire employees and eventually the entrepreneurs make a full-time commitment." For the survival analysis, the new firms' "births" were the date of first sales.

As with many species living in a competitive environment, the study showed that the risk of not surviving varies according to the firm's age and the niche it occupies among industry sectors (see graph). "The risk of failure for new firms in local market-oriented industries, such as construction and consumer service, is no greater than for firms in more basic industries, such as manufacturing or business service," Reynolds says.

Only the retail sector, which includes restaurants, has a distinctive risk. "It's easier to get into some of these indus-

tries," Reynolds says, "because you don't need as much start-up money. Restaurants, in fact, have often been called organizational fruit flies, not only because there are so many and they're easy to study, but because they do seem to have shorter life spans."

The critical period for a new firm in all industry sectors occurs in its third year of life when the probability of not surviving peaks. "The increased risk of failure in the third year has been found in other analyses," Reynolds says. "It is usually attributed to both the initial stake and the time required to determine if a new firm will be a viable economic entity. Those starting new firms usually have enough resources to maintain the firm for a year or two, and it may take a year or so before profitability can be demonstrated."

Although the list of reasons given for failure by firm principals covered a range from "personal problems" to "desire to do something else," by far the greatest response was that the firm did not make money or did not have customers or clients. But it seems that with the new firm species, death can be as difficult to determine as birth. "It caught us by surprise," says Reynolds, "when we discovered that over 20 percent of 49 new firms considered 'out of business' in 1985 were resurrected and active in

"Since it only costs a minimal amount of money to incorporate, a large number of individuals file the papers but never really start the business. Is this failure?"

— Reynolds

1986. It may be more useful to consider firms dormant, rather than deceased." Many of these firms were given new breath when changes in the business environment created a new niche for their products or services, or when an entrepreneur revitalized with additional knowledge and experience decided to try again.

By comparing the differences between firms that survived and firms that failed, two traits emerged that seemed to be almost necessary for survival—an emphasis on competitive marketing strategy and management of financial resources. The first of these entails defining the niche and specialization. "If you're in the cookie business," Reynolds says, "it may be better to specialize in chocolate chip cookies, for example, than all kinds of cookies. At the same time, a

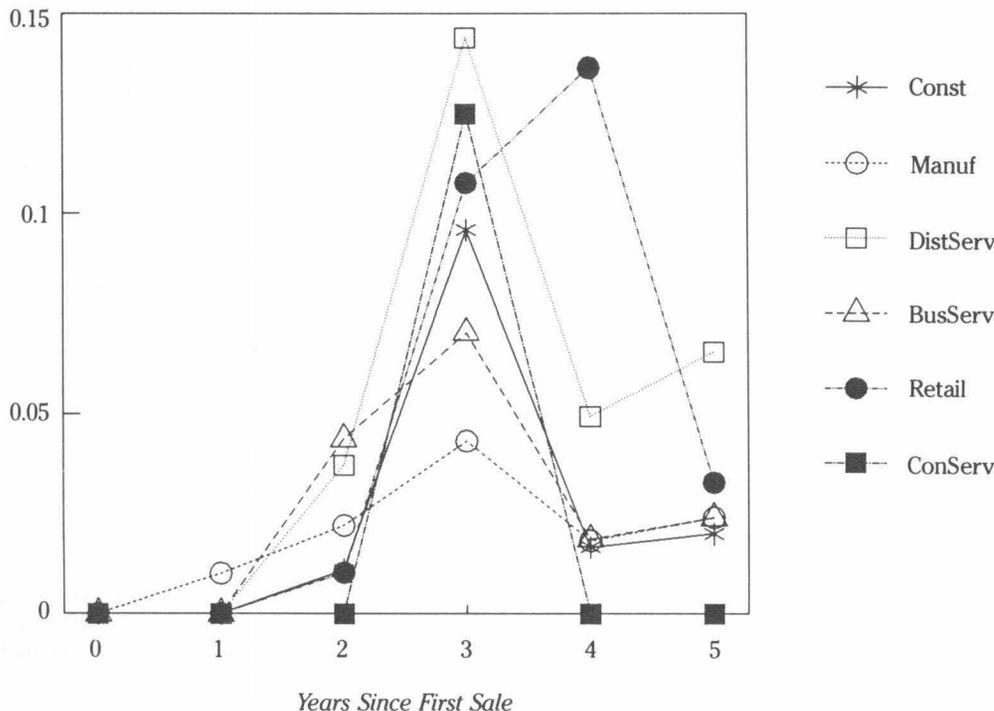
new firm may be better off selecting a specific market for its products or services, such as a well-defined community or clientele."

The second trait—attention to financial resources and cash flow—proved to be an important distinction among the firms that survived and those that did not. "These now-dormant firms may not have been insolvent," Reynolds says. "They may have had sales, but the money hadn't come in yet. In anticipation of payment, they might have committed themselves to buying a couple of computers, for example. Suddenly, they found themselves in a situation where they owed the computer supplier \$20,000, a payroll had to be met and the clients were slow in paying their bills."

In trying to answer questions like "How do you get a fit between organizations and the environment?" Reynolds' research follows a Darwinian argument that only the strong survive. "Either the organization must adapt to environmental change," he says, "or through the selection process those firms that don't have the right form will fail and only those with the right form will survive." ■

Maggi Aitkens is a freelance writer working in the Twin Cities.

Probability of Not Surviving Another Year



New stress on politics creates growth in public affairs

by Lisa Jo Rudy

News coverage over the past few years has called attention to cutbacks in public affairs personnel at certain large corporations, giving the impression that the public affairs function is on its way out. There have even been stories about whole departments being "wiped out."

But according to a recent study by Alfred Marcus, assistant professor of strategic management and organization, and Mark Irion, formerly a research assistant at the Humphrey Institute, these are circumstantial instances rather than a general trend. In fact, Marcus and Irion have found a rise of nearly 70 percent in public affairs personnel in major corporations between 1982 and 1985.

Corporate public affairs includes a variety of functions, such as governmental affairs, issues management, public relations and community affairs. Marcus and Irion assert that a successful public affairs program should be able to enhance a firm's credibility, facilitate response to issues and have a positive impact on the corporate bottom line. Thus, while public affairs personnel may be involved in philanthropy, their mandate is to further the financial interests of the firm.

In their study, Marcus and Irion surveyed a broad cross-section of prominent U.S. corporations in diverse industries headquartered in nine major metropolitan areas—Chicago, Washington D.C., Denver, Detroit, Houston, Los Angeles, Minneapolis-St. Paul, New York and San Francisco. Although the commitment to public affairs varies from location to location, they found some growth in every area and industry.

The areas experiencing the highest growth rate were Denver (127 percent), Minneapolis-St. Paul (102 percent) and Washington D.C. (97.1 percent). Those with the least growth were Los Angeles (23 percent) and Detroit (52 percent). Industries experiencing the highest growth rates include high technology and communications (140 percent), pharmacy and personal care (121 percent) and gas, utility and telephone (100 percent). Those with the lowest growth rate include retail (4 percent), machinery (23 percent), media and food (30 percent each).

Given this data, why should the general public suppose that public affairs is



Alfred Marcus, assistant professor of strategic management and organization, said corporations use the political arena to "reap advantages and not just prevent harm."

on the downswing? Marcus explains this in two ways. First, many people compare the present public affairs situation with that of the 70s, when public affairs growth was at its height. Thus, although there is still significant growth in the field, it doesn't appear strong in comparison to the past. Second, reports of firms like Nabisco and Arco wiping out their public affairs departments are explainable in other ways. Nabisco, for example, was taken over by a larger firm and the public affairs slim-down was only one of many changes. Arco, losing money in the oil slump, cut many of its departments. Public affairs suffered along with the corporation as a whole.

The field's continued growth, on the other hand, is attributable to several causes, say Marcus and Irion. Historically, public affairs departments were founded during the 1970s as a defensive move. "It was a response to the growth of consumer and environmental groups and changes in business-government

relations," they believe. "Business' interest in the 1970s was to stop the passage of legislation which might further curtail management prerogatives."

The focus shifted during the 1980s. No longer solely defensive, public affairs took on a more positive aspect. "It was seen that politics was an arena where firms could reap advantages and not just prevent harm," say the researchers. This led to a renewed interest in public affairs as a means of increasing the bottom line.

Because corporate leaders feared a continued economic downswing, public affairs took on the role of strengthening political lobbying for legislation which would benefit the firm in a highly competitive market. As Marcus and Irion explain it, "This perception of a declining economy spawned divisions within the business community, with ascendant groups in conflict with declining elements on issues such as bailouts, subsidies, trade protection and regulation." Thus, political action was perceived as necessary for self-preservation.

General diversification and its requirement for a broad understanding of political activity in a variety of fields is another reason for the function's continuing viability. Multi-enterprise corporations need political ties that match its blend of different political and social concerns, say Marcus and Irion. They also cite the rise of radical individualism and the ascendancy of the market ideology as important causes of the growth of public affairs.

Popular wisdom may contain a grain of truth, but it is often unreliable. The Marcus and Irion report is a good example of how appearances can sometimes be deceiving and that circumstantial evidence cannot take the place of empirical study. ■

Support for Marcus' work has been provided by the Strategic Management Research Center. The Dean's Innovation Fund also supported this project. The research will be appearing in a volume, Business Strategy and Public Policy, that Professor Marcus is coediting. The volume will be published in August by Greenwood-Praeger.

Lisa Jo Rudy is a freelance writer working in the Twin Cities.

As I see it

Accurate survey methodology is crucial in detecting sexual harassment

by Richard Arvey

A number of court decisions have made it clear that employers have considerable responsibility in curtailing and preventing sexual harassment in their workplace and many employers are surveying their employees to determine just how extensive their own sexual harassment problem is. While this is a commendable initial response to the challenge, I would caution employers that unless they use rigorous survey methodologies, they may draw a darker picture of their particular situation than actually exists. My concern is that data from such surveys will be used to indict organizations without proper consideration of their limitations.

EEOC guidelines define three instances where harassment of a sexual nature is illegal: (1) when the individual's submission to sexual harassment is required as a term or condition of employment; (2) when the individual's submission to or rejection of the harassment is used as a basis for making employment decisions that have an impact on that individual; or (3) when the individual's work performance is unreasonably undermined or an 'intimidating, hostile, or offensive' work environment is created by the conduct. In a widely publicized decision, *Meritor Savings Bank v. Vinson*, the U.S. Supreme Court held that the creation of a hostile work environment may constitute sexual harassment. That is, sexual harassment is not limited to economic or tangible employment outcomes, but encompasses psychological aspects as well.

As a way of getting a diagnostic "fix" on the extent of sexual harassment among their workforce, organizations have begun to use surveys to estimate the number and percentage of females who perceive sexual harassment, as well as to determine the impact of harassment on employee performance and satisfaction. I suspect such surveys may be used in the future to determine whether sufficient agreement exists among females that the work environment is "hostile or intimidating" to

permit class action inferences in litigation.

The results of such surveys seem somewhat shocking. The percentage of females reporting being sexually harassed often runs as high as 60 to 80 percent. As a behavioral scientist reviewing similar studies in a sexual harassment lawsuit, I became aware of problems and pitfalls associated with many of the surveys and the interpretation of their results. While I do not condone sexual harassment in any form, I would like to point out some methodological issues associated with conducting and interpreting surveys in this sensitive area.

Use of retrospective self-report measures. Most surveys ask respondents to recall incidents or occasions when they felt harassed and to indicate the different kinds of harassment. For example, a survey conducted for the Federal Aviation Administration by the Working Women's Institute asked respondents to check whether they had "experienced any of the following types of gender bias or sexual harassment during the last 36 months by any employee." Twenty-two categories were presented, ranging from unwanted sexual teasing and joking to actual rape. This methodology is problematic, first, because it relies on self-reporting, which is notoriously deficient in accuracy and abundant in potential bias. Many studies have shown that individuals perceive events that did not take place, or report disagreement between the events perceived and what actually happened. Social psychologists have demonstrated that individuals are not terribly reliable when witnessing crimes, nor do they always accurately recall harmful events that occur to themselves. A second problem here is that such studies sometimes ask respondents to recall incidents of sexual harassment over great lengths of time—sometimes up to three years before the survey date. Obviously, the longer the time period involved the more likely perceptions will be inaccurate. In addition, the percentage of individuals reporting harassment over

a longer time period will be considerably larger than if the question asks if they are *presently* being harassed.

Attention to reliability and validity. Reliability has to do with consistency of responses (would the respondents give the same reactions if surveyed a month later?) and validity has to do with whether the events reported did, in fact, occur. While it is extremely difficult to determine if the reported results are indeed accurate, there are methods to at least verify the fidelity of the measuring instrument. For example, individuals working for the same department or supervisor could be compared to determine the amount of agreement, responses could be compared to company records to determine correspondence with reported events, statistical methods could be used to estimate the degree to which items within a survey "hang together" in a homogeneous manner, and so forth. Yet none of the survey studies I have reviewed seem to pay much attention to these central measurement issues. When guilt or liability may be based on

(continued on page 27)



Richard Arvey is professor of industrial relations and an industrial/organizational psychologist specializing in fairness and bias in employment settings.

Campus News

Chairman of Auditing Standards Board to speak

Jerry Sullivan, chairman of the powerful Auditing Standards Board of the American Institute of Certified Public Accountants, will present "Revising the Rules: Increasing Auditors' Responsibility" at an accounting department Breakfast Forum on May 12. Sullivan, a partner in the national office of Coopers & Lybrand, heads a task force that has recently proposed the most comprehensive changes in auditing rules in the past four decades.

The May 12 forum will be held at the Radisson Plaza Hotel in Minneapolis, from 7:00 - 9:30 a.m. Tickets are \$25 and can be reserved by calling Tami Huff at 624-8522.

Richard Cardozo named to Entrepreneurial Studies Chair

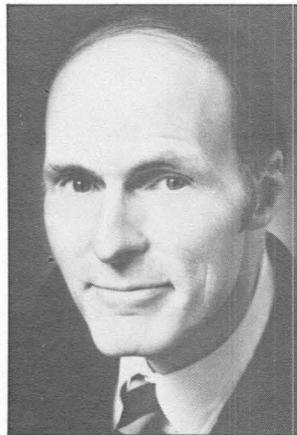
Marketing professor Richard Cardozo has been named to the new Curtis L. Carlson Chair in Entrepreneurial Studies, which was created last year as part of Minnesota entrepreneur Curt Carlson's \$18 million gift to the school.

The chair opens a new area of research and teaching that is, in Dean Preston Townley's words, a "natural" for Minnesota. "Minnesota is a very dynamic region for entrepreneurial activity, both in new business ventures and within already established organizations," he said.

Cardozo, whose research specialties are new business development, business-to-business marketing and product-line strategy, said his first objective when he assumes the chair in July will be to research current entrepreneurial activity, leading to the development of new MBA course material and guidelines. "I will be working closely with the business community to determine just what the problems and needs of entrepreneurs are," he said.

Cardozo joined the management school faculty in 1967. He has also taught at Harvard Business School and the Hebrew University of Jerusalem. He received a bachelor's degree from Carleton College in Northfield, Minn., an MBA from Harvard Business School and a Ph.D. from the University of Minnesota. He currently serves on the

boards of Best Buy Company, Thermo-Rite Sales of Minnesota and Valspar Corporation, and has been a consultant to numerous local and national companies.



Richard Cardozo

Minnesota Campaign donations reach \$34 million

Donations to the Carlson School since the beginning of the university's three-year Minnesota Campaign have reached \$34 million, against a \$40 million goal. University-wide, the campaign has reached \$228 million toward its \$300 million goal. Both figures include Permanent University Fund matching commitments. The campaign ends in 1988.

"Our fund-raising efforts have been very gratifying this year, with tremendous support coming to the school from the business community," said Dean Preston Townley. Major gifts the school has received since last April, when Curt Carlson announced his \$18 million gift, include:

- \$1,000,000 from The Pillsbury Company to permanently endow The Pillsbury Company—Paul S. Gerot Chair in Marketing.
- \$500,000 from the partners of Arthur Andersen & Co. to endow the Arthur Andersen & Co.—Duane R. Kullberg Land Grant Chair in Accounting and Information Systems.
- \$550,000 from First Bank System to continue support of the Minnesota Banking Industry Chair, to create a professorship in the new Center for the Study of Financial Markets and Institutions

(CSFMI) and for the school of management Associates program.

- \$400,000 from Norwest Corporation to continue support of the Minnesota Banking Industry Chair, to create a Norwest faculty fellowship in CSFMI and for the Associates program.

- \$175,000 from Northwestern National Life Insurance Company to continue funding the Insurance Chair, to fund CSFMI and for the Associates program.

- \$280,000 from Minnesota Mutual Life Insurance Company to the Insurance Industry Chair and for the Associates program.

- \$250,000 from the Minnesota Bankers Association to continue the Minnesota Banking Industry Chair.

- \$60,000 from Minnegasco Corporation toward the land grant chair in Industrial Relations, to fund the Minnegasco/Paul R. Doelz Faculty Enrichment Award and for the Associates program.

- Other contributions to the Industrial Relations Land Grant Chair include \$150,000 from Honeywell, \$50,000 from Signal VOP, \$50,000 from Hormel, \$50,000 from Tennant Company, \$50,000 from Control Data Corporation and \$50,000 from V. Heath.

- New Associate members include the Gillette Company, Exxon Company U.S.A., Lamaur, General Mills, Jacobs Management Corporation, Remmele Engineering, Pentair, Super Valu Stores, Inc., Contel Company and Frank B. Hall & Company. Other companies renewing Associates membership include Rosemount, Inc., Lyman Lumber Company, Dain Bosworth Inc., Valspar Corporation, Northern States Power, Toro Company and Mayo Clinic.

In addition, faculty and staff donated \$114,425 to the campaign, which was matched by a special campaign incentive fund that brought the total to \$228,850.

Visiting Chinese researchers study western management theories

The main difference between American and Chinese management, say two Chinese scholars studying this year at the school, is that the focus in China is on macroeconomics, whereas in the U.S. it is on microeconomics.

Yu Qing-ling, a professor of statistics from the Shanghai University of Finance and Economics, said, "In China, the country's economic activi-

ties are managed by the Central Planning Committee and the focus of management research is on such things as improving the gross national product. In the U.S., the emphasis seems to be on improving management within individual companies."

Yu is collecting data that he plans to use to build an econometric model for China's economic growth. He is the first faculty member to come here under the school's new exchange program with the Shanghai university.

"Before the cultural revolution, the central government would make decisions for a company on what and how much to produce, and how to sell the products, and the company's job was to fulfill this plan. But since then, we've begun to realize the importance of giving more control to regional officials and to a company's managers. And we've begun to realize the importance of studying management sciences. Now every university must have a management sciences department and every official must take courses in the field."

Chen Gou-gang is a graduate student from Xiamen University in Fujian Province. He is interested in managerial accounting and is conducting research for his dissertation, which will be a comparative study of managerial accounting in the U.S. and China. He hopes to apply what he learns here to Chinese managerial practice. "Even though on a large scale our countries are very different economically, many American theories can be applied on a small scale," he said. "This is because when you're looking at individual companies or factories, the goals are the same—to make a profit, use resources efficiently and maximize your profits."

Both scholars discussed the differ-

ences between American and Chinese educational techniques. "American students are more responsible for what they study," said Chen. "In China, the government tells you exactly what to do."

Yu explained that in China, all the courses in a student's program are required, and the programs are established by the government. "At Shanghai we are experimenting with the idea of letting students take some courses by their own choice," he said.

Another difference, according to Chen, is that Chinese professors spend the whole class period lecturing and students do not ask questions until after class is over. Yu says that he'd like more opportunities to exchange ideas with students in class, but there isn't enough time. "Before a semester begins, we must write an outline of everything we plan to cover in every hour of class," he said. "This is then submitted to the central Teaching Affairs Bureau."

Yu has attended some classes here to get ideas for his own teaching, and he feels that we do a good job of teaching both the theory and practice of management. "Right now in China we only teach how to apply the principals a little bit. We need to do more of that."

Both Chen and Yu were enthusiastic about the value of international research and travel because of the opportunity it gives for gaining new ideas. And they were both impressed by the kindness of the Americans they met, and the faculty at the school. "This is what will give me my best memories of the time spent here," they both said.



Yu Qing-ling, professor of statistics from Shanghai University of Finance and Economics, and Chen Gou-gang, a graduate student from Xiamen University, are conducting research at the Carlson School of Management.

Strategic Management Research Center news

SMRC Colloquia Series. The SMRC sponsors a colloquia series, featuring scholars from Minnesota and other universities, that is open to the public. The lectures are held from 10:15 - 11:45 a.m. in room 215 Humphrey Center. The remaining lectures this spring are:

- April 24—Barry Mitnick, Univ. of Pittsburgh, "Theories of Agency and Organization."
- May 1—Barry Staw, Univ. of California, Berkeley, "Behavior and Escalation Situations: Antecedents, Prototypes and Solutions."
- May 8—Jim Perry, Indiana Univ., "Administrative Transition and Its Strategic Management: The Hong Kong Case."

For more information or to receive mailings, please contact Susan McGuire at (612) 624-3306.

SMRC participates in agribusiness conference. SMRC Associate Director Robert King was co-organizer of a conference on emerging issues in agribusiness management research, held in conjunction with the 1986 American Agricultural Economics Association meeting. The conference was one of the largest post-meeting sessions in the association's history and was attended by more than 100 participants from academic institutions, agribusiness firms and government agencies. All ten major papers were published in *Agribusiness*, vol. 2, 1986.

SMRC researchers inviting participation in strategic management of political risk study. Department of Strategic Management and Organization Assistant Professor Stefanie Lenway and Associate Professor Peter Ring have begun a study to analyze the strategic management of political risk, and are looking for Minnesota firms willing to participate in the study's survey phase. Questions the researchers are addressing include how considerations of political risk become part of the strategic planning process, how firms can best structure their international operations to minimize political risk, what types of competitive strategies firms can use to manage political risk, and what types of political strategies they can use to manage political risk. For more information, call Professor Lenway at (612) 624-1343 or Professor Ring at (612) 624-2597.

SMRC discussion papers available. The SMRC Discussion Paper Series now includes 66 titles. To receive a complete list or to order papers, call Susan McGuire at (612) 624-0226.

NEW APPOINTMENTS

Philip Bromiley, assistant professor of strategic management and organization, was elected program co-chair for the Institute of Management Sciences College on Organizations.

Richard Cardozo, professor of marketing and business law, was named to the Curtis L. Carlson Chair in Entrepreneurial Studies.

John Fossum, professor and director of graduate programs in industrial relations, was appointed director of the Industrial Relations Center.

Timothy Nantell, professor and chair of finance and insurance, has accepted the position of associate dean for the Carlson School of Management, effective July 1. Associate Dean **Fred Beier** will be on sabbatical next year and then will return to teaching.

John A. Rhody has become controller for the school. He was finance director for Anoka Vocational Technical Institute in Anoka, Minn. John is a 1978 accounting graduate.

Richard Saavedra was hired as assistant professor in strategic management and organization. He received his doctorate from the University of Michigan.

James C. Wetherbe, professor of management sciences and director of Management Information Systems Research Center, was appointed to the Institutional Member Advisory Committee for the Society for Information Management (1986-1987).

C. Arthur Williams, Jr., professor of finance and insurance, was appointed to the State of Minnesota Risk Management Steering Committee.

NEW GRANTS

National Science Foundation to **Philip Bromiley**, assistant professor of strategic management and organization, for a two-year study, "Organizational Risk-Taking and Performance."

Dean's Innovation Fund to **Gerardine DeSanctis**, assistant professor of management

sciences, for her project on using computer technology to improve managerial meetings. DeSanctis also received an NCR Corporation equipment grant for research related to computer-supported meetings.

IBM (\$81,000) to **Paul Johnson**, director of the Ph.D. program and professor of management sciences, to research decision processes and expert systems.

University Micro Electronics and Information Sciences Center (\$150,000) to **Paul Johnson** and William Thompson, associate professor, and James Slagle, professor, department of computer sciences, for continuation of a research project in artificial intelligence and expert systems.

Project WOKSAPE to **J. David Naumann**, associate professor of management sciences, and **Cynthia Beath**, assistant professor of management sciences, for "The Knowledgeable Interview Subject System."

PUBLICATIONS AND ACTIVITIES

Harold Angle, associate professor of strategic management and organization, and **Charles Manz**, assistant professor of strategic management and organization: "Can Group Self-Management Mean a Loss of Personal Control?" *Group and Organization Studies*, Vol. 11, 1986.

Richard Arvey, professor of industrial relations: "General Ability in Employment: A Discussion," *Journal of Vocational Behavior*, 29, 1986.

Philip Bromiley, assistant professor of management sciences: "The Use of Rational Systems in Bounded Rationality Organizations: A Dilemma for Financial Managers" (with K.J. Euske), *Financial Accountability and Management*, 1986; "Shareholder Value and Strategic Management: Some Caveats," in William D. Guth (ed.), *Handbook of Business Strategy: 1986/1987 Yearbook*, Warren, Gorham & Lamont, New York, 1986. The following have been accepted for publication: "Do Forecasts Produced by Organizations Reflect Anchoring and Adjust-

ment?" *Journal of Forecasting*; "Deadlines, Routines, and Change" (with A. A. Marcus), *Policy Sciences*; "A Comparison of Behavioral and Conventional Conceptions of Investment," *Journal of Behavioral Economics*; and "Preventing Corporate Crises: Stock Market Losses as a Deterrent to the Production of Hazardous Products" (with A. A. Marcus and R. Goodman) in Paul Shrivastava (ed.), *Proceedings of the 1986 International Conference on Crisis Management*.

Don Cho, assistant professor of finance and insurance: "Insurable Losses: Systematic or Unsystematic Risk?" *The Journal of Insurance Issues and Practices*, forthcoming.

Grover Cleveland, associate professor of accounting, presented the following in November and December 1986: "Limited Partnerships" to the Minnesota Society of CPA's 1986 Tax Conference; "What Auditors Should Know about the Tax Reform Act of 1986" (with James Duevel of Touche Ross & Co.) to the Institute of Internal Auditors; "Personal Tax Planning and the 1986 Tax Reform Act" to the MBA Association; "Individuals and the 1986 Tax Bill" to the Brainerd Public Library.

Gordon Davis, Honeywell Professor of Management Information Systems: *Structured COBOL: A Step by Step Approach* (with Charles Litecky), 3rd ed., McGraw-Hill, Inc., 1987.

Gerardine DeSanctis, assistant professor of management sciences: "A Foundation for the Study of Group Decision Support Systems" (with R. Brent Gallupe), *Management Science*, accepted for publication.

David Dittman, professor and chair of accounting, was a speaker at the American Accounting Association's Doctoral Directors Conference. His topic was the Minnesota Ph.D. program in accounting.

Michael Duane, lecturer in industrial relations: "Bargaining Behavior and Location of Negotiations: My Place or Yours?" (with Ross Azevedo and Yin Sog Rhee), *Journal of Collective Negotiations in the*

Public Sector, accepted for publication.

Alan Dubinsky, associate professor of marketing and business law: "Customer Portfolio Analysis," *Business Marketing*, JAI Press; "Salesforce Socialization," *Journal of Marketing*, October 1986; "On the Psychometric Properties of Scale to Measure Leadership Substitutes," *Psychological Reports*, December 1986.

Paul Johnson, director of the Ph.D. program and professor of management sciences, made a presentation on human factors at the National Academy of Science in Washington, D.C. in December. Johnson gave invited presentations of his research to the following: Department of Accounting and Information Systems, Ohio State University; Department of Computer and Information Sciences, Graduate School of Business Administration, University of Michigan; Philosophy of Science Colloquium Series, Department of Philosophy, University of Minnesota; Laboratory for Decision Research, Graduate School of Business Administration, University of Chicago; Annual Conference on Audit Judgment, University of Southern California.

Karen Koziara, visiting professor in industrial relations, and **Joshua Schwarz**, lecturer in industrial relations, presented "The Changing Financial Environment and Hospital Industrial Relations: A Tale of Two Cities" at the Industrial Relations Research Association's annual meeting in New Orleans.

Rebecca Luzadis, assistant professor of industrial relations, presented "Defined Benefit, Defined Contribution, or No Pension?" at the annual meeting of the Industrial Relations Research Association.

Charles Manz, assistant professor of strategic management and organization: "Beyond Imitation: Complex Behavioral and Affective Linkages Resulting from Exposure to Leadership Training Models" (with H.P. Sims, Jr.), *Journal of Applied Psychology*, Vol. 71, 1986; "Leading Workers to Lead Themselves: Leadership of Self-Managing Teams" (with

H.P. Sims, Jr.), *Administrative Science Quarterly*, accepted for publication.

Salvatore T. March, associate professor of management sciences, is serving as program committee chair for the 6th International Conference on Entity-Relationship Approach. The conference will be held in New York on Nov. 9-11. March is also the editor-in-chief of *ACM Computing Surveys*.

Alfred A. Marcus, assistant professor of strategic management and organization: "Deadlines, Routines, Change" (with **Philip Bromiley**, assistant professor of strategic management and organization), *Policy Sciences*, accepted for publication. Marcus presented "Shipper Strategies in a Deregulated Trucking Environment" at the Allied Social Sciences meeting in New Orleans and was the plenary speaker at the 13th Annual Rate Symposium sponsored by the Institute for Study of Regulation in St. Louis.

Peter S. Ring, associate professor of strategic management and organization, presented "What is 'Strategic' in Public Sector Strategic Management?" at the annual research meeting of the Association of Public Policy Analysis and Management in Austin, Texas. In March he will discuss the design and management of basic research in a micro gravity environment at the annual meeting of the American Society of Public Administrators in Boston.

Shyam Sunder, professor of accounting: "Design and Tests of an Efficient Search Algorithm for Accurate Linear Valuation Systems" (with Michael S.H. Shih), *Contemporary Accounting Research*, forthcoming in 1987. Sunder made the following presentations: "Economic Agent as an Intuitive Bayesian: Experimental Evidence," University of Michigan; "Methods of Experimental Economics in Accounting Research," University of Southern California; "Market for Information: Experimental Evidence," Allied Social Science Associations annual meeting, New Orleans; "Accounting in the Contract Theory of the Firm," Department of Sociol-

ogy Workshop, University of Arizona; "Optimum Asset Valuation Rules Under Price Movement and Measurement Errors: Linear Aggregation Approach," Arizona State University, and "Market for Information: Experimental Evidence," Washington University (St. Louis).

Terry Tranter, adjunct assistant professor of accounting: "Pension Accounting," *Footnote* (the Minnesota Society of CPA's newsletter), December, 1986.

James C. Wetherbe, professor of management sciences and director of Management Information Systems Research Center: "Service Support Levels: An Organized Approach to End-User Computing" (with Robert L. Leitheiser), *MIS Quarterly*, December 1986; "Key Issues in Information Systems Management" (with **James C. Brancheau**), a delphi survey of chief IS executives and corporate general managers to determine what the most critical issues are in information systems management and to reach consensus on their importance. Wetherbe presented the following: "Organizing Management Technology," 1987 Manager Computer Conference, Cenex/Land O'Lakes; "Executive Expectations for Information Systems," Center on the Management of Information Technology, Rice University; "Computers and Information Systems: Past, Present, Future," Minnesota Office Systems Association and "Avoiding Monarchy vs. Anarchy in End User Computing," Minnesota Joint Computer Conference.

Andrew F. Whitman, professor of finance and insurance, presented "Personal Investing Under the 1986 Tax Act" to the University of Minnesota Faculty Women's Club. In March Whitman presented "Impacts of the 1986 Tax Act on Qualified Pension Plans" to the Twin Cities Personnel Association and "Risk Management in Personal Financial Planning" to Smith Barney brokers.

C. Arthur Williams, Jr., professor of finance and insurance: "Social Security: The Next 75 Years and Beyond," *Risk Management and Insurance Issues*, December 1986;

"Workers' Compensation Insurance Rates: Their Determination and Regulation," Chapter 8 in James Chelius (ed.), *Current Issues in Workers' Compensation* (Kalamazoo: The Upjohn Institute for Employment Research), 1986.

Raymond E. Willis, professor and chair of strategic management and organization: *A Guide to Forecasting for Planners and Managers*, Prentice-Hall, February 1987.

Mahmood A. Zaidi, professor of industrial relations and director of international program development: "Human Capital and Multinationals: Some Evidence from American and Japanese Companies in Thailand" (with John Lawler and Chira Hongladarom), *Proceedings of the 7th World Congress of the International Industrial Relations Association*, Hamburg, 1986; "Do Income Policies Restrain Wage Inflation? Some Evidence from Australia, Canada and the United States," *The Economic Record*, December 1986.

Recent speakers for the Management Information Systems Research Center (MISRC) Associates Seminar Program included: J. Daniel Couger, University of Colorado, "Dominant Human Resource Trends: 2000 vs. 1986—What Will Make the Difference?"; **John Lehman**, assistant professor of management sciences, and **James C. Wetherbe**, professor of management sciences, "4th Generation Languages: Users, Applications, Problems, and Satisfaction"; Michael E. Treacy, Massachusetts Institute of Technology, "The Impact of Information Technology on Performance"; **James C. Wetherbe**, "Competing with Computing," and Richard Dooley, The Dooley Group, "1987 Processes & Objectives for Every CEO & IS Organization."

VISITING FACULTY

J. Burdeane Orris, from Butler University, is a visiting scholar in the department of management sciences through June 1987. He is on sabbatical leave to research management information systems.

Alumni News

A message from the president

Enhancing the educational experience of current students is a new Alumni Advisory Council (AAC) initiative this year that I am very excited about because it is one way that we, as alumni, can really help the school in its drive to the top. It also matches one of the top program priorities of the Minnesota Alumni Association and puts us in step with broader university goals.

With our common background of experience at the "U," we all have ideas on what would have made those years a richer, more productive and enjoyable learning experience. Now the AAC is turning some of those ideas into reality through three committees that are developing recruiting, mentoring and alumni/student program activities. As you can see in this issue of the *MMR*, many successful activities have taken place and more are being planned.

The Carlson School has a special advantage because of its metropolitan location. Many alumni are located in the area and can provide strong support to current students and the school. In fact, this important link is promoted in the school's MBA marketing campaign as a distinct advantage of the program.

I hope you will consider collaborating with us on this important endeavor. Your ideas and participation are always welcome. Call me at (612) 330-8868 or call Jeanne Katz.

*Kay Barber, '75 MBA
President, Alumni Advisory Council*

MBA students and alumni meet at Smokey's

The MBA Association and the AAC Alumni/Student Activities committee hosted a party at Smokey's in February to get acquainted, talk business and share stories about campus life. Another get-together is planned for mid-June to welcome new accelerated MBA students to campus. Watch for details.

Mentoring committee hosts reception

Twelve alumni willing to be mentors and 30 students looking for mentors met in January at a reception hosted by AAC's Mentoring Committee. Patricia Adams, supervisor of Employee Relations at Northwestern Bell, talked about how to go about finding a mentor and what to do once you have found one. Also highlighted at the program was the Alumni Career Advisor's Network, a list of alumni interested in giving career advice, on file in the Placement Office.

The next mentoring reception for students and alumni will be held on Tuesday, May 5, from 6:00-9:00 p.m. in the Management Conference Center in the Humphrey Center. Call Jeanne Katz if you are interested in attending.

Students to tag-a-long with alumni during Business Week

Many students know the general direction they want to take in their careers, but need more information before narrowing their choices. To help them, an alumni/student tag-a-long has been scheduled as part of Business Week 1987. It's a chance to discover what a day in the life of a marketing manager, financial analyst, cost accountant, etc. is *really* like.

The tag-a-long is sponsored jointly by the AAC Mentoring Committee, the MBA Association, the Business Board and the Business Week Committee. On April 23 and 24, students will accom-

pany an appropriate alumnus for either a half or a full day. Over 100 students are interested in participating. Alumni willing to be shadowed should call Jeanne Katz.

Upcoming programs to include entrepreneurship seminar and Alumni Leadership Workshop

Richard Cardozo, recently appointed to the Curtis L. Carlson Chair in Entrepreneurial Studies, will be co-leader of an alumni dinner seminar on entrepreneurship in May. The seminar will also include a panel discussion. Details are being planned now, so watch for more information.

Coming up on Saturday, May 30 is the Alumni Leadership Workshop, held each year to plan AAC priorities and activities. It will take place from 8:30 a.m. - 1:00 p.m. in the Management Conference Center located in the Humphrey Center, and includes lunch. Anyone interested in participating in or learning more about alumni activities is encouraged to attend. For reservations, please call Jeanne Katz.

Minnesota-style international business featured at seminar

Minnesota's international business activities were featured at a seminar in March, sponsored by AAC's Alumni Programs Committee. David Speer, commissioner of Energy and Economic Development, opened the evening event with an update on Minnesota's



international business and his plans to focus the state's economic development activities.

A discussion followed, led by a panel of executives that included Duc Lam, vice president, International, Norwest Corporation; Jim Lande, president and COO, Minnesota Rubber Company; Gary Brown, president, Media Computer Enterprises, Inc.; and Adrian Smith, vice president, International, EcoLab. About 50 alumni, faculty and guests attended.

Reunion weekend scheduled for October 16-17

Plans are being made now for reunion weekend, which coincides with Homecoming, on October 16-17. Classes of '37 and '47 will host the weekend, with classes of '36, '39, '46 and '49 invited as special guests.

Activities being planned for Friday will give you a chance to visit with your School of Management classmates and find out what's happening at the school today. The day begins with a meeting with Dean Townley at 10:00 a.m. and concludes that evening with a dinner at the Humphrey Center. On Saturday, alumni can participate in campus-wide reunion events, including the Minnesota vs. Indiana homecoming game.

If you have questions or are interested in helping plan the weekend, call Jeanne Katz.

Ted Koppel to speak at U of M alumni meeting

Ted Koppel, ABC News correspondent and anchor of "Nightline," will be the keynote speaker at the Minnesota Alumni Association's (MAA) 83rd annual meeting, to be held June 9 at the university's indoor football complex. The school's Alumni Advisory Council is a constituent society of MAA.

The meeting, which begins at 5:30 p.m., is open to alumni and friends of the university. Tickets are \$25 per person and include the program, dinner and entertainment by a jazz band, the alumni band and the University Jugglers Club.

A volunteer committee headed by Chip Glaser, '75 BSB, is coordinating the evening's events, which will also include election of 1987-88 officers, installation of new MAA board members and a recap of the year.

For ticket information, call Chris Mayr at MAA at (612) 624-2323.

MBA class of '85 gathers

The 1985 MBA class will gather Saturday, April 25th at Karen Thorson's home, 1424 West 26th St., in Minneapolis. Call Karen at (612) 374-3721 for details.



Ted Koppel will speak at the annual MAA meeting on June 9.

Call for alumni help

Many Carlson School of Management students are looking for a summer internship. If you know of opportunities within your organization for either a part-time or full-time summer internship position, please call the Placement Office at (612) 624-0011. We'll be happy to work with you on finding the right students.

For MBA/MAIR opportunities, call Barb Nemecek; for undergraduate opportunities, call Donna Gustafson; and for accounting opportunities, call Melissa Anderson.

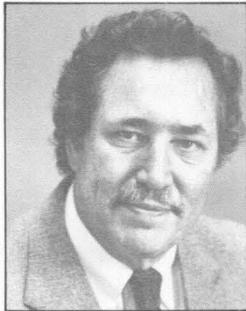
For more information about alumni activities, call Jeanne Katz, director, Alumni and Development, at (612) 625-1556.



The class of 1937 reunion planning committee includes (left to right) Ralph Boline, Genevieve Budge Annett and Jim Annett.

BUSINESS DAY '87 *to be held April 21*

A Global View: The Challenge to Tomorrow's Manager



David Speer



James Spicola

The Carlson School of Management cordially invites its alumni to explore the challenges of conducting business within a world marketplace by attending the 27th annual Business Day on Tuesday, April 21, 1987. The theme this year is "A Global View: The Challenge to Tomorrow's Manager."

David Speer, Minnesota's Commissioner of Energy and Economic Development, will present the opening address, "An Independent Trade Policy for Minnesota." Afternoon concurrent sessions will promote discussion on issues such as free trade vs. fair trade, the international services market, American business competitiveness at home, international accounting and multinationals, women in the global business arena, and the international influence on Minnesota's economy and business community.

The day concludes with a social hour, dinner and address by James Spicola, president and CEO of Cargill, Inc. on "An International Business Perspective." Also attending the dinner will be representatives from almost 80 sponsoring companies.

All activities will be held at the Radisson St. Paul Hotel from 1:00 - 7:30 p.m. To register, fill out the form below, or call the Alumni Relations office at (612) 625-1556.

We hope you will join us for this exciting day of celebration and interaction.

Business Day '87 Registration Form

School of Management alumni and their guests are cordially invited to attend Business Day 1987 on April 21. Two main speakers and a series of timely and informative discussion sessions will explore the theme of international business and global economic challenges for managers. The afternoon program is free and the cost for dinner is \$20.00 per person. Please make advance reservations by using this form. Meal tickets can be picked up on April 21, 12:30 - 6:00 p.m. at the registration table at the Radisson Hotel St. Paul.

_____ Yes, I/we will attend Business Day '87 and will attend these sessions:

- _____ 1:00 Opening address
- _____ 2:00 Concurrent sessions
- _____ 4:00 Roundtable discussions
- _____ 5:00 Reception (cash bar)
- _____ 6:00 Dinner — Please reserve _____ dinner tickets.

I am enclosing a check (payable to Carlson School of Management) for \$ _____

Name _____ Degree & year of graduation _____

Company _____ Title _____

Address _____ City, state, zip _____

Guest's name _____

Return to: Jeanne Katz, Alumni Relations, Univ. of Minnesota, Carlson School of Management, 271 19th Ave. South, Minneapolis, MN 55455. For further information call Jeanne at (612) 625-1556.

1930 1939

Richard P. Baughman, '36, died March 7, 1986.

Robert O. Hawkanson, '37, died on January 7. He lived in Tucson, Ariz.

1940 1949

Charles A. Stewart, '46, died in 1987. Stewart worked for St. Paul Book & Stationery and lived in St. Paul.

Robert C. Johnston, '48, died in 1986.

Richard W. Johnson, '49, is president and CEO of Modern Equipment Co., Inc., Omaha, Neb.

1950 1959

Arne Seljesaeter Giske, '54 MBA, is managing director of Elkem Eiendom a/s, Oslo, Norway and lives in Hovik, Norway.

1960 1969

Gary A. Andersen, '66, is president of RF Monolithics, Inc., a high technology firm in Dallas, Texas.

Robert J. Sutter, '67, is president of the sports products group, Minstar, Inc., Minneapolis.

Curtis L. Tollefsrud, '67, is vice president-sales with Masonite Corp., Chicago.

Greg F. Strobl, '68, formerly a senior attorney with Cargill, Inc., has accepted the position of general counsel with Texas Eastman Co. in Longview, Texas.

1970 1979

Thomas H. Skoog, '70, started a CPA practice in Tucker, Ga. in July 1985. Skoog has held controller positions with Minneapolis-based H.B. Fuller Co. and National Computer Systems in Atlanta, Ga.

John K. Myers, '72 MBA, is manager of automation products with Allen-Bradley Government Business Division, Milwaukee, Wis.

Rodney R. Hannula, '73, is a technical service manager with the packaging systems division of 3M Co., St. Paul. He and his wife Terry have five children.

Daniel P. O'Shea, '73, is an investment executive with Piper, Jaffray & Hopwood, Inc., Minneapolis.

Ronald T. Rausch, '76, is market development manager for Hewlett-Packard Co. in the Asia-Pacific region, covering Japan, China, Southeast Asia, India and Australia. Rausch lives in Hong Kong with his wife and daughter.

Geoffrey W. Stellmacher, '76, is vice president for secondary marketing with the Market Street Mortgage Corp. in Tampa, Fla.

Marilyn R. Froelich, '77 MBA, is relocating to Minneapolis as assistant vice president-investment for Mutual Life of Canada Services, a new investment company that invests funds for Mutual's American companies. For the past nine years Froelich was employed by Western States Life in Fargo, N.D., which was purchased by Mutual Life of Canada in January 1986.

Gary J. Volkenant, '77, has left Deloitte Haskins & Sells to be manager of audit services for Arizona Public Service Co. in Phoenix, Ariz. He serves as president of the Phoenix chapter of the University of Minnesota Alumni Association.

Daniel J. Yavner, '77, is manager of systems development for IDS Financial Corp. in Minneapolis.

James J. Gebhard, '78 EMBA, is manager of engineering with Walt Disney World Co., Lake Buena Vista, Fla.

Nancy Grazzini Olson, '78, is vice president of Thunderbird Aviation Inc., Edina, Minn.

Kevin L. Petersen, '79, is a U.S. Navy supply officer. He attends postgraduate school at Monterey, Calif. and is working towards a master's degree in financial management.

Charles S. Salewsky, Jr., '79 MBA, was promoted to director of strategic planning with Ansal Fire Protection, Marinette, Wis.

Sylvia Savaiano, '79, died in a car accident in December 1986. She was a partner with her husband Carl in Heartland Financial Counselors of St. Louis Park, Minn. Savaiano

had recently become an active member of the Small Business Committee of the Alumni Advisory Council.

80

Bradley L. Bream, '80 MBA, is a product manager for Republic Telcom, Bloomington, Minn.

Bruce W. Regis, '80, is marketing manager with Beatrice/Hunt-Wesson, Fullerton, Calif.

Lisa Sachs, '80, was appointed assistant to the executive director of the Chicago Architecture Foundation, Chicago. Sachs was formerly company manager for the Hubbard Street Dance Company.

81

Michael J. Bishop, '81, is a resident in pediatrics at the University of Minnesota Hospitals & Clinics, Minneapolis. Bishop recently received his MD and MBA degrees in the Medical Scholars Program at the University of Illinois-Champaign, Urbana. His work included formulation of a market assessment and strategic plan for the shared services department of a large hospital-based clinic. He performed a two-month externship at the King's College School of Medicine in London, England.

Susan M. Grotevant, '81 MBA, is the assistant deputy insurance commissioner for the Texas State Board of Insurance, Austin, Texas. She was elected president of Executive Women in Texas Government for 1987.

John F. Holewa, '81 MBA, is marketing director for Business Incentives, Edina, Minn.

Olin M. Hoover, '81 MBA, is marketing research manager for product testing at General Mills, Inc., Minneapolis.

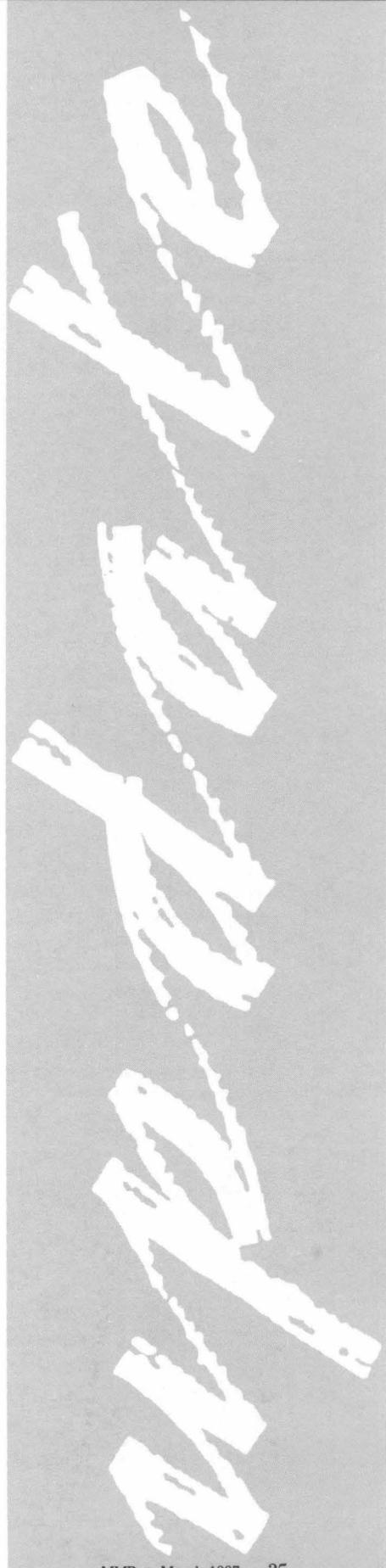
Chi Wo M. Ng, '81 MBA, is product manager for Millipore Corp. in Bedford, Mass.

82

Milind Bhat, '82 MBA, married Pamela Jean Lewis on Dec. 27, 1986.

Jane F. Foreman, '82 MBA, is product manager for Teradyne, Inc., Deerfield, Ill.

ALUMNI UPDATE



Pierre Garesche, Jr., '82 MBA, is finance director for the village of La Grange Park, Ill. He lives in Wheaton, Ill. and has a daughter, Michelle.

Peter M. Gill, '82 MBA, was promoted to vice president at Piper, Jaffray & Hopwood Inc., Minneapolis. He is still involved in investment banking in the corporate finance department.

Douglas R. Larson, '82 MBA, is a rates analyst with the State of Minnesota. He lives in Inver Grove Heights, Minn.

Lt. Donald E. Lyle, '82 MBA, is a radar intercept officer with U.S. Navy Fighter Squadron 32. He married Cynthia Metzger of Minneapolis and has a daughter, Amanda.

Joe Mork, '82 MBA, is a marketing representative for Keane in Minneapolis. He is interested in talking to others about sales as a career.

Ronald E. Reimann, '82, is director of national sales for Migent, Inc., Chicago, a newcomer in the microcomputer industry. He is married to Nancy Brecht, an '82 U of M home economics graduate.

Jeffrey J. Zibley, '82 MAIR, is director of human resources for Malt-O-Meal Co. in Northfield, Minn.

Lynne A. Billingsley, '83, is a systems test engineer for Unisys defense systems operations in Eagan, Minn.

Robert A. Engebretson, '83, is a senior materials control analyst for 3M Co., St. Paul.

Page Warner Gildner, '83 MBA, is third secretary for political affairs with the U.S. Embassy, U.S. Department of State, in New Delhi, India.

Randy D. Groves, '83, is a convenience banking representative with the First Bank Rapid City, N.A., Rapid City, S.D.

Randal D. Schreiner, '83 MBA, is a systems engineer for IBM Corp. in Minneapolis.

Rick Wood, '83 MBA, is a senior excess and special risk underwriter for Transamerica Insurance Group in Englewood, Colo.

Anthony L. Youga, '83 MBA, is a manager for financial planning and analysis with Burger King Corp., Miami, Fla.

Robert T. Bouman, '84 MBA, is an assistant marketing manager for Land O'Lakes, Inc., Arden Hills, Minn.

John S. Hartmann, '84 MBA, is metropolitan district manager for General Motors Service Parts Operations, Livonia (Detroit), Mich.

Steven J. Hengstler, '84 MBA, is in strategic planning for Northwestern National Life, Minneapolis. He lives in Mounds View, Minn.

Mark C. Herzan, '84, is a production scheduler with Unisys Corp. in Roseville, Minn. Herzan schedules production of mainframe computer components in Montreal, Canada.

James P. Lerdal, '84, is a commodity merchandiser with The Pillsbury Co., Fort Worth, Texas.

Kari E. Mihalik, '84, is an account supervisor for group sales with Great West Life Assurance Co. in Atlanta, Ga. In January her sales production qualified her for the Group 200 Limited and an all-expenses-paid trip to Naples, Fla.

Roger William Redmond, '84 MBA, was promoted to vice president of Piper, Jaffray & Hopwood, Inc. where he is a technology analyst specializing in factory automation and materials sciences.

Roger M. Rosche, '84 MBA, recently moved from financial planning at Northern Telecom's corporate headquarters to senior cost analyst in the advanced communication terminals division of Northern Telecom in Nashville, Tenn. He has a son, Kenneth.

Margie Sinner, '84 MBA, is an assistant professor in the business administration department at St. Mary's College, Winona, Minn. She teaches marketing and management courses.

Judie LaBelle Trop, '84 MBA, is a software consultant for the IBS Co., Givatayim, Israel.

Tai Hean Woon, '84 MBA, is a bank officer for the European Asian Bank in Singapore. Woon left Cargill (Singapore) in August 1986.

Daniel R. Jacobs, '85, is a manufacturer representative with Jacobs Marketing, Minnetonka, Minn. He married Sandy McCann, '84, in November.

Ron Merbler, '85 MBA, is a zone manager for the Lincoln-Mercury-Merkur in Wixom, Mich. Merbler works out of the district sales office in Detroit.

Joe Nerenberg, '85 MBA, is a marketing systems project analyst with IDS/American Express in Minneapolis.

Rosemarie Orehek, '85 MBA, is a supervisor with system design center administration for Northwestern Bell in Minneapolis.

Tatsuyoshi Saijo, '85 Ph.D., is a professor in the department of economics, University of California, Santa Barbara, Calif.

Robin Stegner, '85 MBA, is an inventory services senior coordinator at Zytec in Redwood Falls, Minn. and an adjunct professor at Southwest State University, Marshall, Minn. Stegner recently presented a paper at a conference on manufacturing techniques sponsored by the American Production and Inventory Control Society and the American Society for Quality Control in Atlanta, Ga.

Dennis J. Devine, '86 MBA, is an analyst with Procter and Gamble in Cincinnati, Ohio. Devine started in September after a summer trip to Europe. He works on decision support systems in the corporate financial analysis area.

David R. Fink, '86 MBA, is a project manager in field technology for IDS Financial Services, Minneapolis.

Stacia Herman, '85, is in a two and one-half year training program with Prudential Investment Corp. in Newark, N.J.

She loves the work and enjoys being on the east coast. She lives in Woodbridge, N.J.

Laura M. Herren, '86 MBA, is a human resource information systems consultant for Business-To-Business Network in Minneapolis. She redesigned Honeywell Inc.'s corporate job code, using relational database design techniques. The project serves as a foundation for 40 other projects in Honeywell's corporate human resource information systems plan.

Heidi Knatterud, '86 MBA, is a financial analyst with Pillsbury, Minneapolis.

John Rein Leiviska, '86 MBA, is a security analyst with Minnesota Mutual Life in St. Paul.

Ron Mackowski, '86 MBA, is a systems analyst with Unisys, Detroit, Mich.

Susan Lukomski Niles, '86 MBA, was promoted to marketing assistant with General Mills, Inc., Minneapolis. She was a financial analyst in product management.

Shari Johnson Nornes, '86, is a purchasing trainee with Rosemount, Inc., Eden Prairie, Minn.

Patrick Thomas Olk, '86 MBA, is a research analyst with John G. Kinnard & Co., Minneapolis. He lives in Eagan, Minn.

Lisa K. Pope, '86 MBA, is director of marketing for May Printing Co. in Minneapolis.

Timothy J. Salo, '86 MBA, is manager, product management, with NCR Comten in Roseville, Minn.

Chuck Thews, '86 MBA, died Nov. 28 in St. Paul.

Susan R. Tibiatowski, '86, is a technical trainer for United Healthcare in Minnetonka, Minn.

Katrina A. Van Buskirk, '86 MBA, is a cost analyst with FMC Corp., in Fridley, Minn.

(Arvey—continued from page 17)

such measuring instruments, it is extremely important that they are reliable and valid.

Possible selection bias. A major problem with surveys of this sort is that the individuals who choose to respond may differ considerably from those who do not. One hypothesis is that those individuals who have been sensitized to sexual harassment issues will be more likely to respond to such surveys. If such a selection bias exists, the results could possibly indicate a higher frequency and percentage of females harassed.

Prompting the respondent. Many surveys appear to prompt the respondent to report sexual harassment or bias. The instructions quoted above in the study associated with the Federal Aviation Administration survey represent a good example. In addition, many of the surveys only solicit the expression of negative behaviors and activities. Employees are likely to answer in the affirmative to such harassment items

because of a desire to please the researcher, who is obviously looking for such behavior.

Collapsing items. A major problem throughout many reports of survey results is the tendency for researchers to combine all and different forms of reported behaviors and label them sexual harassment with little regard to the differences in their severity. For example, researchers will combine or sum the number of respondents who checked that they had experienced jokes of a sexual nature with those who indicated that they had been raped on the job and report the combined total as experiencing sexual harassment. Besides increasing the percentage estimates of those harassed, such a practice ignores the fact that individuals differ considerably in terms of which behaviors would constitute sexual harassment.

In short, there are a number of methodological problems common to the surveys and survey methodologies dealing

with sexual harassment. While surveys are commonly accepted for detecting, diagnosing and obtaining preliminary information about a particular phenomenon, they have serious limitations. Without proper construction and examination, they can lead to gross imprecision in the estimates and figures revealed. Let's look carefully at these methods and data before we jump to too many conclusions about how widespread sexual harassment is in the workplace.

Faculty, alumni and friends of the Carlson School of Management are invited to submit articles for consideration for MMR's opinion page by sending them to Martha Douglas, editor.

ALUMNI UPDATE

Let your classmates know what you've been doing that's new or exciting. Use this form to share information about your career, awards, family, trips, mini-reunions, etc. Photos are welcome as well. We'll include your news in the "Alumni Update" section of the next *Minnesota Management Review*.

Please also use this form if you have a change of business or home address. Send it to: Jeanne Katz, director, Alumni and Development, Curtis L. Carlson School of Management, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455.

Name _____ Date _____
first middle or maiden last

Year of graduation and degree(s) granted from the School of Management _____

Employer _____ Home _____
position mailing address

_____ company/organization _____ city, state, zip

_____ city, state, zip _____

_____ phone _____

Information you would like to share:

And in conclusion

A little bragging never hurts. Four Carlson School of Management seniors won the 1987 McIntire Commerce Invitational, an international undergraduate business case competition. The annual tournament is hosted by the McIntire School of Commerce at the University of Virginia and sponsored by the General Electric Foundation. This year's event was a tournament of champions, with only past winning schools invited—Notre Dame, Southern California, Western Ontario and Washington University of St. Louis. A University of Minnesota team also won in 1985.

The teams spent 14 hours closeted in hotel rooms preparing a business case study they had never seen before, this time involving Citicorp of New York and its \$33.3 million purchase of the British National Life Assurance Company, Ltd. When the time was up, they turned in a written report and then defended their strategy under very tough questioning from a panel of judges that included top executives, the dean of Dartmouth's Tuck School and a senior editor of *Forbes*.

To prepare for the competition, our team put in a lot of time working with



volunteer faculty coaches from several departments. Shown here, left to right are associate professor of strategic management and organization Peter Ring,

who served as faculty advisor, and winning students Mark Jones, Patricia Crosby, Susan Ahart and Paul Griffiths. ■

Minnesota Management Review

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University of Minnesota
271 19th Ave. S.
Minneapolis, MN 55455

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The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

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Minnesota Management Review

Summer 1987

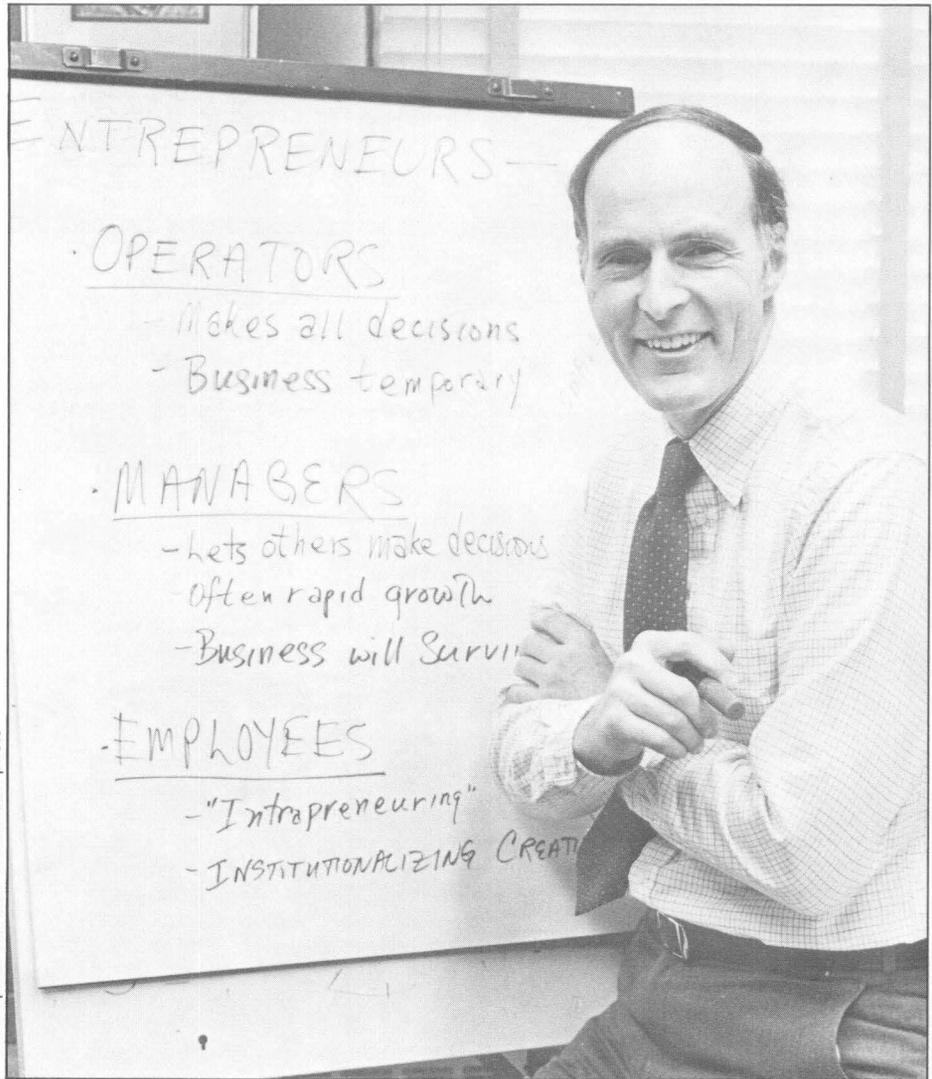
Not crazy, just dreaming *Alumni entrepreneurs pursue success on their own*

People weary of reading about entrepreneurs and entrepreneurship may wonder why an otherwise adequate language like English has to borrow from the French to describe business people who take financial risk upon themselves in the pursuit of profit.

"Entrepreneur," the dictionary says, literally means "undertaker," as in "one who undertakes to achieve something." And that's why we use the frenchified term—because we think of "undertakers" as a profession with rather more certainty than risk ventures. And because the awkward English word "enterprisers" makes us want to beam up, Scotty.

The word has been coming on like gangbusters lately. It's as American as apple pie—entrepreneurism is something just about anyone can aspire to, from Lucy and her five-cent psychiatry sessions to billion-dollar ventures. It can happen in any industry, with any product, service, or combination of both. New jobs, new wealth, innovations and risk—it adds up to leadership, and the Carlson School of Management has been producing its share for many years.

With the recent appointment of marketing professor Richard Cardozo to the new Curtis L. Carlson Chair in Entrepreneurial Studies, the school opens a new area of research and teaching that is a natural for Minnesota. And beginning on page 3, several Carlson School alumni who are pursuing success on their own share the stories of their endeavors and some thoughts about how entrepreneurial studies might have helped them along the way.



Minneapolis Star and Tribune staff photo

Richard Cardozo, holder of the Curtis L. Carlson Chair in Entrepreneurial Studies, says, "My job isn't to stand at the gate and tell aspiring entrepreneurs that it can't be done. True entrepreneurs turn those principles upside down all the time."

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The Minnesota Management Review (MMR) is published by the External Affairs Dept. for alumni and friends of the Curtis L. Carlson School of Management, Univ. of Minnesota. Direct correspondence to: Martha Douglas, editor, **MMR**, Office of the Dean, 271 19th Avenue South, Minneapolis, MN 55455. Tele: (612) 625-0843.

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The **MMR** was designed by Dawn Mathers. Special assistance was provided by Laurel Christianson.

From the dean

Business ethics

It's a complex issue that can and should be addressed

by Dean Preston Townley



Our is a country prone to instant analysis of problems and an even greater tendency to quick solutions. One clear example is the Wall Street insider trading "scandals" and the solution offered for preventing their reoccurrence. Those in quest of easy explanations have found their target in the failure

of business schools to teach ethics to aspiring business leaders. But the issue is much more complex than that.

Of course the focus on business schools is not surprising. Business degree-holders, and MBAs in particular, have become synonymous with the young, eager—even arrogant—challenger of the status quo. From a graduation rate of around 5,000 per year in 1962 when I departed Harvard Business School, the output has reached 70,000 annually in the mid-1980s. The MBA has been a growth business for a generation, so when a problem occurs, why not attach it to this highly visible presence?

Violating securities laws is actually a simple ethics problem. Aside from a handful of economic theorists who argue that insider trading enhances the functioning of the market, everyone recognizes the activity as wrong, and no one more so than the individuals involved who have entered guilty pleas. If the typical MBA student at age 27 has not yet learned through home, family, religion, education and society that breaking the law is wrong, then a business school has little chance of reversing this attitude.

But there are many ethical issues in business where it is much more difficult to identify a right or wrong position. And when the "simple" cases of breaking the law fade from public interest, I hope that the heightened interest in teaching business ethics does not fade with it. Ethics is an important and complex business subject, and one of considerable importance to business schools.

The issue for the Carlson School of Management is not whether to teach ethics—it has been and will be taught. The question is how to teach it and in what

context. Should there be a separate course, say in moral reasoning and applied ethics? Or should ethical subject matter be integrated into all relevant course material? The easy answer for me is "both." But when it comes down to applying scarce resources and devoting faculty time, it is not so easy.

Our MBAs receive a heavy dose of tough business ethics issues in "Business, Government and Macroeconomics," a required course; undergraduates are challenged similarly by "Business and Society." In these classes, students discuss the ethical considerations of corporate campaign contributions, market domination and pricing policy, employee rights, corporate bailouts by the government, product safety, bribery at home and abroad, and environmental pollution.

Ethical issues are also integrated, wherever relevant, into many other courses. In "Marketing Communications" and "Consumer Behavior," marketing faculty caution their students on the inherent potential for manipulation in advertising, or for distorting survey findings. In "Strategy and Policy," strategic management faculty use case studies that illustrate the ethical trade-offs managers must make when implementing strategies that affect a number of stakeholders.

Many local companies face tough corporate strategy issues involving difficult ethical choices, the kinds of issues our graduates will someday face. Honeywell's participation in the defense industry, 3M's operations in South Africa, Hormel's labor relations practices, or Dayton Hudson's decision to contribute 5 percent of its earnings to arts and social causes rather than reinvesting the money or distributing it to shareholders are just a few examples. In each case, there are well thought-out views held dearly by opposing sides as the ethically correct position.

Ethics in these cases emerges as a component of decisions involving total corporate responsibility—how the enter-

(continued on page 30)

Not crazy, just dreaming

Alumni entrepreneurs pursue success on their own

by Michael Finley

Many Carlson School of Management alumni have joined the ranks of those pursuing a dream on their own terms. They're willing to forsake regular hours and a regular paycheck for the ability to call their own shots. Some, like Jim Watkins, president and CEO of Golden Valley Microwave, whose company was number three on Business Week's best small companies list this year, have achieved success. For most, success has not come without setbacks and a lot of hard work.

Take Marc Kramer, half of Kramer-Lieberman & Associates, a Minneapolis film production house. By no stretch of the imagination was he bred for entrepreneurship. "I wanted to be part of corporate life," the 1981 industrial relations graduate says. "I wanted the security."

Trouble was, the economy soured as soon as Kramer graduated and he found himself out on the street. "I was devastated. I'd always worked, ever since I was 14. I expected Social Security to call asking where my contribution was."

Kramer papered his apartment walls with the 280 rejection letters his resumes drew, and the terror was upon him, until someone suggested he work as an extra in commercials. Kramer found he loved the medium and the medium liked him. His business acumen smoothed his way to a series of financial management jobs with a local casting agency, including hiring models and actors.

Then Kramer's education came into play. He had done a study on the decentralization of the entertainment industry. More and more commercial work was being shot on location, and that meant opportunity for regional producers. He presented a plan to a local producer who loved the idea and hired Kramer to set up an "industrial entertainment" production company.

Enterprises began to fly to him now. A public stock offering raised cash while his company produced educational films, and yet another partnership, underwritten with \$4 million, aimed at the stars—production of a full-fledged Hollywood movie, "That Was Then, This Is Now." Filmed in Minneapolis, it's the story of

Captain of the enterprise

As professor occupying the school's new Curtis L. Carlson Chair in Entrepreneurial Studies, Richard Cardozo may occasionally feel like a sitting duck. There are lots of self-styled entrepreneurs in the world who scoff at the notion that what they do can be taught in a classroom.

Entrepreneurism is just business guts, they say—the fortitude required to come up with the idea, pursue it on one's own time and at one's own risk, and work, work, work until the idea catches fire. And that's something you just can't learn from a book.

Cardozo agrees to a point. "Part of the problem is there's this word, *entrepreneur*, for which everyone has a different meaning. My own definition veers away from the idea that it is a single thing. There are many types of entrepreneurs."

An entrepreneur can be an idea generator, an inventor, a strategist, a planner, a manager, anyone with a knack for identifying an opportunity and pursuing it—even an investor.

Entrepreneurs tend to start small, he says, but there is no law that says the spirit has to die when their business reaches a certain scale. "Look at Curt Carlson himself. His companies are large now, yet he remains a consummate entrepreneur. 3M is a giant, but it still has that entrepreneurial fire."

Cardozo, whose background includes one foot in academics on the marketing faculty, and the other in business as board member and consultant to numerous firms throughout the region, has no illusions that entrepreneurial studies will be cranking out a steady stream of Edisons and Fords.

"There are not many Ben Franklins in business, people who invent a product, develop it, market and sell it, capitalize it and oversee its growth. Frankly, that notion has been the demise of a good many solid entrepreneurs—the idea that they have to do it all, that they can't rely upon the rest of the team."

Even if an entrepreneur believes he or she can go it alone, banks will usually indicate otherwise, and suggest, for example, that an inventor-type team up with a financial-type, for the good of the enterprise. The leveraged buyout is an example of an entrepreneurial team where existing management buys a company from its stockholders, and puts it aright.

"Part of the lesson of entrepreneurship is that a business is more than just one person," Cardozo points out. One of the first questions you ask when you begin a business is, "What will become of it later? Who will buy it?" You get to the point where the question is, "Have I done all I can do or is it time for another hand to take the helm?"

But that's the end of the road, and courses in entrepreneurial studies may be very useful in the beginning. "Much is known about why and how business ventures succeed or fail. Call it institutional memory, call it culture, but the wisdom is there, and the emerging entrepreneur may not have had the opportunity to acquire it," Cardozo said.

It's a tricky business, he says. "My job isn't to stand at the gate and tell aspiring entrepreneurs not to try something, that it can't be done. True entrepreneurs turn those principles upside down all the time." ■

Michael Finley is a freelance writer working in the Twin Cities.

"Just having a really good idea is no guarantee of success. If I had it to do all over, I would make sure that we gave more time to planning."

— Dornbush

two boys who grew up as best friends and then grew apart. At \$2.5 million it was cheap by Hollywood standards, but a fair piece of change for Kramer.

"We had 100 temperamental employees, all getting paid a lot of money. Union contracts stipulated when they could take breaks. We had to feed 125 people, sometimes in the middle of nowhere, with the cook chasing me from place to place for grocery money. We had huge crowds of onlookers to control. It was crazy, and it got into my blood."

Back in reality, however, Kramer knew he needed a more reliable cash generator than movie rentals. He and Tom Lieberman (a founding member of the pop/jazz vocal group Rio Nido, and a singer-songwriter with reams of credits) founded a company to bring Hollywood-level creative and production values to industrial communications.

Kramer-Lieberman & Associates thinks it invented the concept of "corporate entertainment." A recent General Mills sales meeting featured live corporate theater with zany characters, songs, dialogue and laser effects.

"It's a way to present corporate information in a way that people will listen

and remember," Kramer says. "The creative is what drives us and gives us value, but it's the business that keeps us in business.

"It's funny. We've never gone over budget and we've never missed a deadline. But we have to market, all four of us—no prima donnas. It's all part of running your own enterprise. I call it terror."

Terror and high hopes are the daily bread of entrepreneurship, where success spells freedom and failure is taken very, very personally. Paul Stormo (MBA '71), president of Artograph, Inc. of Minneapolis, knows all about both. Stormo knew even as a student that the entrepreneur's life was for him. Buy a tired company, patch it up, make it work, sell like crazy and retire early—that was the plan.

The idea worked smoother in the textbooks, where Stormo first read it. His first move upon graduation was to go to work for Graco, Inc., which sent him to Europe for several years. Cutting his teeth on a Graco castoff, H.G. Fischer X-Ray, Stormo laid plans for buying the kind of company that could really take off. By the time he returned to Minneapolis in 1976, he had found it—Artograph, Inc.

"I wanted a company with existing national distribution, one that didn't require any particular industry knowledge or experience on my part, one that I could afford and that needed new management."

Artograph had existed for years as a manufacturer of enlarging and reducing projectors for the graphic design trade, selling them to art materials vendors nationwide. But it had introduced no new products for years, and was starting to fade.

Today, Artograph keeps 28 employees busy at its Plymouth plant. The secret of its success has been a knack for research and development, and a commitment to introducing new products.

But success came at a price. "Our big goof was in ignoring R&D for a while

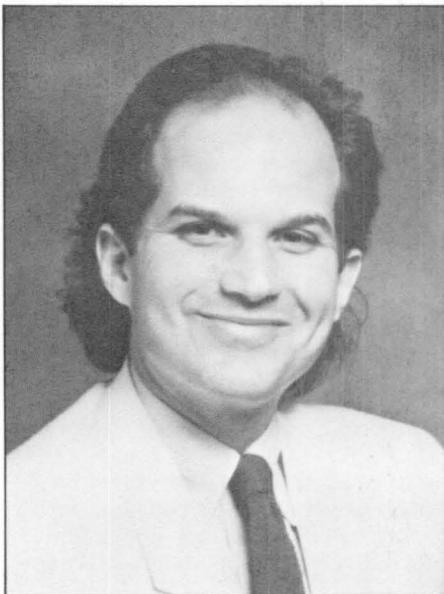
about three years ago," Stormo admits. "It was my fault. I put the company on automatic pilot for a while, and it's been catch-up ever since. Our big lesson has been that you can't experience growth without the constant feeding in of new products."

Since then, Artograph has made up the lost ground. Its latest product could well revolutionize the stat machine market. Carrying a price of only \$1,000, the machine uses advanced miniaturization to achieve what previous low-end stat-makers costing as much as \$5,000 do.

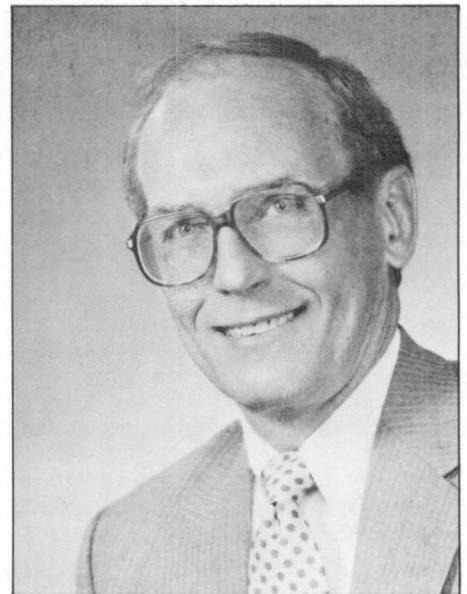
"Within a year and a half, it should be our top selling product," Stormo said. "We've already gotten great advance reception in the industry. Though there's lots of competition, no one has a product like ours, or our selling and distribution network."

Is Stormo protecting his rights with his new moneymaker? No. "The copycats will come regardless. Our philosophy will be to continue to develop good products for the future, and not worry about protecting the present or recent past. This machine is good, but something better will replace it, and soon."

Stormo also has few illusions about



Marc Kramer is half of Kramer-Lieberman & Associates, a Minneapolis film production house. "The creative is what drives us and gives us value, but it's the business that keeps us in business," he says.



Paul Stormo, president of Artograph, Inc., believes a constant introduction of new products is necessary for growth.

"Most venture capitalists will say that good management is more important than a good product, but I disagree. To me, nothing beats good demand for a product."

— Rao

what good R&D means. "We're not true innovators, in the sense of creating brand new products with new applications and principles. That's too much for most small companies to handle. We take what is known or what exists and push it one step further, or two steps at most. Marketing is hard enough without having to stop people and educate them about what a new product is and why people will need one."

Ruth Stormo (MBA '82), Paul's partner in both the business and marriage sense, serves as the company's international sales and market research manager. They both know that their industry stands on the brink of a major shakeout. Computerized desktop publishing will wipe out a large segment of the professional graphic design industry. Artograph has hedged its bets somewhat by diversifying in the area of value-added computer products. If you can't beat 'em, Stormo says, you can sometimes meet them on their own turf.

And *no more coasting*. "No more reaping benefits before their time. I'm putting in the long hours that the work needs. When I sell this thing, I intend to get my price."



Dave Dornbush is president of Alternative Pioneering, the result of a benevolent takeover that put a fledgling business back on its feet.

Unlike Paul Stormo, whose number-one rule seems to be "Avoid Reinventing the Wheel," that's pretty much what Dave Dornbush, president of Minneapolis' Alternative Pioneering, has done.

Alternative Pioneering is the maker of something called the Harvest Maid Home Food Dehydrator, a device for making things like beef jerky and fruit rollups at home. And Harvest Maid had to create its market from scratch. Dornbush, a marketing major, and several partners got the idea for Harvest Maid back in grad school.

Dornbush and company decided they wanted to manufacture and market a home-appliance product with "veiled market potential." The market had to be small enough to keep big manufacturers from jumping in after them. But it had to be genuinely useful, so that it actually met the market need it sought to create.

And it had to be proprietary—they wanted to sell accessories to cash in on repeat business. The food dehydrator seemed to fill the bill, and Dornbush recalls thinking he had it made. "Entrepreneur Finds Gold in Prunes," the headlines would say.

"It was touch and go for a long time," he said. "We had problems with our manufacturer, we ran out of money several times, and key people started to leave. I kept thinking, 'I've heard horror stories like this.'"

Just when it seemed Dornbush himself might be hung out to dry, the darkness passed. Fresh capital arrived in the guise of a benevolent takeover by Frank Griswold, himself an entrepreneur, who put Alternative Pioneering back on its feet. Better yet, the Harvest Maid machine was picked up by Montgomery Ward and advertised on the inside cover of a catalog. Alternative Pioneering was a success.

En route to success, however, Dornbush learned many things that might be uttered and heard in a classroom, but never quite *learned*. Still, he is enthusiastic about entrepreneurial studies. "The

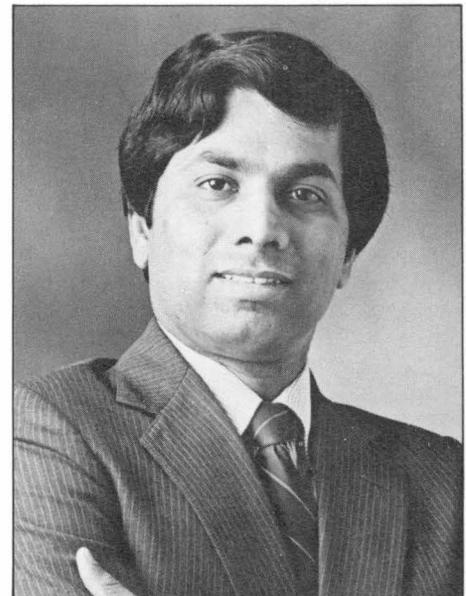
heart of good business, I am convinced, is good planning, and most entrepreneurial types need help in that area.

"Just having a really good idea is no guarantee of success," he said. "If I had it to do all over, I would make sure that we gave more time to planning. Poor planning is the Achilles' heel of even good businesses."

The president of InterFinance Corporation of Minneapolis knows all about entrepreneurs. As publisher of reference books and periodicals directed toward high technology startups and venture capital groups in the United States and internationally, Dileep Rao ('75 PhD) is in touch with more entrepreneurs than just about anybody.

As head of his own company, which itself faces all the problems he consults other companies on, he is one. And it is rough sledding all around.

"Frankly, I'm concerned these days about Minnesota as a place for people with business ideas," Rao says. "I am especially concerned about our state as a place for high technology. There was a



Minnesota gravely needs new entrepreneurial blood, according to Dileep Rao, president of the high-technology publisher InterFinance Corporation.

"The entrepreneurial philosophy holds that opportunities don't come by every day and when one does, it's a window that must be opened."

— Buuck

time very recently when the state was billed as a leader in this area. But that is not how we are regarded by others. Even a casual look at the literature shows that Minnesota firms are seldom mentioned in high technology. Is that because we don't get good publicity, or is it because it is true? It's a very important question."

Entrepreneurs carry risk, Rao says, but they can't even begin to do that without proper capitalization and support. In California, New York and Massachusetts, the capitals of capital and of high tech, venture capital groups very commonly incubate their own enterprises, creating the concepts and providing management, helping to assure success. Money actually creates leadership, and not vice versa. Apart from some similar work done by Control Data, Minnesota is not competitive in that area.

Rao is in most matters a contrarian. His philosophy of risk, for example, is that entrepreneurs achieve the most when they expose themselves the least.

"When I began my own business, publishing directories, I was terribly ignorant of the high cost of publishing. If I had known of the risk, I wouldn't have tried. But then I *had* to publish, to recoup my investments. Fortunately, some good up-front account contracts saved me."

He is likewise contrary in his vision of entrepreneurial success. "Most venture capitalists will say that good management is more important than a good product, but I disagree. To me, nothing beats good demand for a product. A good product with a good market pulls along mediocre management routinely. And you can always bring good people in to maximize profit."

Contrary to his contrarianism, Rao is excited about entrepreneurial studies. "The principles and experiences and philosophies of those with entrepreneurial experience can be transferred to people without it. My only caution would be about meeting the expectations of students. Learning the process of entrepreneurship will not transform them into entrepreneurs."

And, Minnesota gravely needs new entrepreneurial blood, Rao says, particularly in high technology. "We can't afford to be complacent. I myself am dependent

upon the changing trends in high technology. If it pulls away from Minnesota, I would find it difficult to stay here."

Bob Buuck (MBA '71) certainly deserves to be on even the shortest list of alumni entrepreneurs. As president and co-founder of American Medical Systems, a \$42 million manufacturer of urological devices, he took a company a very long way in a relatively short time. But what makes his case especially interesting is his delight in having been acquired this year by the pharmaceutical company Pfizer, Inc.

"We started AMS in 1972. There were four of us—the others had the medical and engineering backgrounds, I was the business fellow. I swallowed hard and ventured out into the cold."



American Medical Systems president and co-founder Bob Buuck took his company a long way in a short time and was acquired this year by Pfizer, Inc.

Why take on the danger and uncertainty? "You have to have an entrepreneurial philosophy," Buuck says. "It holds that opportunities don't come by every day and when one does, it's a window that must be opened. This was my window."

AMS didn't even have a product during its first months, just a concept. "It was a classic shoestring operation. By the third year we were still undercapitalized, and that by a \$500,000 loan against my personal collateral, which amounted to maybe \$20,000. But the bank was smart—they knew how to motivate me."

With the first crumbs of venture capital came unfavorable intrusion into the business—that "angel" enjoyed rights of first refusal and a strong stock position, and should have turned Buuck and company off to the idea of allying itself with another company again.

"I'm still not an enthusiast for being a takeover target," Buuck says. "Our acquisition just happens to have worked out very well for us. No jobs have been lost, some have been enhanced, while a few have been 'un-enhanced,' as financial controls have reverted to the parent company. And we finally have the financial strength to do what needs doing."

Buuck claims he feels more entrepreneurial than ever, as he sits on the boards of several small startups, and keeps an eye out for promising new enterprises. And getting that "great idea" through to a market is still the greatest high in business. "When I was first called an entrepreneur, I felt insulted. You wanted to fill out the phrase, 'entrepreneur indicted for...'

"Today I'm more comfortable with it." As Dick Cardozo says, it's not one thing, but a range of behaviors. You ought to be a bit of a scrapper, you need to have a high energy drive, and maybe it helps not to come from a pampered environment.

"You don't want to be crazy. But you ought to have a dream." ■

Editor's note: In this article, we were only able to scratch the surface of entrepreneurial activity by Carlson School of Management alumni. We would like to feature more news about entrepreneurs in future issues, so please keep us informed of your endeavors.

Physician, heal thyself: A new approach to managing information resources

by Miriam Feldman, with Salvatore March

Professor Salvatore March and graduate student Young-Gul Kim have taken the proverb "physician, heal thyself" literally in a new study of "metadata" for information resource management. "Metadata is simply data about data," explained March, an associate professor of Management Information Systems in the Department of Management Sciences.

"A basic problem in managing information as a corporate resource is defining exactly what that resource is all about," he continued. "We are trying to develop a clear and concise definition of the corporate information resource so that methodologies and tools can be developed to manage it. The entire emphasis in information systems technology for a number of years has been to develop a requirements definition that can be validated by those being served by the information system. Our approach is to paint as broad a picture as possible, and to develop the requirements for that system."

March points out that managing information resources is a problem for many organizations. In fact a leading expert in the field has observed that in most organizations there exists a better inventory of the chairs in which people dealing with data sit, than an inventory of the data with which they deal.

March concurs. "At first I thought that was an incredible statement, yet it seems to be true. In discussions with local companies and professional organizations the issue of how to manage information surfaces regularly. Symptoms of this problem arise in situations when a manager makes a seemingly reasonable request for information and the people in data processing simply can't respond in a timely fashion. In one company, for example, the question 'Who are our best customers?' literally could not be answered directly from the computer-based information systems. In another company, changes to operational systems were delayed because it was difficult to determine the impact changes in one computer file would make on other operational systems."

Information is recognized as an important corporate resource, and its effective management can have significant bottom-line implications. But it is difficult to manage the information resource and a major reason is that it is not as

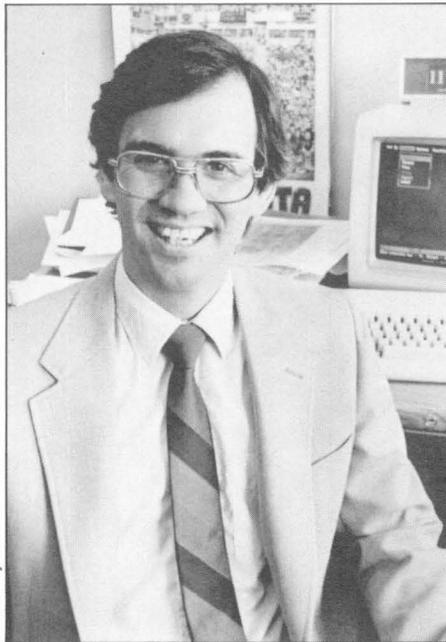


Photo by Jim Hansen

Salvatore March, associate professor of Management Information Systems. Support for March's work has been provided in part by the McKnight Foundation. It has been published at the University of Minnesota as a Management Information Systems Research Center working paper (MISRC-WP-87-15). It has been submitted to the Journal of Management Information Systems.

well defined as other resources. March and Kim's work is an attempt to improve this situation.

"We do not have a great deal of experience with managing this resource," March said. "First of all, we are talking about computer software and data bases that took decades to develop. I'm not sure if it's billions, but it is clearly millions of instructions that we're dealing with. No one person can possibly comprehend all of the interdependencies or intricacies of such systems. We need computer systems to help us manage our computer systems. And that's what this work is all about."

To effectively manage any resource, the first step is to define the nature of that resource, and March and Kim have therefore proposed a model for corporate data. This model represents the data definition, or metadata, for information resource management. Through this metadata, the current state of the information resource can be made explicit. In addition,

it can facilitate planning for and controlling its development.

This work is not unique to March and Kim, or to Minnesota. "Many people have been working on these problems for some time and we have relied heavily on this earlier research," March explained. "The National Bureau of Standards, for example, has sponsored two working conferences in the past four years on information resource management, and the American National Standards Institute has a working group on Information Resource Directory Systems. This project is extending some of that work."

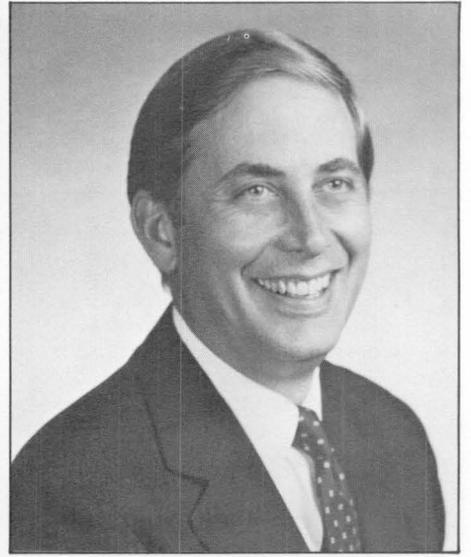
"The basic notion is that information systems exist to support the business," said March. "What we are trying to do is to manage the data about the information systems so that they can better support management. The first step in that process is to define and understand the resource."

The important message for management, says March, is that, "managing information as a resource has both costs and benefits to managers—not just to the technical data processing people. All managers must 'buy into' the concept. If information is a corporate resource, then developing information systems is a corporate activity, not just a department or divisional activity. If other areas in the company are to benefit from the information, they should share in the responsibility for the development of the system. This includes both their personal time and their financial resources."

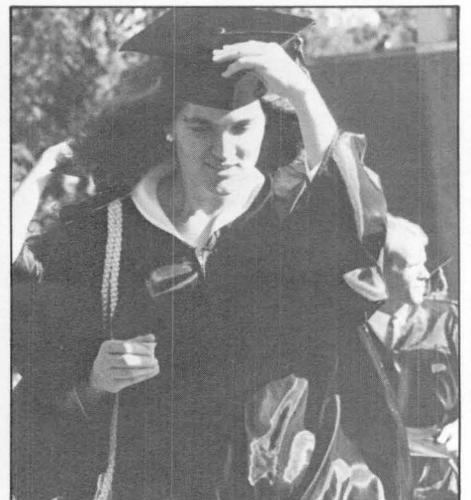
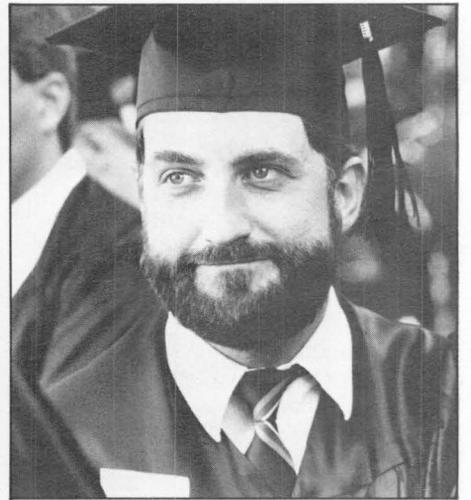
As an example, March cited the development of an order processing system, which would typically be developed chiefly for the accounting department. But such a system must also capture information for inventory management and marketing. If accounting is given the entire responsibility for developing the system, it is unlikely that the other departments will have their information needs met.

The theoretical model for data proposed by March and Kim should serve to define what data is used by whom and how the data needs are interrelated. This information will facilitate cooperation among departments in developing information systems that truly meet management needs. ■

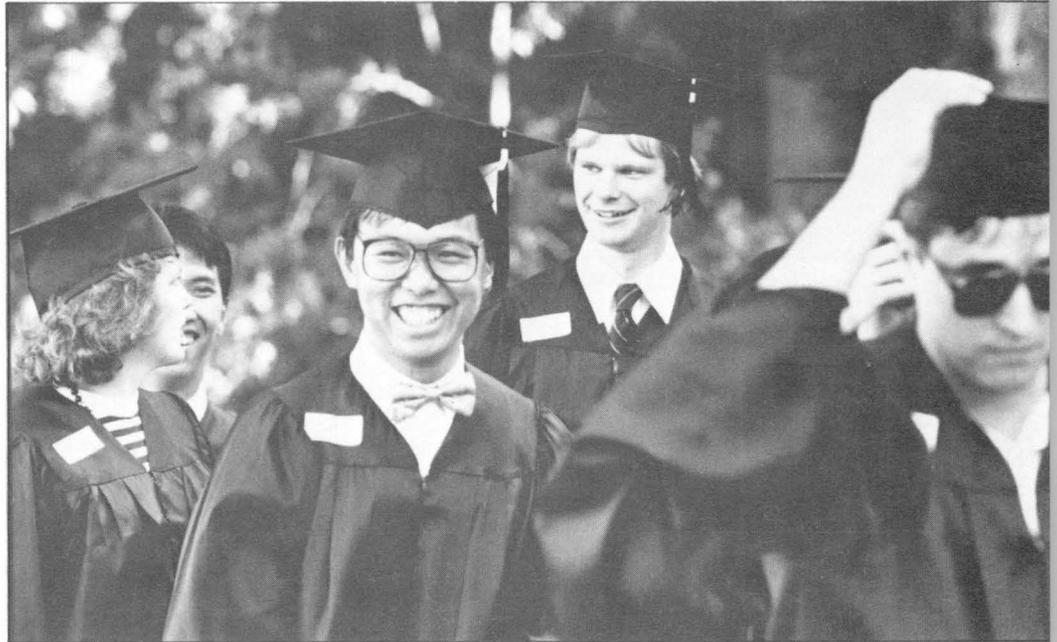
Miriam Feldman is a freelance writer working in the Twin Cities.



Presenting this year's commencement address was James D. Watkins, CEO and CFO of Golden Valley Microwave Foods. Watkins founded Golden Valley Microwave Foods in 1978, after leaving the Pillsbury Company, where he had developed microwave food products and programs. He went public with the company in 1986, with one of the country's top money-making initial public offerings of the year. Watkins is a 1969 alumnus of the school.



Students wind up their degrees at spring commencement



Our first combined spring commencement ceremony as the Curtis L. Carlson School of Management was held on June 14 at Northrop Auditorium, with 515 bachelors and MBA graduates participating. It began with a procession up the mall from Coffman Union, accompanied by flag bearers, the Canon Choir of Brass and, unfortunately, 95-degree heat.

Speakers at the ceremony included Tom Rasmussen, '87 MBA, Greg Guenther, '87 BSB and Jim Watkins, CEO and chief financial officer of Golden Valley Microwave Foods and alumnus of the school.

In the academic year 1986-87, the following numbers of Carlson School students received degrees:

- 477 BSB, regular
- 191 BSB, accounting
- 485 MBA
- 43 MAIR
- 11 PhD
- 2 PhD in Industrial Relations

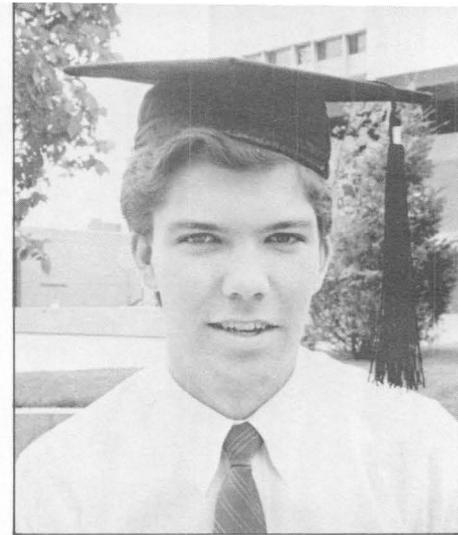
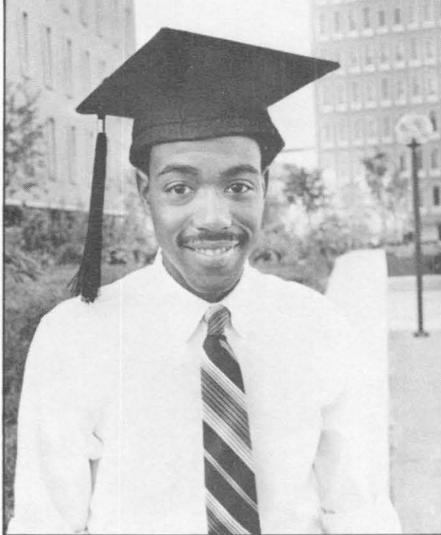
On the following pages, profiles of 12 graduates give a representative picture of the class of 1987—who they are, what brought them to the Carlson school, what motivates them and where they're going. Congratulations to an outstanding class of students!

Several awards and honors were announced at the June 14 commencement ceremony, including:

- The Pillsbury Scholastic Achievement Award, to Susan Kimmel, BSB
- The 3M Marketing Leadership Award, to Kathy Rypstat, BSB
- The undergraduate Wall Street Journal Award, to Michael Binger
- The Alpha Kappa Psi Scholarship Medal, to Susan Kimmel
- The Alpha Kappa Psi Tablet, to Sandra Famodu, BSB; Greg Guenther, BSB; Beth Johnson, BSB and Christine Madson, BSB
- The Business Association of Minorities Outstanding Achievement Award, to Angela Archer, BSB
- The Delta Sigma Pi Scholarship Key, to Mary Betzel, BSB
- The Tomato Can Loving Cup Leadership Award, to Sandra Famodu
- The MBA Wall Street Journal Award, to Jane McCrossen



Angela Archer, BSB, received this year's Business Association of Minorities Outstanding Achievement Award.



Walter Cox
'87 MBA

After talking to Walter Cox for awhile, you get the idea that he has always been very sure of what he wants, and has made careful choices along the way to get there.

He had college in mind when he chose to go to private high school in Minneapolis. Then as an undergraduate at Stanford, he says, "I knew I wanted to come back to the Midwest to get an MBA and work, so I majored in industrial engineering, which is really the business side of engineering, to provide some balance and prepare for my career. As it turns out, engineering really developed my problem solving skills, and exposed me to the operations side of business."

While at Stanford, Cox worked at the Stanford Linear Accelerator Center, working with manufacturing engineers on production scheduling, handling materials and dealing with outside vendors. He has also had summer internships with IBM Corporation and worked as a financial analyst for Unisys.

As an MBA student here at the Carlson School, Cox concentrated in finance and general management. "I'm mainly interested in general management, but I see finance as a necessary skill for the long term," he said. "It's a good combination."

Cox begins a position as management trainee at the Oscar Mayer Company in Madison, Wisconsin this summer. He calls the job "a good synthesis of all my different experiences and skills."

"I think it's important to find a balance in your life between school, work and social activities," said Cox, who's been a member of the MBA Association, the Society of Black Scientists and Engineers, the Stanford Black Student Union and played on the Stanford Varsity Basketball team.

Cox has also volunteered as a tutoring coordinator for Hospitality House, Inc., a youth organization. "I was involved with them as a kid, and I wanted to give something back," he said. "Since academics is my strong point, that's what I try to give."

Barbara Spotts
'87 BSB, Accounting

When Barbara Spotts first started at the university in 1974, she was majoring in biology and thought she wanted to be a doctor. She got a degree in respiratory therapy, moved to Oregon with her husband and began working as a therapist.

A few years later they were back in Minnesota again. Spotts joined the staff at University Hospitals, first as a laboratory technician, then as a respiratory care practitioner in a pediatric intensive care unit. She had two sons.

"About that time I decided I wanted a change and that I would go back to school," she said. "I took beginning accounting and a microeconomics class, and found that I was good at it and enjoyed it. I decided to major in accounting." She continued working at the hospital at night and attended class during the day.

Spotts cut her ties with the medical profession a year ago. She became a TA in accounting and was elected president of the local chapter of Beta Alpha Psi, the national honorary accounting society. In this office, Spotts started a successful career series, bringing in accounting professionals from various organizations and specialties to help students learn more about career options.

"My contact with the business community through Beta Alpha Psi helped me decide where I wanted to fit in, and serving as president really improved my poise and confidence in dealing with the public," she said.

It also helped her get an internship at Arthur Young in the tax department, and this summer Spotts began full-time there as tax staff accountant, working with businesses.

"I like the tax profession because it's never the same and I enjoy the research and detail," Spotts said. "I also like helping people run their businesses better by figuring out their best tax advantages. I'm very pleased with how things have turned out."

David Peterson
'87 BSB

A position in Prudential's coveted Pace management trainee program is what it took to entice Dave Peterson, a wilderness camping enthusiast, to move from Minnesota to Newark. "I had other offers, but this one stood out as the right thing for me," he said.

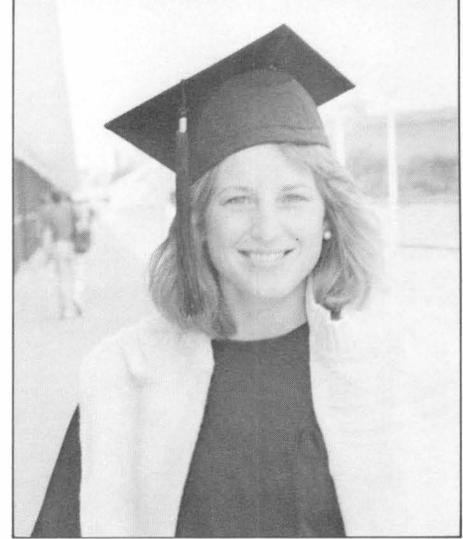
Prudential hires only 20 undergraduates each year for its Pace program. Peterson will spend six months in intensive finance training, followed by two full-year rotations, each focusing on a different investment area. "This way you get a feel for what you want to do," he explained. "Then you can apply for a position in the area of your choice."

As part of the interviewing process for the Pace program, Peterson spent several days at Prudential's corporate headquarters in New Jersey and talked to current Pace trainees. He liked what he saw. "They seemed to be very competent, motivated people who get satisfaction from working hard and doing well. And yet there's a good feeling of camaraderie. That kind of environment really excites me."

He should fit in well. He's been an honors student and has worked to pay for his tuition throughout high school and college. This past year he was a marketing sales assistant for Nynex Business Center.

Peterson, who started at the university in the Institute of Technology, previously worked in 3M's Commercial Office Supply Division, writing test methods for quality control. "I liked working with the engineers, but the pre-management courses I was taking at the time interested me more than my engineering classes, and I realized that that's what I wanted to do," he said.

How does he manage his busy schedule? "I try to keep balance in my life—a little work, a little school, keep up with my friends, and I don't let one thing suffer because of the others. And whenever I can, I get away into the wilderness. That's what really helps me maintain my sanity."



Brent Sherwin '87 MBA

Brent Sherwin is the classic MBA student. When he enrolled in the accelerated program last June, he already had a B.S. in business and finance from the University of Montana, three years of experience as a banking systems analyst and five years as an independent systems design consultant under his belt.

He recently sold his consulting business, which had grown to 15 employees, but he continued working full-time as a systems analyst for G & K Services while in graduate school. "It's been an intense year," he says humbly. "I'm looking forward to having more time to relax with my wife and two kids."

This summer Sherwin begins a position as marketing assistant for The Pillsbury Company. He says he got the job through a field project with the company. "I had interviewed with Pillsbury the year before," he explained, "but since I wasn't a marketing major, it didn't go any further." His first assignment in his new job will be to implement a direct product profitability system that the field project team designed.

Sherwin views marketing as a key strategic function and says that taking a marketing position was a natural extension of his MBA concentration in strategic management and finance.

"I'm interested in strategic management because this is where I think American business falls short. And when you define finance or marketing broadly, you see that they really drive the business. What excites me is looking at all the strengths and weaknesses in a particular situation and managing them so that you make a profit."

Sherwin strongly recommends getting some business experience before returning to school for an MBA. "It helps you deal with the theoretical framework of issues," he said. "I think that almost half of what you learn in class comes from discussing work experiences with your peers."

Mike Rappa '87 PhD, Strategic Management

For at least the past three years, Mike Rappa has thought a lot about the management of technological innovation. Three years ago he began research on his dissertation, a study of how technological revolutions, specifically the semiconductor industry, develop over time. He defended his dissertation in June, and begins teaching this fall as assistant professor of management technology at MIT's Sloan School of Management.

In a project supported by the Strategic Management Research Center, Rappa studied the activities of several thousand researchers in about 300 organizations between 1976 and 1986, looking at factors such as mobility, industry concentration, integration, networking and technology diffusion. This formed the basis of his work.

Rappa pointed out that technological revolutions do not happen in isolation. There is a bandwagon effect to this activity, and managers need to understand how the industry as a whole is coalescing so that they can decide how much of a commitment their organization should make.

"In Japan, the government will do some of this tracking for industry, because they're dealing with relatively few organizations. In the United States, technological development is more random and hundreds of organizations are involved, so it's harder to comprehend the full magnitude."

Rappa, who has a B.A. in economics from Union College in New York, brings ample industry experience to his research. He spent a summer in Japan as an industry analyst for IBM World Trade Corporation's Asia/Pacific Group, and has held internships with IBM in their General Technology Division and Litigation Department.

"I'm really committed to university research," said Rappa, "because as an unbiased researcher, you're able to provide knowledge that will help hundreds of organizations around the world. No other institution can fill in this gap."

Sandra Fiechtner '87 MAIR

A series of career changes has taken Sandra Fiechtner from teaching home economics in Crookston, Minnesota, to a position as associate personnel representative with Pfizer, Inc., in downtown Manhattan.

With a B.S. in education from North Dakota State University, Fiechtner put in a short stint teaching home economics. Then she became an assistant manager at the North Dakota Dairy Council in Bismarck, developing statewide promotional campaigns and implementing a nutritional education program for grades K-6.

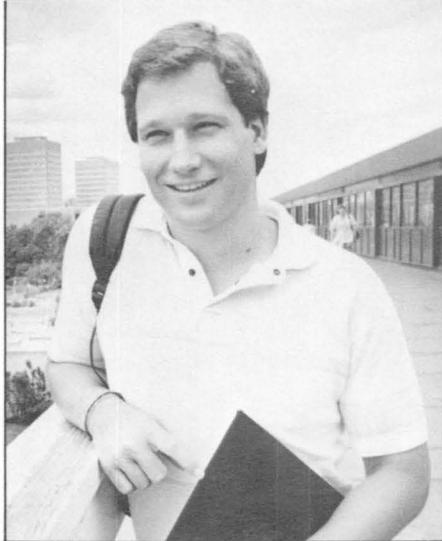
While working on radio and television programs for the Council, Fiechtner became interested in broadcasting. She also thought about getting a graduate degree in business and took a job as an account representative for Meyer Broadcasting Company in Bismarck. "I still consider sales a good starting point if you're interested in business," she advised.

After four years, Fiechtner was ready for graduate school. "The reputation and flexibility of the industrial relations program are what attracted me here," she said.

Shortly after beginning the program, Fiechtner was hired as a graduate assistant on a research project with Northwestern Bell, conducting interviews and writing job descriptions for a five-state area. "That was an outstanding opportunity," she said. "Job analysis is so important to human relations."

In an internship at Pfizer last summer, she led a task force to investigate skill-based pay systems and work design. In her new position, Fiechtner will be in Pfizer's pharmaceuticals division, which has 42,000 employees.

But her first task when she gets to the city is to find a place to live. "I want to live downtown, close to work," said Fiechtner, who grew up in a small North Dakota town. Fortunately, the company owns some apartments where employees can stay for two months. "I'm really excited about living in New York City."



David Bogenschultz
'87 MAIR

The global village is home to David Bogenschultz, who has traveled, worked and studied abroad since he was an exchange student in high school.

While an undergraduate in international relations at Beloit College in Wisconsin, Bogenschultz fulfilled a field project requirement working with the archives of a manufacturing company in Hamburg, West Germany. After graduation he went to India as part of the U.S. Youth Delegation to the People to People World Conference, traveling around the world on the way home.

He came to the Twin Cities and began taking graduate courses in German. A three-week international seminar took him to East Germany, and then to Gdansk, Poland, where he met Solidarity labor leader Lech Walesa.

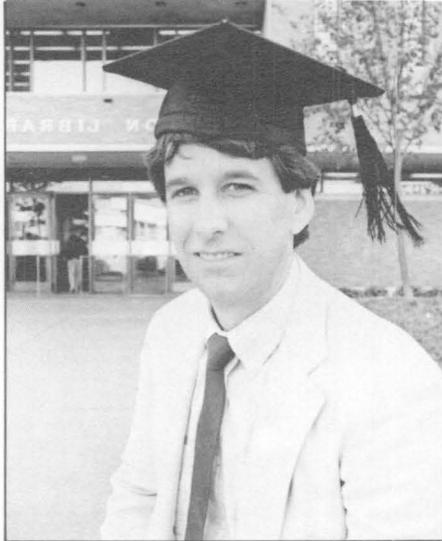
"That meeting helped me decide what direction I wanted to take in my studies," said Bogenschultz. "I decided to focus on labor markets and collective bargaining."

Bogenschultz started working on an MAIR, choosing the Plan A thesis program. He spent almost a year in Nairobi, Kenya as an intern under the Minnesota Studies in International Development program. There he worked at the Mazingira Institute, which sponsors studies on the environment and economics, in connection with policy proposals to the government. He also collected data on labor markets in 12 Kenyan municipalities for his thesis.

"My thesis is a study of urban labor markets in developing countries," he explained. "It looks at how the traditional and modern labor sectors develop in response to supply and demand."

Bogenschultz plans to work locally for awhile to gain experience with labor organizations, and then hopes to use these skills in an international career.

"The institute in Kenya had connections with other agencies, and I got to see the kinds of work and research being done. I'm interested in being a part of that kind of work."



Tom Renshaw
'87 MBA

A senior research chemical engineer at General Mills, Tom Renshaw was given responsibility for managing large food research projects and found that he needed to broaden his management abilities. He enrolled in the Evening MBA program, choosing a self-designed concentration in organizational leadership.

Renshaw has a BA in political science and a BA in biochemical engineering from the University of Michigan. He has also graduated from General Motor's apprenticeship program as a machinist and has a journeyman's card.

"I don't know when I haven't been in school," he said. "I always like to pursue different interests and increase my capabilities." Renshaw has been with General Mills for eight years and plans to stay with the company.

As is typical with Evening MBA students, Renshaw said that he often used what he learned in the classroom right away on the job. "Discussing issues from my work environment in class made the material very relevant, and then I was able to carry insights back to my job as well," he said.

Renshaw would advise people who are considering going back to school for an MBA to have a specific goal in mind. "It's a lot of work, especially if you're working full-time, so be clear as to your expectations of what you think the degree will do for you and how you want to apply it," he said.



Mark Baier
'87 MBA

As national marketing representative for a computer-generated map company, Mark Baier traveled half of the time. When a new manager increased his traveling time to more than 75 percent, Baier realized he was ready for a change.

"I quit my job and enrolled in the MBA program," he said. "It's been the biggest decision in my life so far."

But before taking the leap, he carefully assessed where he'd been and where he wanted to go. "I looked at my objectives, my skills, my previous education and work experience, and thought about how it could all fit together," said Baier, who has a BA in geography from the university. "It's important to think about what makes you happy and then package yourself to get the job you want."

He chose management support systems (MSS) as an MBA concentration, drawing on his background in computers. This summer he begins working as a management systems analyst for Cincinnati-based Procter and Gamble. But getting his foot in the door at the company took some ingenuity on Baier's part.

"I learned that Procter and Gamble wasn't going to recruit at the university this spring, which disappointed me because they had been influential in designing the MSS curriculum," he said. "So I wrote them a letter, which was followed by a 45-minute telephone conversation, and then they invited me out to Cincinnati to interview."

"It's an ideal job for me," he continued. "I'll be solving problems that will use my computer skills, quantitative analysis skills, financial analysis, really the whole degree."

While in the program, Baier was involved in the MBA Association and served one term as president. "I think you get out of things what you put into them," he said. "You can just attend classes and do the necessary work, but when you get involved in extra activities, the benefits far exceed the effort."



Sandra Famodu '87 BSB, Accounting

Sandra Famodu is the kind of person you think of when something needs to get done. Recipient of this year's Tomato Can Loving Cup Leadership Award, she is highly deserving of the honor.

Famodu has been vice president of public relations for the Society for the Advancement of Management for two years, promoting their events, developing a bi-quarterly newsletter, representing the chapter at conferences, planning the 1986 regional conference and increasing chapter membership six-fold.

She was also vice president of public relations for Business Board, co-chair of the 1987 Career Fair and chair of Awards and Arrangements for Business Day. Famodu has volunteered as a peer advisor, an income tax preparer for the Minnesota Accounting Aid Society, a commencement marshal and a tutor.

"Getting involved in school activities is a good way to make a big university small," she said. "It's also a personal challenge for me to do as many different things as possible and balance all my commitments."

"I think it's crucial to set priorities," said Famodu, who is married. "My family comes first. Classwork comes before extra activities. Every quarter I make a master plan to schedule everything in."

An honors student, Famodu is a member of Beta Alpha Psi, an honorary accounting fraternity, and Beta Gamma Sigma, a national honorary business society. And on top of everything else, she has worked throughout college, as an income tax preparer, as an internal audit intern and as a deputy administrator for the Stearns County courthouse.

Famodu said her interest in accounting began early. "In high school I worked for my mom in her bookkeeping business, and had total responsibility for one of her clients."

She plans to study for the CPA exam this summer and work for a public accounting firm in tax in the fall.

Nancy Melone '87 PhD, MIS

"I have approached my professional life in a rather entrepreneurial and free-spirited way," says Nancy Melone, referring to the many directions her interests have led her in.

Melone just defended her dissertation, but has been assistant professor of Industrial Administration at Carnegie Mellon University for two years—an unexpected career choice for someone starting out with a BA in foreign language education and an MA in library science from the University of Iowa.

"I lived in Munich for three years and then worked for the University of Iowa as media director and lecturer, she said. "When the public sector collective bargaining act was passed, I went back for a degree in labor negotiations."

She became interested in technology while working on an organizational behavior project. "My professor needed someone to do programming and suggested I take a Fortran course. I wrote 36 programs that year."

The next summer she visited Minnesota's Carlson School of Management, hoping to take a course in management information systems. Instead she enrolled in the MBA program in MIS and then went on for a PhD. "I was a non-traditional student," she said. "There weren't many women in the department and my background was very different from others."

Feeling that she needed more experience in industry, Melone worked on special projects involving office automation systems for First Banks and man-machine sciences research for Honeywell. "I was going in two directions and had to choose between academics and industry," she said. "But the experience changed my outlook and helped me incorporate a strategic management perspective into my thinking."

It significantly influenced her thesis, "Expertise in Corporate Acquisitions: An Investigation of the Influence of Specialized Knowledge on Strategic Decision Making." "My humanities background has given me the ability to move fluidly among disciplines," she said.

Carolyn McCann '87 MBA

Carolyn McCann has always approached education as a way to broaden her outlook. As a pre-law undergrad at the university, she majored in international relations and political science. "It's an interdisciplinary major," she explained. "For example, I studied history, political science, geography and French." She also spent a summer in Paris at the Sorbonne.

McCann graduated from law school in 1980 and joined Duluth's largest law firm. "That experience gave me the chance to see a lot of things happen," she said.

"Duluth is the focal point of the Iron Range—it's the center of medicine, education, shopping and business for the area."

Working with businesses in the area "got business in my blood," she said. "I thought it would be fun to be with the people who are making the deals happen."

So with the goal of working in the legal department of a large international corporation in mind, McCann returned to the Twin Cities to get an MBA. "I needed a broader business background and I decided to concentrate on finance because it would help me most in what I want to do," she said.

This summer McCann is interviewing for openings in the field. "Corporate law is a tight market and most corporations hire out of law firms they're working with," she pointed out.

But she feels that she has a unique combination of skills to offer. "An MBA exposes you to a wide variety of issues and ideas and I think that's very important. There is also a lot of group work in the program, which is an excellent way to practice group dynamics. After all, working with other people is a big part of life in the business world." ■

Business Day '87

*A global view of business featured
at this year's event*



Speeches, panel discussions, small-group discussions, question and answer periods, all focusing on the implications of doing business in an international marketplace—that was Business Day '87. Executives, students, faculty, government and labor officials, alumni—all took part in exploring the global perspective and how business and education can cooperate to enhance our ability to compete and prosper.

Sponsored by the MBA Association, the Business Board and the Carlson School of Management, the annual event was attended by over 500 people this year, including representatives of 60 sponsoring companies.

David Speer, Minnesota's commissioner of Energy and Economic Development, spoke about Minnesota's trade policy in the opening address. At the evening banquet, James Spicola, president and CEO of Cargill, Inc. and a member of the school's Board of Overseers, described the primary management objectives of the company's international operations.

Afternoon concurrent discussion sessions were devoted to a range of international business issues, including competition, industrial relations challenges, marketing strategies, service industry challenges, free trade versus fair trade, technology transfer, accounting practices and the advancement of women.

To recognize and celebrate the Minnesota management community's success in incorporating a global perspective in their operations, Governor Rudy Perpich proclaimed April 21 to be Business Day 1987 in the state.



Business Day 1988 Tuesday, April 19th
*Radisson University Hotel
(East Bank Campus)*

If you would like to receive advance information about next year's Business Day, or would like to participate as an alumni discussion leader or corporate sponsor, please call Jeanne Katz, director of Alumni Development and Student Relations at (612) 625-1556.



Photo by Jim Hansen

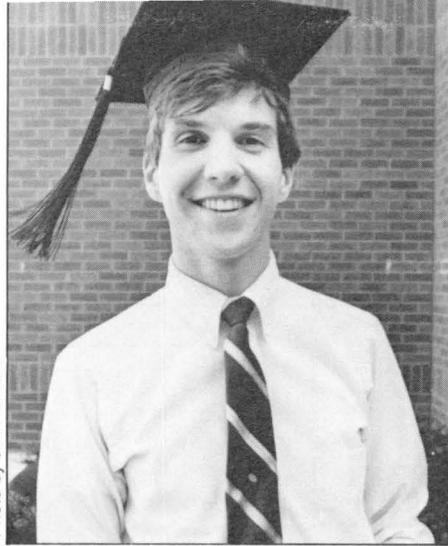
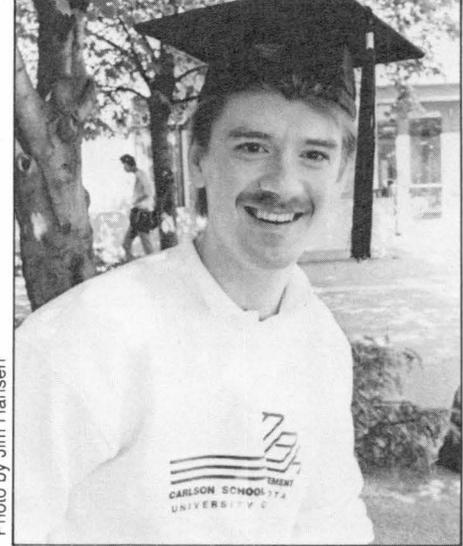


Photo by Jim Hansen



Greg Guenther '87 BSB

Co-chairing Business Day and serving as vice president of the Business Board would be enough involvement for most undergraduates. But not for Greg Guenther. In the past year alone he has been president of the University Ski Club, chair of the Student Services Fees Committee, the school's student senator on the University Senate, a member of the University Credit Union Committee and the undergraduate speaker at commencement. He was one of 164 students receiving this year's President's Student Leadership Service Award.

"It's really been rewarding," said Guenther, who aspires to a leadership position in management. "It's a good way to learn what your skills and limits are. If I had it to do over again, I wouldn't do it any differently."

He said chairing the Student Services Fees Committee was especially valuable as a management student. He explained that every quarter each student pays a fee to support about 30 organizations, such as health and recreation programs and the unions. It amounts to about \$12 million a year and it's up to the committee to decide how the money should be spent and to set the fee levels.

"Part of the process includes listening to everyone who has an opinion about where the money goes, or even whether there should be a student services fee at all. Our wrap-up meeting was nine hours of debating," he said.

Guenther said that Minnesota is one of the few universities that give students this much control over such fees.

Business Day was another highlight. "I enjoyed being part of a big project and taking it all the way through, dealing with one theme and refining it," he said. "It was also a good experience working with a committee structure, where you take a large project and break it down into smaller parts."

Guenther plans to work in business for a few years to broaden his experience and then go back to school for an MBA.

Tom Rasmussen '87 MBA

Co-chair of Business Day '87 and president of the MBA Association, Tom Rasmussen said his MBA experience would have been "one-hundred percent different" if he hadn't been involved in the organization.

"Classwork gives you the basic tools you need, but the ability to use them in working with people is key, and this is what I learned through the MBA Association," he said.

"Getting a group of people to do things just isn't that easy," he continued. "I learned how to run a meeting, facilitate a discussion, delegate responsibilities, hold people accountable, and be organized."

The experience also taught him to be more comfortable speaking in front of a group. "I actually found that I enjoy it," said Rasmussen, who was the MBA speaker at this year's graduation ceremony.

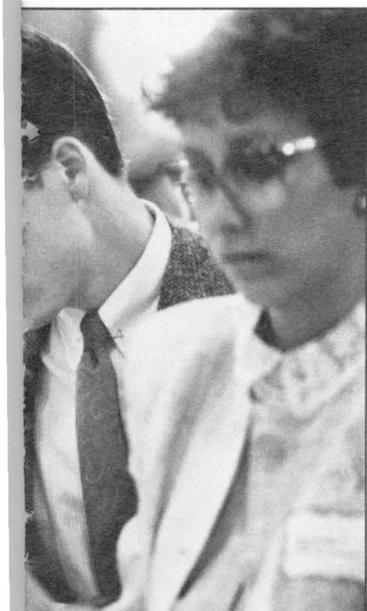
He said the main frustration with student organizations is the amount of apathy among students. "Not enough people get involved. There's a small group of people who do and they're incredible."

Rasmussen has a BA in theology from St. Olaf's College in Northfield, where his father taught religion. After graduating from St. Olaf's, he got a job as dining room manager at the Palm Court Restaurant in Edina.

"That's where I found out that I had an interest and an aptitude for the business," he said. "It's also when I realized how little I knew. I decided to get an MBA."

He chose management decision support as a concentration and began a position with Arthur Andersen as staff consultant in information systems this summer.

While in graduate school, Rasmussen worked as a TA, as an intern consultant with Arthur D. Little, Inc., and as bass player and singer for the Hi-Tops band. "That was my relief from studying. You can't get any further than that from the MBA program, mentally or physically."



Winning in the field: A look at this year's top MBA field projects

by Martha Douglas

A model developed by an MBA field project team working at Valspar Corporation this year "has the potential to save the company more than \$500,000 a year in the cost of purchased raw materials," according to Doug Smith, assistant director of Purchasing at Valspar.

The Valspar project is an excellent example of a field project that is not only an outstanding learning experience for the students, but is extremely valuable for the company as well. It is also winner of the 1987 MBA Field Project of the Year Award.

The MBA field project is considered by many to be the highlight of the day MBA program. During the 14-week project, interdisciplinary student teams study actual business problems, formulate and recommend solutions. They work directly with company representatives, and meet regularly with a faculty member who advises the team and evaluates their work. Final results are presented in written and oral reports to both faculty and company executives. This past year the school sent about 200 students into 50 sponsoring companies.

Each year the school's Board of Overseers selects one team as the MBA Field Project Team of the Year. Faculty nominate teams and the winner is selected by a review panel from the board. This year's judges were Bruce Allbright, chairman and CEO of Target Stores; Dennis Cavanaugh, chairman and CEO of Soo Line Corporation; and Lloyd Johnson, chairman, president and CEO of Norwest Corporation.

Team members of the winning "Raw Material Ordering Model for Quantity Discount Situations" for Valspar Corporation were Allan Gorsett, James Market, Don Nemcek and Tom Syverson.

"The team's professionalism was evident throughout the project, but was literally showcased at the final presentation," said George Benson, associate professor of management sciences and the team's advisor. "They fielded 25-35 questions—many of them quite difficult—from people at all levels within Valspar, including the president. They literally nailed every single question and put on a clinic that I wish all of our students could have seen."

The project team developed a model for evaluating raw material ordering decisions that combined information about

discounts, inventory and the timing of orders to effectively minimize costs. The ordering process and decision criteria were developed into a computer program using Lotus 1-2-3 that could be programmed on Valspar's mainframe and used at manufacturing locations around the country. The company has begun implementing the program in Minneapolis and expects to use it at other locations soon.

"Although Valspar has sponsored several field project teams, this was the first time I was involved personally," Smith said. "It was a very successful experience. I think we all learned from each other and gained insights from getting involved in new aspects of our business."

Team member Don Nemcek agrees that their good working relationship with the company was key to their success. "They were very cooperative in giving us the information we needed and resolving questions about what needed to get done," he said. "We spent the first three weeks narrowing the project's scope, which was very broad at first, and the company agreed on all of our proposed objectives."

Another key element of successful projects seems to be a good combination of team members. Rosemary Hauschild was a member of a runner-up team that explored growth opportunities at Wild Wings, Inc., a Lake City, Minnesota publisher of limited edition wildlife and sport prints. "I think we were a rare group," she said. "Everything seemed to fall naturally in place and we never even selected a leader or assigned standard rules and responsibilities. The problem involved several specialty areas that we each fell into by choice."

The Wild Wings team researched and uncovered growth opportunities in all sectors of the company's business, including retail stores, mail order and corporate sales. Hauschild concentrated on the mail order segment; team members Carole Eaton and Travis Finstad conducted a market research survey; and Tres Tronvold focused on the retail store business.

"For me, the measure of team-of-the-year quality for a project team is determined by what a team does *beyond* the requests of the client organization," commented their advisor, Charles Manz, assistant professor of strategic management and organization. "This team met in every way the initial requests of Wild

Wings and then a considerable measure more. They raised issues and provided data that extended well beyond what the client had hoped for."

For example, Tronvold recruited friends to shop at both Wild Wings' and the competition's retail outlets to compare customer service quality. The team also put together a packet of unique mail advertising techniques used by other businesses for Wild Wings' consideration. They used Wild Wings' products during the final presentation to the company, tastefully incorporating a sense of humor.

Baard Webster, Wild Wings' director of Marketing, said the team's recommendations will "definitely be used. People from all levels of the company were involved in the project, and that seemed to generate a lot of support internally."

The third finalist in the award competition was "Compensation Survey System" for the Northern Ordnance Division of FMC Corporation. Team members Rich Baker, Paula Berg, Barbara Claudon and Bryan Norris developed a computer system to match FMC job and salary information with approximately 40 external compensation practices with published survey data.

"This was an unusual, high-risk project," explained project advisor Dave Naumann, associate professor of management sciences. "We usually don't even take on systems development projects because unknowns are often discovered late and can lead to an extended development and revision period or dissatisfied system users. This team not only completed the project on time, but produced professional documentation to support it and trained key FMC system users as well."

Choosing a winner from among three outstanding projects was a difficult job for the judges. One commented, "The works are each of very high quality—quality that I would be proud to see in mature managers at this company."

"It's a two-way street," said Valspar's Doug Smith. "The students get a valuable learning experience and the company gets the long-term benefit. I'd do it again if I had the chance."

For more information about the MBA field project, or to find out how to sponsor a team, call the staff coordinator for the course, Kathleen Walter, in the Management Sciences Department at (612) 624-7827.

Computers in the classroom: Innovative computer applications increase information literacy

by Martha Douglas

You may assume that you have a high degree of computer literacy. You know how to use computer hardware and software to gain access to data—data that is becoming more and more an integral part of the workplace. But once you have that data, it will only be of limited benefit unless you also possess information literacy.

"Information literacy means understanding the nature of the information you have and knowing how to use it," explained associate professor of management sciences Sal March. "To use the information appropriately in making decisions, you should know certain characteristics about it, such as how old it is, how reliable it is, what sources it was derived from or how it relates to other areas. Computer literacy comes first and then information literacy goes one step beyond. And it's needed in all functional areas of an organization, not just the technical ones."

Helping our graduates become managers with high information literacy is the goal of 13 curriculum development projects underway in the last two years, funded by the IBM Program of Support for Education. March is the program's coordinator of curriculum development. The IBM grant, awarded in 1985, totals \$2 million over five years, with an additional match of \$2 million in university and industry funds. IBM has also donated unlimited software to the program. The money has been used to support research and curriculum development and to create new computer lab facilities.

Faculty from five departments have developed computer applications for new and existing courses that give students hands-on experience with manipulating data to solve problems. Using actual and simulated data bases ranging from a company's payroll system to worldwide trade figures, faculty teach students to look at the role of information in a broad context. "You can't just throw information out to students and expect them to solve problems. They need to understand the whole," said March. A computer laboratory with access to the school's mainframe computer has been created for students to use with a class or on an individual basis.

The following descriptions of six of the projects illustrate the types of applications being used. In addition to the 13 underway so far, another group of projects will be funded in the coming year.

CRSP and Compustat data in MBA finance courses: In this project developed by finance professors Pat Hess and Tim Nantell, students have access to two large financial data bases. Compustat contains annual data from the past 20 years for 2,000 firms and CRSP contains monthly and daily stock prices and dividends from major stock exchanges since 1926. Hess and Nantell developed models for students to use in solving problems that apply the financial theories learned in class. And as an offshoot, they found that with this teaching method students not only learned how to apply the theory, but they learn the theory itself much more successfully.

IR 8005 — Employee Compensation and Reward: Industrial relations professor John Fossum and undergraduate student Bob Laedtke constructed a simulated employee data base and a program that allows students to develop a compensation strategy and evaluate it month by month. The program contains random events and teaches students concepts such as how fluctuations in the labor market affect turnover and salary structures, or how salary increases affect performance.

MBA 8125 — Security, Control and Audit of Computer-Based Accounting Systems: Accounting professor Gordon Duke has constructed a payroll system for 400 fictitious employees, containing all the records that such a system would normally contain — taxes, insurance options, social security. He also created a computer program and files to use the system. The system contains 22 cases of errors in coding, logic problems and fraud, and students are challenged to devise an audit plan that uncovers them.

IR 8022 — International Human Resource Management: This new course, offered in the fall of 1987, will teach the relationship between international trade and employment. Industrial relations professor Mahmood Zaidi is developing a simulation program which

students will use to gain an understanding of the effects of changes in the international environment upon the internal human resource management policies of the organization. In addition a static data base containing history files and displays in graphic and tabular forms is being developed which the students will use to trace changes over time in summary information. For example, information on balance of payments, imports and exports, comparative advantage, personnel policies and global trading areas will be studied. Students will be asked to combine information from the data base with knowledge gained from readings on economic, political and social systems, values and attitudes towards work, personnel policies and reward systems, and labor-management relations to apply to the simulation program to face problems affecting business organizations in the world economy today. This simulation program and the data base will be available to those colleagues who are interested in increasing the international contents of their courses.

Using the IBM PC/AT in Expert Systems Education: Management sciences professor Paul Johnson and his students have implemented an expert system shell developed in his research on expert decision making on an IBM PC/AT so that students can build and experiment with their own expert systems. A series of video tapes on the process of developing an expert system has also been created. Students will use these and other materials to build models of expertise in different functional areas in a new course being developed for the 1988 school year.

MBA 8025 — Decision Sciences and Information Systems: March has developed a mini corporate data base for students to use in solving problems that illustrate the integrated nature of corporate data. For example, students will take a single transaction, such as a customer order, and work with it from the standpoint of several different areas — accounting, operations, marketing and finance. By manipulating the data this way, students can get an appreciation for the benefits and limitations of information, as well as its function as a corporate resource. ■

Let's not debunk the superwoman myth

by Anne M. Benisch

The media have had a field day lately bemoaning the fate of women trying to have it all and coming up short. Presumably *Fortune*, *The Wall Street Journal*, *Newsweek* and all the rest are giving us the bad news so we can adjust our goals downward.

We should appreciate the forewarning that women with MBAs are bailing out of corporations because they are not getting promoted to CEO. And settling into spinsterhood should be easier now that we know professional women over 30 can't find suitable husbands. If we have been fortunate enough to have found a husband and have children, we now know that finding quality day care is hopeless.

Wait just a minute! Don't tell me I'm hearing that familiar collective voice, all sugary and patronizing, saying, "Go home and bake. Don't run the corporate marathon. Don't compete, sweetie, because it's a tough world out there."

My mother never told me it was going to be easy. She never even said there would be prizes. She just taught me, through her own example, that the best of life is trying to be the best, on your own terms. As I work, raise children, participate in community affairs and enjoy my friends and pastimes, I feel more and more that excellence is not an achievement; it's an attitude.

Back in the sixties, Richard Nixon tried to get a man named Harold Carswell appointed to the Supreme Court. In an infamous plea for Cars-

well, a Nebraska senator proclaimed, "There ought to be a place for mediocrity on the Supreme Court." As far as I'm concerned, mediocrity has no legitimate place. The mediocre are not a protected class. And women should not set their goals to achieve mediocrity. Not at home, in the workplace, or in service to our communities. I reject this not-so-subliminal messaging that we should accept less. Lowered expectations are not the route to self fulfillment and are certainly not the route to equality.

Furthermore, if we debunk the superwoman myth, or stop trying to be superwomen, how are we going to compete as a nation? It won't help the balance of trade if 50 million working women readjust their sights and aim instead for a shine on the kitchen floor and no ring around the collar. Our ultimate competitive advantage could well be the full empowerment of all of our citizens, men and women alike.

I think it's important to tell our management students, about forty percent of whom are women, that the early years of marriage, family, and career are the toughest. That's true for each, and multiplied when you try to do it all.

I remember well the stress of being wife, mother, graduate student and working woman, all at once. I remember the anxiety of being plaintiff in a lawsuit against the boss, and also feeling plaintive about the quality of my casseroles for the school potlucks. I was lucky enough to win the lawsuit without having to forsake my career. And I learned to fill up my casserole dishes at the deli rather than sweating it out in the kitchen. It wasn't easy. It still isn't.

Fortunately, as more and more women balance professional careers and families, we are collectively building a repertoire of techniques. The working mom traveling on business who coaches her teenager through homework by long distance phone. The smart cookie who combines volunteer hours with mothering hours by taking an assignment that she can do with her children. The careerist who doesn't blink an eye leaving the office at two in the afternoon because of an urgent call from the day care

center. She knows a Saturday morning at the office can be twice as productive. Both her husband and her boss know it, too. She has quietly taught them.

My superwomen friends and I have learned that having it all perhaps means having it all in sequence, not all at once. Rather than worry about the imbalances—between job and family, work and play, contribution and reward—we are learning to be content knowing that lifestyle equilibrium is not a viable option. It's okay to have a run of days when you're not a contender for mother of the year. You can't be traded or put on waivers. And there's no sense beating yourself up when you face that frequent feeling of running in place. The start of a new sequence, and coping with the current one, require mountains of patience. Haven't women always been terrific at that? As for the world of work and the pressures of the male-dominated environment, on the days when we may wonder if key organizational decisions are being made without us, many women now have the authority and the resources to make a few of their own. We can (gracefully, I hope) take pleasure in their successes.

In short, we are defining how we can pursue excellence in a new order. It may be more of a steeplechase than a thoroughbred race. Fits and starts. Falls, breaks, and more than a little messy. The exhilaration of every success is magnified because the obstacles are so ubiquitous, so obvious. And, since it's our course, the aspiring superwomen's track, it is far from crowded.

It helps to lengthen the time horizons for evaluating the pros and cons of this lifestyle. It helps to know that meeting challenges and failures can be equally enriching experiences. All that experience defines a person. Most of all, it helps to know that, through the trial and error in our chaotic pursuit of the superwoman designation, we are giving our daughters and sons a sense of many possibilities, not to mention adding to the GNP.

I hope our children will grow up in an age where superwoman lives and superwoman's husband takes care of the ring around the collar. ■



Photo by Jim Hansen

Anne M. Benisch is associate dean, External Affairs for the Carlson School of Management and the mother of two teenage daughters.

Campus news

Fred Beier steps down as associate dean...

A major change occurred in the Dean's Office this June when Fred Beier, professor of management sciences, concluded a four-year tenure as associate dean of Academic Affairs. A logistics specialist, he joined the school's faculty in 1967 from Ohio State University, where he received his PhD.

Looking back, Beier recalled, "I took the job as associate dean in 1982 because it was a tough time for the school and I felt I could contribute something, including the management skills I gained while working for a West Coast transportation company in the 70s."

Beier was influential in introducing more management rigor into the school's administration and he played a large part in organizing and writing the school's response to Commitment to Focus. "Our planning process is greatly improved under Pete Townley's direction, and I'm happy to have been a part of that," said Beier.

"I'm also happy to have played a part in improving the school academically," he continued. "Our goal of becoming one of the top five public management schools is a realistic one. I will be proud to be part of this institution in the coming years."

He said that an emphasis on maintaining top-quality hiring and tenure standards is how we'll reach that goal. "The school has developed a good

group of faculty. With our successful fund-raising efforts and a strategy of hiring only the highest quality people who fit our needs, we have the potential to attract some very good new people.

"One of our biggest concerns right now is the school's physical facilities. We desperately need better office and classroom space. It affects morale and our ability to attract top faculty and students."

Beier just returned from three weeks in Russia as part of a delegation studying the country's food distribution system. He will be on sabbatical in 1987-88 and will return to teaching fall quarter, 1988. In the coming year he plans to do research and work on establishing a logistics management research center.

Beier said that he has missed being out of the mainstream of research and teaching. "I participated in the last two graduation ceremonies and I didn't know the name of a single student!"

Commenting on Beier's departure, Dean Townley said, "Fred's contributions to the school's progress have been substantial. His good judgment, unperturbable demeanor and great sense of humor have made my life easier. He will be missed."

And Tim Nantell takes over

Running with the momentum of an ambitious strategy at the school is Timothy Nantell, Gelco Professor of Finance and the new associate dean of Academic Affairs.

"We have a unique opportunity to become one of the noticeable management schools in the country, given our location in a supportive business community, a central administration that is focused on graduate research activity and our recent successes in fundraising," said Nantell. "I felt it was a good time to become part of this activity and to provide some of my own direction."

Nantell, who sees himself primarily as a faculty member, said, "This new appointment is not a step toward a new career, but is an effort to help make this the kind of place I'll be happy to be associated with for the rest of my career."

Nantell joined the faculty in 1980 as associate professor of finance. He became full professor in 1982 and was named the Gelco Professor of Finance in the following year. He has a PhD from the University of Wisconsin and

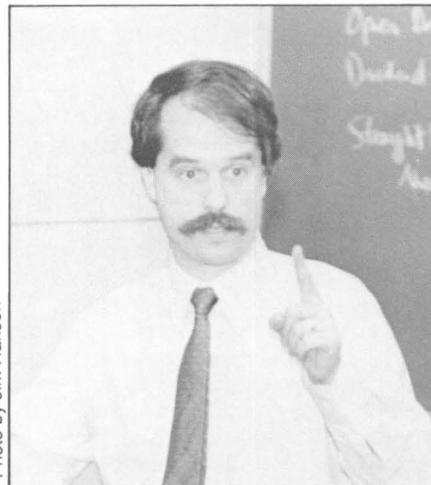


Photo by Jim Hansen

The school's new associate dean is Tim Nantell, the Gelco Professor of Finance and former chairman of the Department of Finance.

taught at the University of Michigan for nine years before coming to Minnesota.

In 1986-87, Nantell was chairman of the Department of Finance and Insurance. During that year, he helped establish and raise money for the new Institute for Financial Studies.

As associate dean, Nantell said he will focus on school planning. "My goal is to find an efficient way to get faculty involved in agreeing on the standards and activities the school should be pursuing," he said.

Nantell believes there are four important priorities for the school. "The first is hiring the best faculty who are interested in research and teaching and who will bring us national attention. That's the best way to attract top students.

"The second is to have a first-class MBA program that runs like clockwork in recruiting students, teaching them, providing services and placing them in good jobs.

"We need to make continuing progress in our PhD programs, and we need to decide exactly what our participation in the undergraduate program should consist of. And, in the next five years we should have an executive development center that contributes to our regional reputation."

Knowing that changes like these don't happen overnight, Nantell is realistic. "These things change slowly, because it all depends on the people who are here. But there will be a steady flow until you realize the institution has taken on a new life."

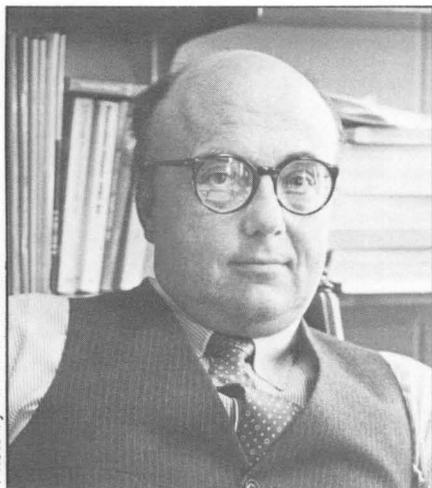


Photo by Tim Rummelhoff

Professor of Management Sciences Fred Beier recently concluded four years as the school's associate dean of Academic Affairs.

Visiting lecturers bring added expertise to campus

One of the most exciting ways to learn about current management issues is to talk to the people directly involved, whether they're researchers carrying out critical research, executives who set strategies for large corporations or officials charged with establishing public policy.

Many influential leaders are invited to the Carlson School every year to speak in classes, to student organizations and schoolwide events, or at lectures and seminars designed to foster interaction between professionals and the academic community. They provide opportunities for students, faculty, alumni and other practitioners to hear right from the experts what's happening and to share ideas.

These two pages feature some recent visitors to the school.



School of Management student organizations frequently sponsor presentations by prominent business leaders. David Kelby, senior vice president and treasurer of General Mills, Inc. (above) was the keynote speaker at Beta Gamma Sigma's initiation banquet this spring, presenting "Current Trends of Corporate Restructuring."



Photo by Tom Foley

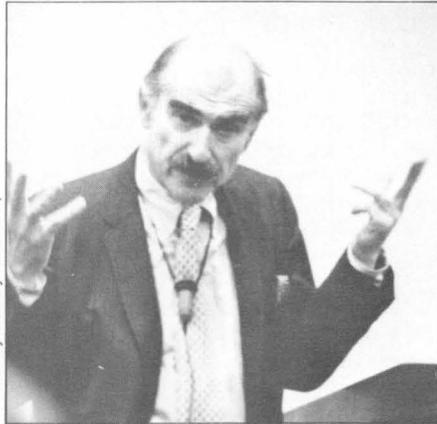
In May, University of Southern California Professor Jagdish Sheth presented "Changing Demographics and the Emerging Market Opportunities." A continental breakfast held in the Humphrey Building atrium preceding the lecture gave professionals, students and faculty a chance to share ideas.



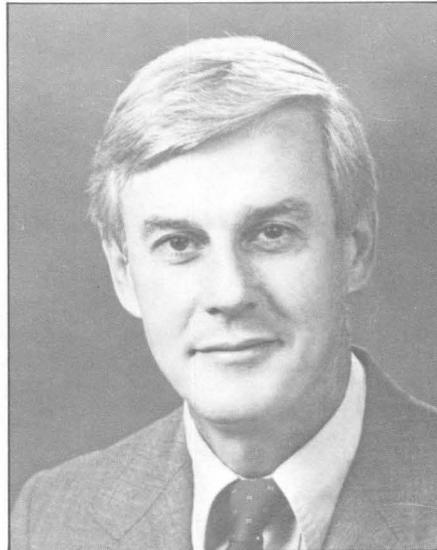
Steven Schlossberg, the U.S. Deputy Secretary of Labor, spoke on "Labor Management Cooperation in America" in IR 5000, Labor Policy and Application, taught by industrial relations professor Mike Bognanno. The course is co-listed with the Humphrey Institute.



Dayton Hudson Corporation's Chairman and CEO Ken Macke was one of nine executives making presentations spring quarter in the honors section of MBA 8060, Strategy and Policy, taught jointly by Stephen Keating, retired chairman and CEO of Honeywell Corporation, and Richard Edwards, the Kappel Professor of Business-Government Relations. Other speakers included Carl Platou, president of Fairview Hospital; Erwin Kelen, president and CEO of Datamyte Corporation; John Stafford, chairman of The Pillsbury Company; Mark Willes, president of General Mills, Inc.; Ed Spencer, chairman of Honeywell, Inc.; Kendrick Melrose, president of Toro Company; Angus Wurtele, chairman of The Valspar Corporation; and N. Bud Grossman, chairman of Gelco Corporation.



The Pillsbury Company Lecture Series, established by a grant from the Leo Burnett Company, brings outstanding researchers to campus twice a year. Harvard Business School Professor of Business Administration Ted Levitt, who is also editor of the Harvard Business Review, presented "Global Competition in Collision" at the December lecture.



Jerry Sullivan, chairman of the Auditing Standards Board of the American Institute of Certified Public Accountants and a partner in the national office of Coopers & Lybrand, was the featured speaker at the spring Accounting Department Breakfast Forum. Sullivan presented "Revising the Rules," a summary of proposed changes to the country's auditing standards. At the fall lecture, former Internal Revenue Service head Roscoe Egger, Jr. presented "Recent Changes in U.S. Tax Policy."

Minnesota Campaign update

Two major gifts in honor of outstanding alumni highlight recent Minnesota Campaign activity. The H. B. Fuller Company has made a \$1 million gift to create the Elmer L. Andersen Chair in Corporate Responsibility, honoring the company's longtime CEO and current chairman on the occasion of the company's centennial.

The chair will reside in the Department of Strategic Management and Organization and will be affiliated with the College of Liberal Arts. It will be the foundation for an interdisciplinary program tying together theoretical basics from the liberal arts with the strategic management applications of the business school. The chairholder is expected to combine strong academic credentials and sufficient experience in the corporate world to bridge academia and industry in this undertaking. A national search will begin in the fall.

Union Pacific Corporation has donated \$500,000 in honor of CEO William S. Cook. The gift will be used to establish a new research center in distribution and logistics and for schoolwide needs. Former Associate Dean Fred Beier, charged with initiating the center, hopes to raise additional funding to create a nationally recognized interdisciplinary research effort that will be the catalyst for significant improvement in the management of logistics, distribution and transportation.

Robert Lieberman Memorial Award recipients announced

PhD students Esra Gencturk and Jan Shimenski are joint recipients of the first Robert Lieberman Memorial Award, to be given annually in honor of excellence in teaching undergraduate marketing courses.

The award is given in memory of Robert Lieberman, a marketing PhD student who died in 1986. He was dedicated to undergraduate teaching and had an excellent teaching record in his classes at the university.

If you wish to contribute to the Robert Lieberman Memorial Award, contact Cathy Bjerkebek in the Department of Marketing and Business Law at (612) 624-5055.

Books on innovation research findings to be published

Researchers in the Minnesota Innovation Research Program, which is sponsored by the Strategic Management Research Center, are getting ready to publish their findings in two books. At a workshop in May, 50 researchers and practitioners involved in the research projects met with 12 leading scholars of innovation from other universities to discuss and review chapters of the books, scheduled for publication in 1988 by Ballinger Publishing Company.

The Minnesota Innovation Research Program began in 1983 with a grant from the Office of Naval Research. Researchers have been studying how innovations develop over time and are identifying the factors that influence their successful development. Thirteen related but different studies have tracked a wide variety of technological, product, process and administrative innovations.

Strategic management professor Andrew H. Van de Ven, the program's director, said that the research being done at Minnesota is unique because it is real-time longitudinal research, and not historical case study. "We're tracking innovations as they develop and we don't know what their outcome will be. The emphasis is on the process of innovation, how it unfolds over time, and its consequences," he said. "We hope to be able to tell people how it happens, problems that emerge, and then give them some good prescriptions based on empirical evidence."

The first book will focus on the management of innovation, including managing innovative ideas, managing people engaged in innovation, the legal and managerial dimensions of transactions, and managing the innovation context. Book two will focus on tracking and managing the process of innovation, including new business creation, mobilization and integration processes, and industry influences.

In memorium

The Carlson School of Management faculty and alumni join the University community in mourning the passing of Walter Heller, Regents' Professor of Economics, who died on June 15 while at his summer home near Seattle. During much of Heller's distinguished tenure at the university, including some of the period while he was on leave to serve as President Kennedy's chairman of the Council of Economic Advisors, the economics and management faculties together made up the college of business administration.

Administrative staff changes

Barbara Nemecek has resigned as Associate Director of Placement and MBA Coordinator to enter private business. Clare Foley has been appointed Acting Associate Director.

Julie Heupel, Director of Corporate Relations, has accepted a position as Marketing Manager with First Bank System effective August 1. Finance Professor Jim Gahlon has been named to head the search committee to replace Julie.

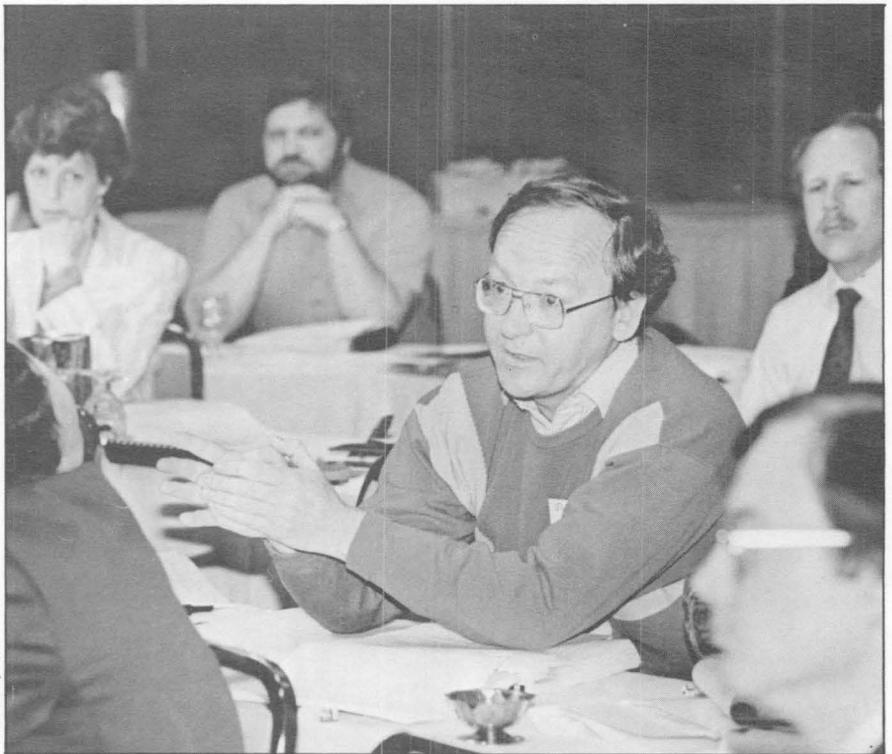


Photo by Jim Hansen

Andrew Pettigrew (center), from the University of Warwick in England, was one of 12 distinguished innovation scholars invited to the Minnesota Innovation Workshop as a guest commentator.

Carlson School researchers featured on TV series

Research on retooling the displaced worker, carried out by industrial relations associate professor Dennis Ahlburg and Richard Swanson, director of the Training and Development Research Center at the School of Agriculture was featured on "Research Journal," a 10-part series focusing on University of Minnesota research produced by KTCI television.

Another program featured management sciences professor Paul Johnson and his work on expert systems.

NEW APPOINTMENTS

Michael Dothan, professor of finance and insurance, was appointed chair of the Department of Finance and Insurance.

Richard Edwards, Frederick R. Kappel Chair in Business and Government, was appointed acting chair of the Department of Strategic Management and Organization.

Ian Maitland, associate professor of strategic management and organization, and **Shyam Sunder**, professor of accounting, were elected to three-year terms on the University Senate and Twin Cities Campus Assembly.

William Scheurer was appointed director of the Executive Development Center. He has been acting director of the center since October and prior to that, was manager of Employment and Development at The Minneapolis Star and Tribune Company.

NEW GRANTS

Graduate School to **Dennis A. Ahlburg**, associate professor of industrial relations, for "Work, Welfare, and Remittances: A Study of Illegal Mexican Immigrants to the U.S."

University of Minnesota Educational Development Center to **Robert Hansen**, associate professor of marketing and business law, to develop a graduate level course in international marketing.

Dean's Innovation Fund to **Alfred A. Marcus**, assistant professor of strategic management and organization, for "Implementing Central Directives—A Comparison of Autonomous and Rule-Bound Approaches."

Peat, Marwick, Mitchell & Co. to **Judy Rayburn**, assistant professor of accounting, for her two-year research plan.

Council on Library Resources to the **Department of Management Sciences**, the Hubert H. Humphrey Institute of Public Affairs, and the University Library System, for "The Planning and Design of a Model Academic Integrated Information Center."

PUBLICATIONS AND ACTIVITIES

Dennis A. Ahlburg, associate professor of industrial relations: "Technological Change, Market Decline and Industrial Relations in the U.S. Steel Industry" in D. Cornfield (ed.) *Workers, Managers, and Technological Change*, New York: Plenum Press; "The Impact of Population Growth on Economic Development: The Evidence from Macroeconomic Demographic Models" in C. Johnson and R. Lee (eds.) *Population Growth and Economic Development*, Madison: University of Wisconsin Press. Ahlburg's "Population Forecasts for South Pacific Nations Using Autoregressive Models" was accepted for publication in the *Journal of the Australian Population Association*. He will present "Long Fluctuations in Demography" at the European Population Conference in Finland in June and "Human Resources Development in Pacific Developing Countries" at the Association for the Advancement of Policy, Research and Development" at the Third World Conference in Bermuda in November.

Mario Bognanno, professor of industrial relations, presented the following: "Production and Non-Production Labor Demanded in Korea's Manufacturing Sector" (with Y.S. Rhee and S.K. Kim), at a Korean-German-American seminar on Employment Effects of Technological Development, sponsored by the Korean Labor Economics Association, March 7-8, Seoul, Korea, and "Changes

in the United States' Negotiating Environment and its Impact on Union-Management Balance of Power" (with E. Montemeyor), at the International Seminar on Labor Relations and International Competitiveness, sponsored by Sogang University and Friedrich Ebert Stiftung Research Institute, May 22-23, Seoul, Korea. Bognanno received an Outstanding Service Award by the Industrial Relations Center Advisory Council at its spring meeting, May 11.

Don Cho, assistant professor of finance and insurance: "The Impact of Risk Management Decisions on Firm Value: Gordon's Growth Model Approach" and "Some Evidence of Scale Economies in Worker's Compensation," forthcoming in *The Journal of Risk and Insurance*. Cho's current research includes "Interrelationships between Financial and Risk Management Policies of a Business Firm."

Gary Dickson, professor of management sciences, was named the visiting American Assembly of Collegiate Schools of Business professor at St. Cloud University for the 1987-88 academic year. He will assist in developing the school's undergraduate business program.

Donald V. Harper, professor of management sciences: "The Potential Consequences of Deregulation of Transportation Revisited" (with J.C. Johnson), *Land Economics*, May 1987.

Mike Houston, professor of marketing and chair of the Department of Marketing and Business Law, was appointed to a three-year term as editor of the *Journal of Marketing Research*, generally regarded as the premier journal in the marketing field.

Paul Johnson, director of the Ph.D program and professor of management sciences, and **Dennis A. Ahlburg**, associate professor of industrial relations, were featured researchers in "Research Journal," a series that focused on U of M research. Johnson's topic was expert systems; Ahlburg and Richard Swanson, School of Agriculture, spoke on retooling the displaced worker.

Alfred A. Marcus, assistant professor of strategic management and organization: "From Market Dominance to Credible Commitment: Shipper Strategies in a Deregulated Trucking Environment," *Transportation Journal*, accepted for publication; "Airline Deregulation: Factors Affecting the Choice of Firm Political Strategy," *Policy Studies Journal*, Vol. 15, No. 2, Dec. 1986.

Ray Noe, assistant professor of industrial relations: "The Influence of Individual Characteristics and Assessment Center Evaluation on Career Exploration Behavior and Job Involvement" (with **Brian Steffy**, assistant professor of industrial relations), *Journal of Vocational Behavior*, 30, 187-202; "Self-Assessed Training Needs: The Effects of Attitudes Toward Training, Managerial Level, and Function," *Personnel Psychology*, 40, 39-53; "On Shifting Standards for Conclusions Regarding Validity Generalization" (with N. Schmitt), *Personnel Psychology*, 39, 849-851; "Self-Assessed Training Needs: The Effects of Attitudes Toward Training, Managerial Level, and Function" (with J.K. Ford), *Personnel Psychology*, 40, 39-53. Noe was an invited participant in the International Conference on Advances in Selection and Assessment, Boxton, England, May 20-22.

Rudy Pinola, senior research associate in industrial relations: *The Pure Theory of the Least of Capital: A Reexamination of the M-M Theorem* (with William Sher). Current research includes "Selected Techniques for Analyzing and Forecasting State and Area Employment Behavior."

Joshua Schwarz, assistant professor of industrial relations: "The Role of Public Income Security Programs in Union Wage Determination: The Case of School Teachers," *Journal of Collective Negotiations in the Public Sector*, 16(2), 1987. Current research includes the effect of changes in health care financing on industrial relations in hospitals.

John See, research specialist in labor education service, was awarded the George Beller Video Award from the Minneapolis Television Network for "Where Love Abides—The Potters House," which was voted the best informational program of 1986.

Shyam Sunder, professor of accounting, presented "Problems of Measuring the Profitability of the Pharmaceutical Industry" at the Second Annual Pharmaceutical Public Policy Conference organized by the College of Pharmacy, University of Minnesota. His article, "Rational Expectations and the Aggregation of Diverse Information in Laboratory Security Markets" (with C.R. Plott), will be published in *Econometrica*.

Andrew F. Whitman, professor of finance and insurance, presented the following seminars: "Real Estate and Retirement Planning," Rochester, Minn.; "Workers' Compensation Pricing," Minnesota Center for Health and Safety, St. Paul; "Financial Planning for Retirement," community college faculty, and "Employee Health Benefits," managers of the City of St. Cloud.

James C. Wetherbe, professor of management sciences and director of Management Information Systems Research Center, presented "Executive Expectations for Information Systems," Tulsa Association for Systems Management Chapter, and "Monarchy vs. Anarchy in End-User Computing," Diebold Research Program's 70th Plenary meeting. He was session facilitator on "Making Change: Selling the Vision" at The Society for Information Management Institutional Conference and led the session, "Bridging the Gap between Information Systems and Users," at the Life Office Management Association Conference. He and **Gordon Davis**, Honeywell Professor of Management Information Systems, led a three-day seminar, "Achieving Competitive Advantage through Information Technology" as representatives of the Data Processing Managers' Association in Singapore.

C. Arthur Williams, Jr., professor of finance and insurance: "Medicare: The Next 75 Years and Beyond," *Risk Management and Insurance Issues*, June 1987. Copies can be obtained from Professor Williams, Dept. of Finance and Insurance, 271-19th Ave. S., Minneapolis, MN 55455.

A message from the president

The Alumni Advisory Council of the Carlson School of Management has completed a very active and successful year of programming. I would like to take this opportunity to thank everyone who has participated in alumni events throughout the 1986-87 academic year. Special thanks to those of you who planned, organized and produced the programs. As a volunteer organization, we depend on the continuing efforts of all alumni to maintain a strong association.

Now it's time to look ahead. We made significant progress toward making 1987-88 an even better year at our Leadership Workshop in May. Committee chairs met with other alumni interested in developing ideas and planning agendas. Many events were scheduled, but many others are still in the idea stage and need volunteers to help develop them. On pages 26-27 of this issue of the *MMR*, you'll find an overview of the Leadership Workshop, the names and telephone numbers of committee chairs for you to contact, and a calendar of upcoming alumni events that have been scheduled so far. You'll also find a form that you can send in to indicate your interest in working with a committee, or to ask for more information about alumni activities. I encourage you to respond and I look forward to seeing many of you at upcoming meetings and events.

I would also like to extend a special welcome to all our new graduates and invite you to join with us in alumni activities. Many of you have already participated as students, and our programming has benefited greatly from this perspective. I hope you will continue to give your support to your school through the alumni association.



Photo by Jim Hansen

Kay Barber, '75 MBA
President, Alumni Advisory Council

Alumni surveyed on AAC activities

Almost 12,000 Carlson School alumni live in the Twin Cities area, but only about 200 of them are actively involved in alumni activities. As a first step toward increasing this involvement, the Alumni Advisory Council (AAC) decided last spring to commission a market research study of Carlson School alumni and their involvement in AAC activities.

Paul Stormo ('71 MBA), chair of the AAC Research Committee, contacted a group of MBA students in marketing professor Terry Childer's Marketing Research class to conduct the study. They sent questionnaires to 1,200 alumni living in the area. The questions were designed to determine alumni awareness of AAC activities, the attitudes of alumni toward existing AAC programs, how alumni are willing to serve the AAC, what services alumni would like to receive from the AAC, and what potential there is for increasing involvement.

Response to the survey was 29 percent, or 350 questionnaires returned. The researchers also interviewed selected alumni and six alumni directors at institutions similar to the Carlson School. Major findings include:

- Awareness of AAC activities is low even though a large number of alumni read the *Minnesota Manage-*

ment Review and *The Minnesota Magazine* (the Minnesota Alumni Association's magazine).

- Participation rates for AAC activities are lower than rates for similar activities at other institutions.
- While some alumni are not interested in participating in any AAC activities, a significant proportion are, showing that participation levels can be increased.
- The services and programs that alumni are most interested in are library privileges, continuing education for credit, networking, athletic events, non-credit continuing education programs, and career planning and placement services. Younger alumni are more interested in continuing education and career enhancement programs.
- The most preferred location for activities is on the University of Minnesota Minneapolis campus.

Efforts are already underway to respond to the survey's findings. The results were shared with committee chairs to help in planning appropriate programs and information about upcoming programs will be mailed to targeted groups. We are also exploring ways to share information about AAC activities more prominently in the *MMR*.

Minnesota Alumni Association membership: Alumni interested in university library privileges should consider joining the MAA, a university-wide dues-paying organization. For an annual \$25 membership fee, alumni have access to university libraries, receive the bimonthly *Minnesota Magazine*, belong to a national network of alumni contacts and receive discounts at many university facilities and travel programs.

The school's Alumni Advisory Council is affiliated with the MAA, and receives a portion of the membership fees of its graduates. Along with this financial support, the AAC benefits from the MAA's university-wide scope in encouraging and representing alumni views.

For more information about the MAA, call or write them at 100 Morrill Hall, 100 Church Street SE, Minneapolis, MN 55455, (612) 624-2323.

Planning for 1987-88 gets underway at Leadership Workshop

Planning for 1987-88 Alumni Advisory Council (AAC) activities began in May at the council's fourth annual Alumni Leadership Workshop. Interested alumni met with advisory council members and committee chairs to review last year's highlights and set objectives and agendas for the coming year. Several Carlson School staff and faculty members were on hand to lend their advice and ideas on coordinating activities with the school.

AAC President Kay Barber pointed out in her opening remarks at the workshop that many of the council's overall objectives are in line with those of the Minnesota Alumni Association (MAA), with which the AAC is affiliated. Both organizations have established as goals enhancing the current student's educational experience, supporting the Minnesota Campaign and providing services to alumni.

Volunteers are still needed on every committee to help plan upcoming programs, to serve as program participants or as resources, and to develop additional ideas. Getting involved in the AAC is not only a good way to give something back to the Carlson School, but is a great way to get to know other professionals in the area.

The following list summarizes upcoming committee activities. If you would like to serve on a committee, or if you just want more information, contact the committee chair directly or use the form on the next page to indicate your interest.

Mentoring Committee — contact Joel Erlandson, 626-5114: This committee helps establish contacts between alumni and students who want additional help understanding the business environment, provides information about careers in business and assists students in making contacts and preparing for interviews. Plans for the coming year include four evening information/networking programs, providing alumni speakers to student groups, informal lunch get-togethers and sponsoring an alumni/student tag-a-long. The group also intends to make their services more visible to students through the Placement Office and at school events.

Recruiting Committee — contact Margaret Bloyer, 370-5422: Working with Carlson School staff members, this committee will assist in recruiting high-ability students to the school. They will establish procedures for alumni to contact targeted students who have expressed an interest in the school and will develop background materials and training for the alumni involved.

Alumni Programs Committee — contact Sally Scheefe, 540-2061: In the coming year, the Program Committee hopes to schedule a program every other month, including wine and cheese networking receptions, educational and career-oriented programs and other events. The calendar on the next page lists programs that have been scheduled so far.

International Forum — contact Bill Poppert, 540-5696: This new forum provides an educational and networking link for people interested in international business. David Speer, Minnesota's Commissioner of Trade and Economic Development, will serve as consultant to the group. Four events

have been scheduled so far (see calendar) and informal meetings are being planned.

Alumni Resources Committee — contact Angela Vikesland, 343-1535: Members of this committee will develop a list of alumni who are qualified and interested in serving as resources to students and to the school in various capacities. This may include coaching students on resume writing, interviewing and business communications skills, giving career information, speaking in classes, serving on program panels or at Business Day, or taking part in the fall job search workshop.

Minnesota Campaign Committee — contact Kay Barber, 330-8868: This committee works in coordination with the dean's office and the overall university campaign to solicit alumni support.

For more information about the Alumni Advisory Council or alumni activities, contact Kay Barber or Jeanne Katz, director of Alumni Development and Student Relations at 625-1556.



Miles Davenport, vice president of the AAC, attended the Leadership Workshop and reviewed efforts undertaken last year by the Mentoring Committee, which he co-chaired.

Calendar

Alumni Advisory Council Events & Programs

1987

- September 16 Alumni Networking Reception at the Alumni Club (A)
October 6 Alumni Mentoring Students Seminar (A & S)
October 8 Wine & Cheese Midterm Gathering (A & S)
October 16-17 Reunions, classes of '37 and '47 (A)
October 27 International Forum — Topic TBA (A)
November 5 Tax Planning Seminar with Grover Cleveland (A)
November 17 Alumni Mentoring Students Seminar and Reception (A&S)

1988

- January 21 Alumni Mentoring Students Seminar and Reception (A & S)
January 26 Seminar: Athletic Teams as a Business (A)
February 2 International Forum — Topic TBA (A)
February 11 Wine & Cheese Midterm Gathering (A & S)
March 31 Networking Reception at the Alumni Club (A)
April 19 Business Day, University Radisson 1 pm - 8 pm (A & S)
April 26 Alumni Mentoring Students Seminar & Reception (A & S)
May 3 International Forum — Topic TBA (A)
May 5 Wine & Cheese Midterm Gathering (A & S)
May 18 Alumni Seminar — Politics in Business (A)
August 2 International Forum — Topic TBA (A)

A — Participants primarily alumni

A & S — Participants primarily alumni and students

For more information about any of these programs, please contact Jeanne Katz at (612) 626-1556.

----- please cut along dotted line and mail -----

How can I find out more about Carlson School alumni activities?

For more information on the Alumni Advisory Council and alumni activities, or to indicate your interest in participating in events or serving on a committee, please fill out this card and mail it to:

Jeanne Katz
Director, Alumni Development and Student Relations
Carlson School of Management
University of Minnesota
271 19th Avenue South
Minneapolis, MN 55455

I am interested in supporting the AAC in the following activities: *(check all that apply)*

- Recruiting students to the Carlson School of Management
 Mentoring students
 Serving as a business resource to the school
 Coaching students in interviewing
 Providing internships for students
 Providing part-time jobs for students
 Public relations/promotion
 Serving on a committee

Specify which committee: _____

Other _____

(see other side)

Reunion weekend scheduled for October 16-17

The classes of '37 and '47 are the focus of the school's reunion weekend on October 16-17, with the classes of '36, '38, '46 and '48 invited as special guests. The weekend coincides with the university's Homecoming Weekend.

The agenda for the reunion is as follows:

Friday, October 16, 1987

- 9:00 - 10:00 a.m. Registration, coffee & rolls in 180 Humphrey Building
- 10:00 - 11:00 a.m. Welcome & discussion with Dean Townley
- 12:00 noon Lunch at the Campus Club
- 2:00 p.m. Bus tour of campus

6:00 - 9:00 p.m. Reception and dinner in the Humphrey Atrium, West Bank Campus. The dinner will be held jointly with CLA and Education alumni. The speaker will be comedian Marilyn Belgom.

Saturday, October 17, 1987

- 8:00 - 10:30 a.m. Join the campus-wide Homecoming Breakfast Pancake Feast at the Williams Arena
- 10:30 a.m. Homecoming Parade
- 7:00 p.m. Homecoming game—Minnesota vs. Indiana, Humphrey Metrodome

Information and registration forms for the reunion will be mailed to graduates of the classes of '36, '37, '38, '46, '47, and '48. If you do not receive the mailing, or if you would like more information, please contact Jeanne Katz, director of Alumni Development and Student Relations at (612) 625-1556.

Management alum highlighted in *Business Week*

Carlson School of Management alumnus Barbara Mowry ('75 MBA) was recently named one of *Business Week's* "Fifty Women to Watch." Mowry is president of MPI, Inc., a direct mail subsidiary of Alegis Corporation. MPI, Inc. sells contract telemarketing, direct-mail and order-fulfillment services to outside companies.

Please send me more information on:

- Business Day
- Seminars for alumni
- Reunions
- Minnesota Alumni Association

Name _____

Address _____

Phone *home* _____ *work* _____

Degree _____ Year of graduation _____

ALUMNI UPDATE

1940-49

Kenneth D. Simon, '47, is chairman emeritus of ACCO Air Conditioning Co., Inc. in Glendale, Calif. He was president, CEO, and chairman of the board of ACCO from 1966 to 1983. Simon was named Industrialist of 1986 by the Glendale Chamber of Commerce.

Charles B. Engh, '48, is vice president of corporate retail operations with Nash Finch Co., Minneapolis.

Michael C. Finn, '48, is retired and spends his winters in Sarasota, Fla. and his summers in Eastport, Mich.

Bruce Pazandak, '49, died in December 1986.

Majorie W. Vorachek, '48, died the beginning of this year.

1960-69

Charles L. Squires, '65, is executive vice president for Robert Half of Minnesota, Inc. in Minneapolis.

1970-79

Mark A. Hughes, '72, is city manager for National Car Rental System, Inc. in Pittsburgh. He lives in Coraopolis, Penn.

Bruce J. Brunette, '73 MBA, is founder and president of Introl Corp., St. Paul. Introl is a manufacturer of high performance disk and tape drive controllers for microcomputers.

Laurel E. Johnson, '73, is vice president and account manager for The Data Group, Inc./An Information Resources Company in Philadelphia.

Thomas R. Hanson, '75, is professor of business administration at Concordia College, St. Paul. He received his Juris Doctor degree from William Mitchell College of Law in January 1987 and his MBA from Rensselaer Polytechnic Institute in 1981.

Rex S. Toh, '75 Ph.D., is professor of business at Seattle University, Seattle, Wash. He is

co-authoring a business statistics book with Michael Hu.

Jack Pick, '75, is senior investment executive with the Minnetonka branch of Paine Webber. He will be married 25 years this fall and lives in Plymouth, Minn.

Roger A. Stoick, '75, is group controller for National Computer Systems, Inc., Eden Prairie, Minn.

Sally Ann Walls, '75 MAIR, was promoted to personnel director, Information Systems Division, at General Mills.

Margaret (Betsy) Ingalls, '76, is associate vice president and investment officer with the Minneapolis office of Dain Bosworth.

Brad Bixby, '78, is manager of corporate reporting for Burger King Corp., Miami, Fla.

Nelson Chee-Lai Lam, '79 MBA, is vice president for Bank of America, NT & SA, in Hong Kong.

Jim Riebe, '79, is principal auditor for the Office of the Legislative Auditor, State of Minnesota in St. Paul. He will be acting audit manager during the Minnesota Statewide Audit beginning June 1987.

Galen P. Wax, '79, is product control administrator with the mainframe and peripheral products group of UNISYS, Roseville, Minn.

1980

Sheila Hickey-Burke, '80 MBA, works with Hickey-Burke Marketing Services, Minneapolis.

Marguerite J. Miller, '80 MBA, recently left Graco to become manager of marketing for Unimin Corp., a silica and high purity quartz mining company in New Canaan, Conn. She married Dr. Robert G. Lees in April.

1981

Douglas B. Hultberg, '81 MBA, is director-cash for Northwest Airlines in St. Paul.

1982

Vicki E. Burns, '82 MBA, is senior financial analyst-Treasury for Land O'Lakes, Arden Hills, Minn. She lives in Isanti, Minn.

Mark W. Erickson, '82, was promoted to national accounts manager for Businessland, Inc., San Jose, Calif. He manages microcomputer sales to Fortune 100 companies.

Dean B. Kloeckner, '82, is a financial counselor with CIGNA Individual Financial Services in Edina, Minn.

Sarah S. White, '82 MBA, is manager, software licensing, for Cray Research, Inc., Mendota Heights, Minn. She is currently a member of the Mounds Park Academy Board of Directors.

Ronald J. Zenk, '82 MBA, is vice president-finance for Surgidyne, Inc., Eden Prairie, Minn.

1983

Margaret Boyler, '83 MBA, is planning officer for First Bank System, Minneapolis.

Cynthia K. Buyck, '83 MBA, was named manager of marketing financial analysis for the Minneapolis Star and Tribune Co., Minneapolis. She will also act as financial liaison with the circulation division on marketing issues.

Holly P. Downing, '83, is controller for RESULTS Travel and Incentives, Minneapolis.

Mark O. Sullivan, '83 MAIR, is director, human resources, for Honeywell, Inc. in Denver, Colo. He and his wife Becky have two sons, Michael and Sean.

1984

Anne Obert Derfler, '84 MBA, was promoted to supervisor of cost accounting for Harris Semiconductor, Melbourne, Fla. She is responsible for financial costings of all government proposals.

Kelly Carey Frankenfeld, '84 MBA, is sales manager for US West Direct, Omaha, Neb.

Kathy D. Kmit, '84, a production staff accountant in Hopkins, Minn., has become a certified management accountant.

Kevin McCarthy, '84 MBA, was promoted to supervisor of network operations, Transportation, with Target, Minneapolis. He married Cindee Prust, '84 MBA, in April. Prust is a transportation analyst with Pillsbury Co.

Kim Weldy Steffanina, '84, is a purchasing assistant for Duquesne Systems, Inc., Pittsburgh, Penn. She and her husband Ron have a son, Amante.

1985

Joy C. Case, '85 MBA, is a marketing assistant for Honeywell-Underseas Systems Division, Hopkins, Minn.

Edward J. Cracraft, '85 MBA, was promoted to senior financial analyst-marketing analysis with Dayton Hudson Department Store Co., Minneapolis.

Thomas D. Lindgren, '85 MBA, is coordinator of cost operations for Kimberly-Clark Corp., New Milford, Conn.

Gary W. Moheban, '85, is manager-accounting and planning with Apcoa, Inc., St. Paul.

1986

Bradley M. Bliese, '86, is a management trainee with Deluxe Check Printers, Inc., Shoreview, Minn.

Doug Heupel, '86 MBA, is a marketing analyst for Fingerhut Corp., Minnetonka, Minn.

Somdeb Lahiri, '86 Ph.D., is an assistant professor with the Indian Institute of Management in Ahmedabad, India.

Laura J. Miller, '86 MBA, is a product development coordinator with Deluxe Check Printers, Inc., Roseville, Minn.

Lisa Pope, '86 MBA, is director of marketing for May Printing Co. She was transferred to the national accounts division in Irvine, Calif.

Karen Mills Vincent, '86, is a buyer-dresses and accessories with Millston Corp.-Arzella Stores in Indianapolis, Ind.

Mark D. Youngquist, '86, is a legislative correspondent for Charles E. Schumer M.C. in Washington, D.C.

(continued from page 2)

prise defines its business purpose. Moreover, there are many interested parties beyond just stockholders and managers. There are employees, customers, suppliers, communities, regulators and so on. For me, looking at this totality and studying the trade-offs is the really significant opportunity presented by today's interest in business ethics.

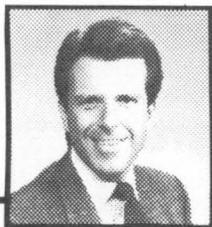
As I see it, our task is not to teach our students right or wrong, but to heighten their awareness and sensitivity to the ethical aspects of complex business issues. The decisions they make as future managers will depend to a large degree on their personal values, but I hope they do not leave the school unable to recognize the ethical component of those issues.

Fortunately, we will be able to intensify our efforts in teaching and researching business ethics. Due to the generosity of the H.B. Fuller Co.—a company that truly lives a strategy of corporate responsibility—the university has created the Elmer L. Andersen Chair in Corporate Responsibility. It will be housed in the Carlson School of Management and will be affiliated with the College of Liberal Arts. We intend to build an interdisciplinary program tying together the basics of theoretical inquiry from the liberal arts with the strategic management applications of the business school. We will seek a chairholder with strong academic credentials and sufficient experience in the corporate world to bridge academia and industry in this undertaking. This will be no mean feat, but the promise of significantly advancing the study and application of corporate responsibility is substantial.

Long after current interest in Boesky, Levine, and others have been relegated to wrapping yesterday's trash, I hope our efforts will succeed in heightening student and scholarly interest in ethics as a critical component of business purpose.

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Correction: On page 12 of the March MMR, the Operations Management Center was incorrectly called the Operations Research Center. We're sorry for any inconvenience the error may have caused.



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*David Dotlich,
Vice President Human Resources
Honeywell Bull Inc.*

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To learn more about this program, contact:

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Curtis L. Carlson School of Management
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 Anne M. Benisch, Associate Dean,
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 Lloyd Johnson, Chairman, President and CEO, Norwest Corporation
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 Richard Knowlton, Chairman and CEO, Geo. A. Hormel and Company
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 William Lurton, Chairman and CEO, Jostens
 Harvey Mackay, Chairman and CEO, Mackay Envelope Company

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 Dale Olseth, President and CEO, Bio-Metric Systems, Inc.
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 Gary Stern, President, Federal Reserve Bank of Minneapolis
 John Turner, President and COO, Northwestern National Life Insurance Company
 Mervin Winston, Vice President of Professional Practices, First Bank System, Inc.
 Angus Wurtele, Chairman and CEO, The Valspar Corporation

ALUMNI UPDATE

Let your classmates know what you've been doing that's new or exciting. Use this form to share information about your career, awards, family, trips, mini-reunions, etc. Photos are welcome as well. We'll include your news in the "Alumni Update" section of the next *Minnesota Management Review*.

Please also use this form if you have a change of business or home address. Send it to: Jeanne Katz, director, Alumni and Development, Curtis L. Carlson School of Management, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455.

Name _____ Date _____
first middle or maiden last

Year of graduation and degree(s) granted from the School of Management _____

Employer _____	Home _____
<small>position</small>	<small>mailing address</small>
_____	_____
<small>company/organization</small>	<small>city, state, zip</small>
_____	_____
<small>city, state, zip</small>	

<small>phone</small>	

Information you would like to share:

And in conclusion



Photo by Jeffrey Grosscup

More than 500 graduating students proceeded up the mall in record heat to take part in the Carlson School's first combined BSB-MBA graduation ceremony in Northrop Auditorium. See related stories beginning on page 8 inside.

Minnesota Management Review

Curtis L. Carlson School of Management
University of Minnesota
271 19th Ave. S.
Minneapolis, MN 55455

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Minnesota Management Review

Annual Report Issue

Fall 1987



Dennis W. Schadow BSB '68



Sally Schuyf, MBA '81



**Alumni are key
in making 1986-87
a pivotal year.**

(Story on page 3.)

Dear Alumnus,

What does it take to create a special sense of identity and loyalty to a school within a university? What would it take to foster this sense among the alumni of the Carlson School of Management at the University of Minnesota?

As chairman of the Alumni Advisory Council of the Carlson School, these questions have driven much of my involvement with the school. And the answer, I have found, is alumni pride.

Pride is the key ingredient that motivates alumni support. And with the help of many other alumni, the Council has designed and begun to implement a program to create that pride. Now we need your involvement and investment.

Alumni investment is essential to move the school toward its goal of top ranking among public schools of management. That goal is important to me, and it should be to you, too, because it means increasing the value of our degrees and providing the business community with an increasingly valuable resource. Alumni investment funds the opportunities that make a better school—scholarships, student services, communications and faculty support.

Whether your degree is a BSB, an MBA or a PhD, and whether it says College of Business Administration, School of Management or Curtis L. Carlson School of Management, you share in the special identity we have, in the reputation we have today and in the goals we have for the future.

Show your pride. Be involved. Make an investment in the Carlson School by writing a check to the School of Management Fund today.



Thank you,

A handwritten signature in cursive script that reads "Kay".

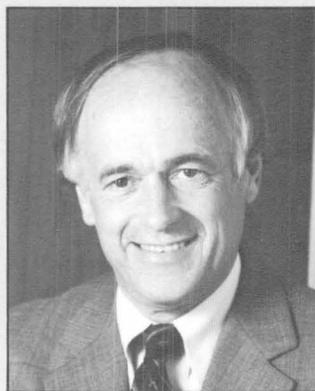
Kay Barber
Chairman
Alumni Advisory Council

Dear Friend:

As you look through this annual report issue of the *Minnesota Management Review*, you'll see that 1986-87 was a very good year for the Curtis L. Carlson School of Management. Much of that progress can be credited to the private support of alumni and corporations, as exemplified by the three alumni donors featured on the cover.

I have been involved with the school since the early seventies and have served on the Board of Overseers since 1978. I know firsthand the increasing professionalism, sense of purpose and competence that is driving the school today. I know, too, that the school's fund-raising success is both a cause and an effect for the value added impact the Carlson School of Management is making on the business community. That value added is captured throughout this report.

The Carlson School of Management has ambitious goals. The resources that will move a good school into the ranks of the best must come from the combined investment of public and private funds. The business community has a clear self interest in investing in the school, because of the many resources that are available from a strong management school. I urge you to consider how your business can participate.



Best regards,

A handwritten signature in cursive script that reads "Bill".

William A. Hodder
Chairman
Board of Overseers

Administration

Preston Townley, Dean
Timothy Nantell, Associate Dean
Anne Benisch, Associate Dean, External Affairs

Board of Overseers

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The *Minnesota Management Review (MMR)* is published by External Affairs for alumni and friends of the Carlson School of Management. Direct correspondence to Martha Douglas, editor, *MMR*, Office of the Dean, 271 19th Avenue South, Minneapolis, MN 55455. Telephone: (612) 625-0843.

External Affairs Department:

Anne Benisch, Associate Dean
Martha Douglas, Director, Communications
Jeanne Katz, Director, Alumni Development and Student Relations
Jan Windmeier, Director, Placement

The *MMR* was designed by Dawn Mathers. The photographers were Mike Habermann (cover photos), Jim Hansen (inside photos) and Nancy Johnson (back photo).

On the cover: Elmer Andersen, Bruce Schadow and Sally Scheeffe symbolize the diversity and the importance of the many different ways alumni and friends contributed to the school in 1986-87. The story of last year's annual giving begins on page 3.

Minnesota Management Review

Fall 1987

Vol. 6, No. 3

3

Annual Giving

Thank you to the alumni, friends and corporations who helped make 1986-87 a pivotal year for the school.

15

Financial Overview

Operating resources were up by almost \$2 million in 1986-87.

16

Degree Programs

Profiles of entering students and accomplishments during the year point to increasingly high-quality degree programs.

20

Placement

Higher MBA, MAIR and BSB salary offers are one result of an active recruiting year.

22

Faculty Research

List of faculty grants and publications illustrates an aggressive research agenda.

31

Research Centers

The school expanded its commitment to research and academic leadership with two new centers, bringing the total to seven.



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Reflections on a good year

*An increasing commitment to quality
is beginning to pay off*

by Dean Preston Townley

Just as corporations publish a report of their financial results every year, we are happy to provide an account of the past year's activities at the Carlson School of Management in this annual report issue of the *Minnesota Management Review*. And, as "CEO" of this enterprise, it is appropriate that I reflect on the year just completed and comment on what lies ahead.

To put our efforts in perspective, let me make a succinct summary: we are committed to quality and determined to get better. Quality is measured by the impact our graduates and faculty make, and better is measured by how we compare with the top public university business schools in the United States.

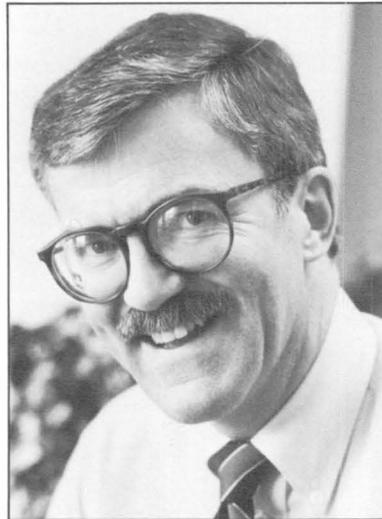
Our mission statement clearly describes where we're going: "The Carlson School of Management's primary mission is to understand and improve the process of management. It seeks a national and international reputation through the preparation and placement of its graduates and the dissemination of its research. Moreover, the school recognizes a special relationship with and responsibility to the region's business firms, labor unions, governmental units and not-for-profit agencies in furthering improved management study and practice."

Now how are we doing?

1986-87 was certainly a good year, but I hope it proves to be more than that. My sense is that the present time is pivotal for the Carlson School of Management. The successes of this past year—some modest, some significant—are most important for what they mean for the future, not the present. It was a year in which I sensed an important feeling of rising expectations in quality both for faculty and students. And there clearly was a feeling of progress.

We made progress in several areas last year:

- Some outstanding young faculty received tenure and, meaningfully, some darned good ones did not. The school's standards are getting more demanding.
- The Ph.D. program, already one of our national strengths, received a solid endorsement from an external review committee of faculty leaders from other universities. New Ph.D. students have



test scores that exceed the 97th percentile and the admission rate was only one in seven, another sign of higher standards.

- Applications to our full-time MBA program rose 39 percent and GMAT scores climbed 10 points. A faculty committee put in long hours hammering out curriculum revisions to assure currency of the program into the 1990's, and outreach activities commenced to assure growth in quality and diversity of our student body.
- The quality of the undergraduate program was boosted from an already high base. It is two-thirds of the way to its Commitment to Focus target of just under 1200 students. The result emerging is smaller classes, better delivery and even better students, with average entry grade points exceeding 3.2.
- External support continues to be robust. We raised \$7 million in private funds last year, passing \$36 million on our way to our Minnesota Campaign goal of \$40 million. Four new senior academic positions were endowed and four previously term-funded positions established endowment bases.

These are quick capsules that summarize a year. But perhaps even more significant is the long-range planning exercise the school completed last year. The five-year plan that emerged is ambitious and specific. It does not bask in recent achievements, but hard-headedly defines what we have to do to obtain recognition

as a top national management school among the top five public universities.

Our vehicle for achieving that goal is our faculty. The faculty's performance, both in educating students and in advancing knowledge through research, will enable us to attain our goal. The strategy is to achieve a balance between research and teaching, with the balance tipped to the former. The objective is to improve the practice of management through ideas as well as people. To execute that we must attract and maintain a high quality faculty whose research output provides visibility. From this earned reputation we intend to push the quality of our students and to modify curriculum as required to lead, not merely to follow, management developments.

The plan goes into considerable detail on all these elements, but the strategy's key ingredient remains attracting and retaining top quality faculty who have national or international reputations as scholars. And critical to this is that we have the required resources. For this, I will be doing a selling job with the central administration to achieve yet another balance. That is, we must have comparable university support from our share of tuition and legislative funding to reinforce the exceptional external support we receive from corporations and individuals.

As I write, the university's central administration is struggling through its own planning process, of which ours was but a small part. Much unfortunate publicity has surrounded this process, with defensiveness and reaction dominating the debate to date. There is no way of knowing at this time how successful the Carlson School of Management will be in achieving a better allocation of support than has previously been the case. But at least no one has suggested closing us down!

I anticipate a long pull to achieve all that we have set out for ourselves. Last year was clearly a good year, but we have to maintain a multi-year perspective. 1986-87 may prove to be comparable to a fine wine-growing year. You can predict strong results from the harvest but you cannot really know the true outcome for many years to come. Nonetheless, this last year looks like a vintage year. My hope is that we can continue to produce them. ■

Pride · Involvement · Investment

Many ways to make it count

Featured on the cover of this annual report are three alumni—Elmer L. Andersen (BBA '31), Bruce Schadow (BSB '68) and Sally Scheefe (MBA '81)—who symbolize the diversity and the importance of the many different ways alumni and friends contributed to the Carlson School of Management in 1986-87.

Those contributions came to over \$7 million in new gifts and pledges, and were made through the university's Minnesota Campaign, the school's Associates Program, gift clubs and the School of Management Fund. Many individuals also donated their time to school activities. They have all helped make 1986-87 a pivotal year for the school in its drive to become one of the top public management schools in the country.

Elmer L. Andersen is the namesake for the school's new \$2 million endowed chair in corporate responsibility, created by a gift of the H. B. Fuller Company in honor of Andersen, their long-time chairman and guiding force. Andersen also served on the university's Board of Regents for 14 years and in 1982 received the only honorary doctorate of management awarded by the university. The school worked with H. B. Fuller and the College of Liberal Arts to structure an interdisciplinary chair that will draw its expertise and direction from both the liberal arts and strategic management perspectives.

Sally Scheefe, sales administration manager for General Mills' Minnetonka Division, is a School of Management Fund annual donor who was able to take advantage of General Mills' matching gift program. Scheefe has been active on the Alumni Advisory Council for three years, serving as chair of the Alumni Programs Committee for the past two years. "At this point in my career, it's fun to be able to return something to the school both in service and dollars," Scheefe said.

Bruce Schadow is one of two dozen alumni and friends of the Carlson School who became members of the President's Club last year. Schadow heads the Schadow Agency Inc., a property and casualty insurance company in St. Louis Park. He contacted the school through his attorney a year ago to make an anonymous testamentary gift that would

benefit the insurance department. "In part, I wanted to pay back the school for its irreplaceable good influence on my life," he said. In the process of arranging the terms of the gift, Schadow became acquainted with Insurance Industry Chairholder C. Arthur Williams, and decided to participate in funding current

needs through a President's Club commitment.

On the following pages, we are happy to acknowledge the many individuals and companies who contributed their financial support and their time to the Carlson School of Management. We thank you, one and all!

Minnesota Campaign funding

Donations to the Carlson School since the beginning of the university's three-year Minnesota Campaign have reached \$36.5 million, against a \$40 million goal. University-wide, the campaign has reached almost \$281.5 million toward its \$300 million goal. Both figures include Permanent University Fund matching commitments. The campaign ends in 1988.

Minnesota Campaign gifts and pledges made to the Carlson School to date will fund the following:

Endowed chairs

Carlson chair in marketing	\$2,000,000
Carlson chair in entrepreneurial studies	2,000,000
Carlson chair in a field to be determined	2,000,000
Andersen chair in corporate responsibility	2,000,000
Pillsbury-Gerot chair in marketing	2,000,000
Banking industry chair	1,350,000
Insurance industry chair	1,335,000

Endowed land grant chairs

Andersen-Kullberg chair in accounting	\$1,000,000
and information systems	
Industrial relations chair	1,000,000

Endowed professorships

Four Carlson professorships	\$2,000,000
First Bank System professorship	500,000
Honeywell accounting professorship	450,000

Other initiatives

From the Carlson gift:	
Advancement fund	\$2,000,000
Scholarships	4,500,000
Research matching fund	1,000,000
Recruitment and retention fund	6,500,000
From the Watkins gift:	
Marketing entrepreneurship fund	300,000
From the Union Pacific gift:	
Logistics Management Research Center	250,000
From various other gifts:	
Operating fund	4,335,423

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The Carlson School of Management and the University of Minnesota recognize individual efforts in supporting excellence in education through several donor gift clubs.

At the school, the **Century Council** recognizes gifts of \$100-\$499, the **Dean's Council** recognizes gifts of \$500-\$999 and the **Benefactor's Council** acknowledges gifts over \$1,000.

The school and the university recognize three additional levels of giving. The **President's Club** includes individuals who give \$10,000, contributed at a minimum level of \$1,000 annually for ten years or planned gifts of \$25,000 or more. The **Trustee Society** is open to individuals, foundations and other groups who give a minimum of \$100,000 or a planned gift of \$150,000. **Builders for the Future** is open to individuals, foundations and other group contributing \$1 million or more.

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Annual giving and telephone campaign results

The University of Minnesota Foundation conducts annual alumni giving telephone solicitation campaigns for the Carlson School of Management. Student callers contact alumni, provide current information about the school, respond to questions and ask for support. Gifts that are intended for the school's unrestricted use are allocated to the School of Management Fund. Designated gifts go to departmental funds, scholarships and special program support for areas such as placement and communications skills.

The School of Management Fund supports a wide range of school activities from alumni programs to faculty research grants. Of the 3,092 gifts made in 1986-87, 190 were matched through corporate matching gift programs, for a total of \$253,214. The 3,092 annual giving donors represent an 11 percent increase in the school's annual donor base.

According to Associate Dean for External Affairs Anne Benisch, "Growth in the alumni donor base and increased gift support for operations are necessary if the school is to achieve the full benefit of the endowment growth we have realized in the Minnesota Campaign."

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The following people have selflessly given of their time, talents and expertise to assist the Carlson School of Management during the past year by serving on advisory committees, alumni boards, participating in events like Business Day and orientation panels, or speaking in classes and at student gatherings. To these alumni, friends and students—we thank you.

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Associates Program adds 21 new corporate members

The Carlson School of Management's Associates Program, the school's corporate membership organization, added 21 first-time new members from June 1986 - June 1987. In addition, 15 companies renewed their commitment to the program.

New members represent a range in size and industry, from Remmele Engineering, a small private contract manufacturer, to General Mills, the \$5+ billion consumer products and restaurant leader.

The Associates Program provides a broad base of unrestricted giving to support new initiatives and key activities not otherwise funded. In turn, the school works with an appointed company liaison to identify opportunities for corporate and academic interaction. The liaison, usually a senior officer, works with the school's director of Corporate Relations to identify areas where ties can be strengthened and corporate needs can be met.

For example, in the past year we helped a major financial institution find part-time student help for a spreadsheet assignment, identified potential faculty speakers for another company planning an in-house international seminar and helped a third company find expert help in developing a policy on exposure to toxins for pregnant employees.

The director of Corporate Relations also works to ensure that associate members are kept informed of companywide relationships to the school and of school resources available to companies, such as recruiting services, executive programs, faculty consultants, research center activities, MBA field project opportunities, special presentations and other activities at the school.

Contributions to the Associates Program are scaled to the size of member companies, and are applied toward a variety of obligations and initiatives required to keep the school competitive. Of the \$224,000 provided by associate members in 1986-87, approximately half funded new initiatives— projects, services and purchases which could not otherwise be undertaken. The balance provided for scholarship and fellowship support across all program areas.

For more information about the Carlson School Associates Program, contact the director of Corporate Relations at (612) 625-9538.

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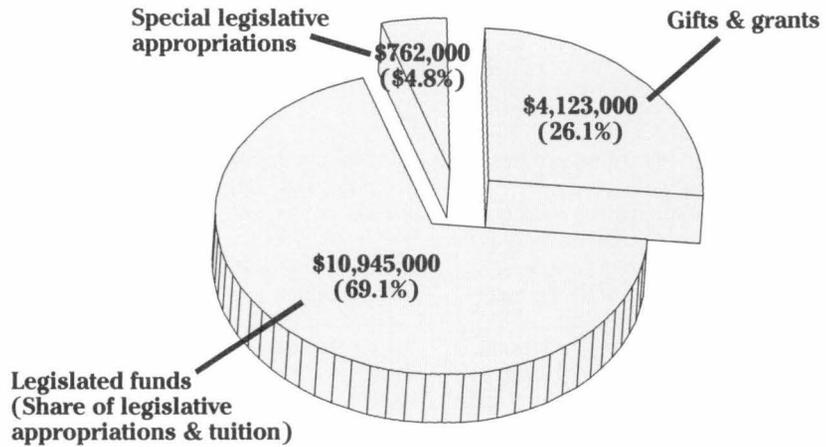
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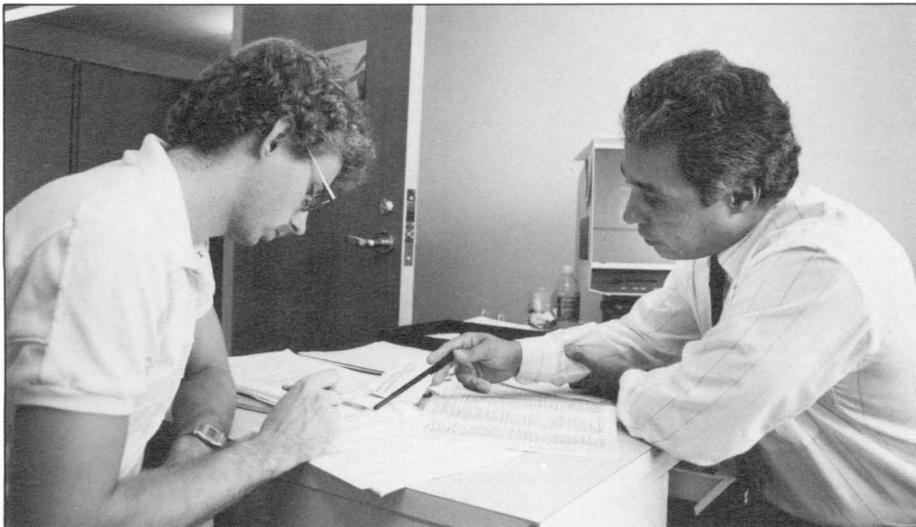
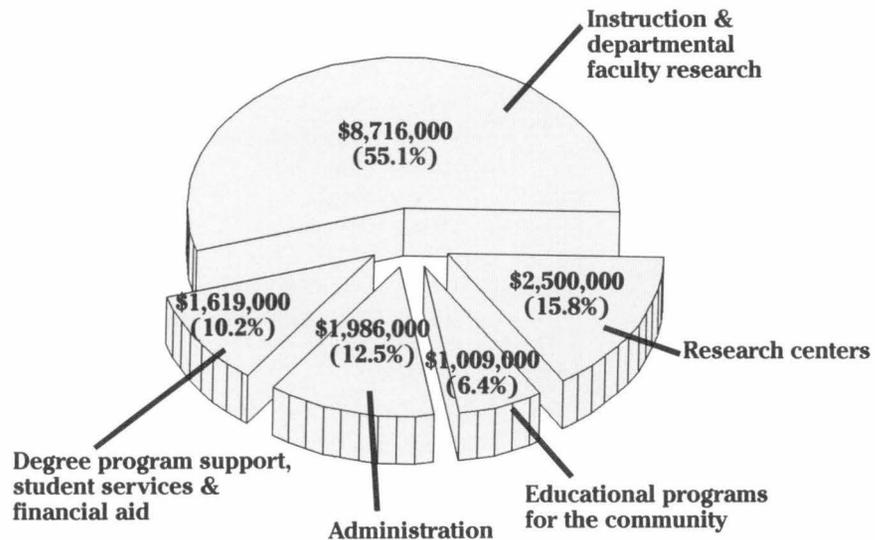
Sources of Funds

The Curtis L. Carlson School of Management had operating resources of \$15.83 million in fiscal 1986-87, up from \$14 million in 1985-86. Legislated funds (the school's share of legislative appropriations plus tuition) accounted for 69.1 percent, or \$10,945,000, of the income. Gifts and grants, including unrestricted contributions and restricted gifts for chairs, professorships, projects and research centers, represent 26.1 percent of the budget, or \$4,123,000. Special legislative appropriations for the Industrial Relations Center and the Bureau of Economic Research account for the balance of income sources, 4.8 percent, or \$762,000.



Uses of Funds

Departmental faculty research and instruction represents 55.1 percent of the expenditure of funds, totalling \$8,716,000. Support of activity through research centers amounted to \$2,500,000, or 15.8 percent. Degree program support and financial aid in the form of scholarships, fellowships, research and teaching assistantships, accounted for \$1,619,000, or 10.2 percent. Non-degree programs for the community, including the Employer Education Service and Labor Education Service of the Industrial Relations Center, and the Executive Development Center, required an investment of \$1,009,000, or 6.4 percent of the funds expended. The balance of expenditures for the year, \$1,986,000, or 12.5 percent, covered administration.



Student and program quality increasing on all degree levels

The school made important progress in strengthening its teaching programs last year—improving the quality of entering students, updating curricula, adding international business courses, increasing student contact with the local business community and adding computer applications in the classroom. Improvements also came through new funding for scholarships, minority tutoring programs and increased student services.

More than 3,500 day and evening students are enrolled in six degree programs accredited by the American Assembly of Collegiate Schools of Business: Bachelor of Science in Business (BSB), Master of Business Administration (MBA), Master of Business Taxation (MBT), Master of Industrial Relations (MAIR) and the PhD in Business or Industrial Relations. They are part of one of the most rigorous and stimulating learning environments available to management students anywhere.

The Carlson School Undergrad

Two programs of study lead to the bachelor of science in business (BSB) degree: the accounting program and the regular program, with eight areas of emphasis or a self-designed option. The BSB requires two years of pre-management, liberal arts education followed by two years of coursework at the Carlson School. The school's undergraduate curriculum enjoys national attention for its balance of liberal arts, communications and a strong foundation in the management disciplines.

The strength of the undergraduate program was evident last February when a team of four students won the 1987 McIntire Commerce Invitational, a prestigious international undergraduate business case competition. A Carlson School team also won the competition in 1985 and will return in 1988 to defend its title.

In response to university President Kenneth Keller's Commitment to Focus, the school has been reducing its new undergraduate admissions for the regular business program since fall 1986 through more stringent admissions standards.

Admissions this fall were down 12 percent from last year, with the average quarterly enrollment expected to be 1290 students. By the 1988-89 school year, the school hopes to achieve its target enrollment of 1175 students.

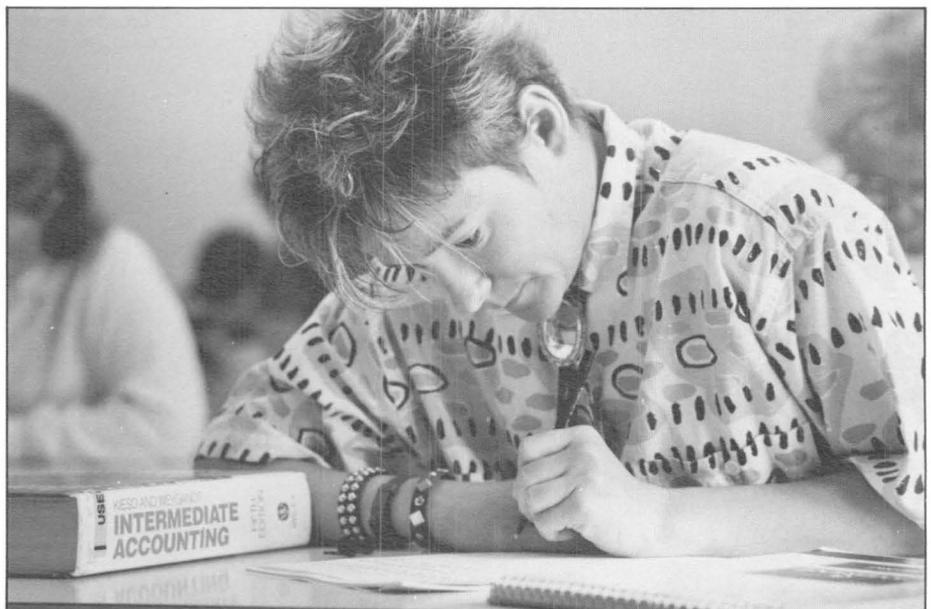
Because of these reductions, the grade point averages (GPAs) of incoming students are significantly higher than in previous years. Another positive effect is smaller class sizes, with an improved educational experience for all students.

Increased funding for scholarships was available to undergraduate business students entering this fall. A total of 55 students received scholarships, including 32 Carlson Advantage Scholarship Program awards. This is a new scholarship program for minority and disadvantaged business students. In 1986-87, 21 students received other merit scholarships. An increased number of research assistantships are also available to honors students this year.

Undergraduate admissions and profile data

	1985-86	1986-87	1987-88
Number of applicants	1461	1491	1500
Percent meeting minimum standards for consideration	90%	86%	71%
Number admitted			
Accounting	216	235	235
Regular	613	485	400
Adult Special	22	11	9
Percent of applicants admitted	60%	50%	42%
Average GPAs of admitted students			
Accounting	3.31	3.27	3.29
Regular	3.04	3.18	3.21
Total undergraduate enrollment*	1495	1426	1290

*Average quarterly enrollment. The figure for 1987-88 is estimated.



The Carlson School MBA

Competition for high-quality MBA students is very intense among the top business schools. In this light, the Carlson School is very pleased to report a 39.4 percent increase in applications to the day MBA program for fall 1987. GMAT scores and grade point averages (GPAs) also increased.

Much of the credit for these increases can be attributed to stepped-up recruiting efforts, which will continue in 1987-88. A new alumni recruiting committee has also been formed to help attract selected high-quality students.

MBA students enroll in either a day or evening 74-credit program. Accelerated 50-credit day and evening programs are also available for students with undergraduate business degrees, and a Managers' MBA program for individuals with considerable professional experience. The curriculum features a lock-step, integrated core of courses that builds sequentially on both the theory and practice of management. Students also specialize in a chosen area of concentration.

Faculty committees worked last year on updating the MBA curriculum to give students more flexibility in designing their programs and choosing electives. A redistribution of credits was approved in March and the new curriculum will be available in fall 1988.

Most of the students entering the MBA program have had some professional experience. Approximately half come from liberal arts, science and technical undergraduate backgrounds; the balance have degrees in business administration. About one-third are women.

Carlson School MBA students enjoy a high intensity research environment, where a top-notch university and a rich and varied business community regularly interact. That means frequent exposure to management practitioners through visiting lecturers, executive forums and a rigorous team-structured field project that involves all day MBAs in a ten-week consulting assignment for a local firm or business.

The Carlson School is dedicated to developing managers with strong discipline, understanding and skills, who will be successful in their careers and contribute significantly to their organizations.



MBA admissions and profile data

Day program

	1985-86	1986-87	1987-88
Number of applications	440	391	545
Percent change from previous year	-12.5%	-11.1%	+39.4%
Number of admissions	345	308	308
Number of students who enrolled	193	210	182
Average GMAT scores of incoming regular program students	570	571	577
Average GMAT scores of incoming accelerated program students	570	570	580
Average GPAs of incoming regular program students	3.23	3.23	3.21
Average GPAs of incoming accelerated program students	3.29	3.32	3.35
Average age of incoming students	26	27	26.5

Evening program (fall quarter only)

	1985-86	1986-87	1987-88
Number of applications	280	320	324
Percent change from previous year	0%	+14.3%	+1.3%
Number of admissions	233	230	208
Number of new students who enrolled	197	196	170
Average GMAT scores of incoming students	578	570	594
Average GPAs of incoming students	3.25	3.30	3.35
Average age of incoming students	28	28	27.5

Total MBA enrollment: 1,723

Total Manager's MBA enrollment: 54

The Carlson School MAIR

The Carlson School of Management master's program in industrial relations is recognized by scholars and employers as one of the top-ranking programs nationwide, a ranking that is based on its faculty's reputation, the success of its large alumni body and its involvement with employers, unions and public policy makers.

The program broadly encompasses five key aspects of the employment relationship: staffing, training and development, organization theory and administration, compensation and reward administration, human resource allocation and collective bargaining. These are supplemented with related field work in one or more of the fields of business administration, economics, history, law, psychology, sociology, statistics and other social sciences.

Students may enroll in the day program, or in the evening program, which was implemented in fall 1985.

The MAIR prepares students for employment by private-sector organizations in personnel or human resource management and labor relations; by labor unions in organization, representation and research activities; by public sector organizations in personnel management and labor relations; and by federal, state and local government bodies involved with employment relations such as mediation services and equal employment opportunity commissions.



The Carlson School MBT

The master's of business taxation program trains individuals for careers in personal and business taxation. It is exclusively an evening program, with 125 students currently enrolled. The 1987-88 academic year marks the program's tenth anniversary.

The Carlson School PhD

A review last year of the Carlson School PhD program by faculty from other universities said the program is "in a wave of innovation" that "will raise it to new heights over years of the immediate future."

This strong endorsement is backed by admissions trends over the last seven years. Requests for information about the program have increased by 292 percent and the number of applications has increased by 178 percent. Admissions as a percent of applicants have dropped from 37 percent to 15 percent, indicating the school's ability to be increasingly selective in the quality of PhD students admitted.

Of those students admitted, 54 percent have matriculated, as compared to 46 percent seven years ago. GMAT scores of incoming students have risen from 588 to 660, and undergraduate GPAs have risen from 3.13 to 3.56.

Part of this success has come as a result of increased funding for fellowships. Eleven students are entering this fall with fellowships of \$12,000 per year plus tuition and nine dissertation-stage students were awarded dissertation fellowships. Research assistantships and teaching assistantships are also available, especially during the middle years of a student's program.

According to PhD Program Director Paul Johnson, "The school's growing

MAIR admissions and profile data

	1985-86	1986-87	1987-88
<i>Day program</i>			
Number of applications	76	89	97
Number of students admitted	62	62	70
Number of students who enrolled	51	40	42
Average GPAs of incoming students	3.28	3.31	3.38
Average GRE scores of incoming students	520/530	524/580	490/540
GRE percentile averages of incoming students	62/45%	63/58%	52/48%
Average age of incoming students	27	29	27
Percent of incoming students who are women	57%	55%	63%
<i>Evening program</i>			
Number of applications	83	51	45
Number of students admitted	53	34	30
Number of students who enrolled	46	28	24
Average GPAs of incoming students	3.58	3.20	3.28
Average GRE scores of incoming students	557/558	557/585	521/530
GRE percentile averages of incoming students	73/53%	53/66%	63/46%
Average age of incoming students	30	32	30
Percent of incoming students who are women	58%	75%	78%

Total MAIR enrollment: 198

reputation for outstanding faculty research and its commitment to hiring top-quality new faculty are also strengthening the PhD program and helping attract outstanding students."

Most of the program's graduates go on to academic positions at other universities or to research-oriented opportunities in business and government. Recent PhD graduates have found teaching positions at Carnegie-Mellon University, Massachusetts Institute of Technology, University of Southern California, University of Texas and other major institutions throughout the country.

PhD graduates numbered 16 in 1985, 10 in 1986 and 24 are expected to graduate by the end of 1987. A total of 138 students are currently enrolled.

Number of PhD students by area

Accounting	22
Finance	9
Insurance	4
Decision Sciences	19
MIS	28
Operating Management	12
Marketing	15
Strategic Management	29

The PhD in Industrial Relations

The Carlson School's PhD program in industrial relations is considered one of the top three in the country. With 19 students currently enrolled, it is also one of the largest.

Students in the industrial relations doctoral program are primarily interested in pursuing academic careers. Graduates of the program have found teaching positions at leading universities in North America, including the University of California-Berkeley, Cornell University, Purdue University, University of Wisconsin-Madison, The University of British Columbia, The University of Toronto and others.

Six new PhD students joined the department this fall, out of 18 applicants. Their average undergraduate GPA is 3.52. Their average GRE scores are 526/694 (verbal/quantitative) and 65%/82%. Three students have finished their degrees in each of the last two years, with three more expected to graduate by the end of 1987. ■

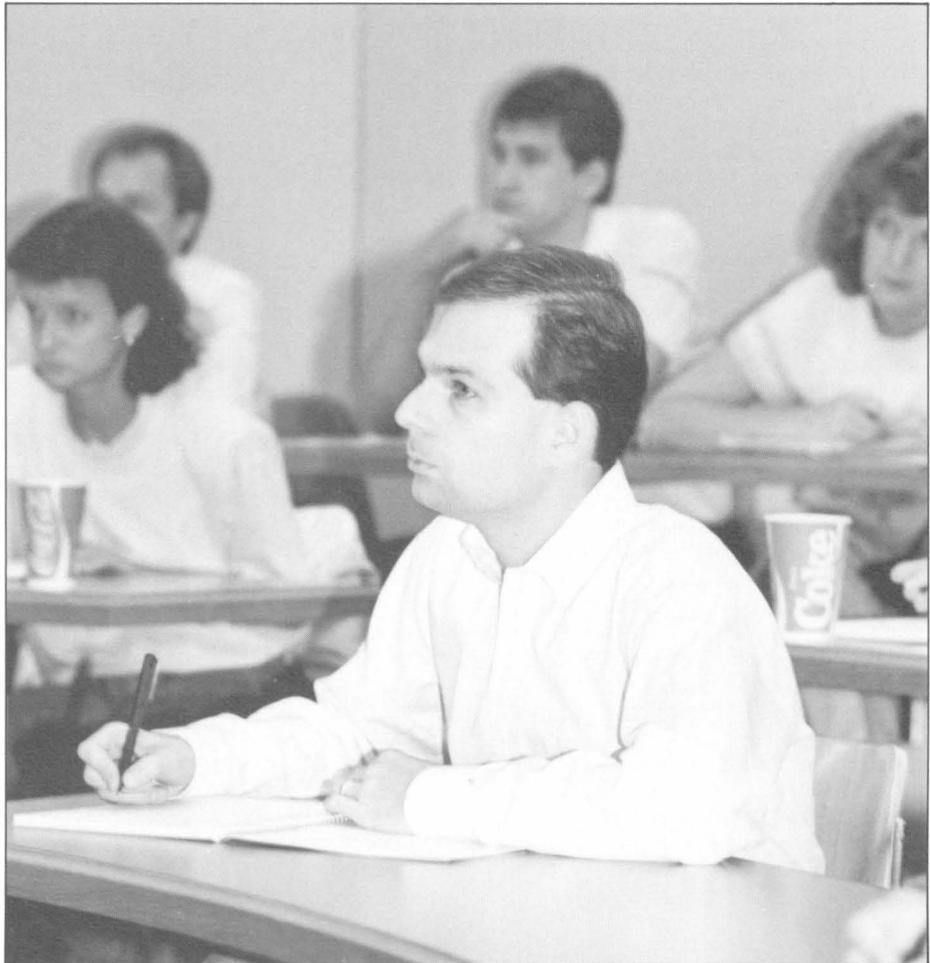
Executive education at the Carlson School

The school's Executive Development Center (EDC) sponsors non-degree continuing education programs for the practicing manager. These programs meet specific developmental needs through intensive, short-term coursework, led by faculty and shared with people of similar backgrounds from other organizations.

The Executive Development Center offers three residential management programs in formats compatible with a working manager's full schedule:

- The Minnesota Executive Program deals with strategic management for senior managers, and covers organizational mission and specific strategies for achieving goals.
- The Minnesota Management Institute deals with operating management for the mid-level manager and covers the operating activities (operations, marketing, finance, human resources and systems) needed to convert a well-conceived strategy into a sound annual business plan.
- The Minnesota Management Academy deals with front-line management for the new manager, who is often a professional assuming management responsibility for the first time. It covers the basic activities of management, such as communication, financial statements, management of change and personnel practices, with special emphasis on the management of task teams.

In 1986-87, EDC programs served over 102 managers from more than 75 organizations.



Placement activities, salary offers up over last year

The school's Career Planning and Placement Office reported increased service activities and higher salary offers in 1986-87. More programs and services were available to students last year, including additional opportunities for individual counseling, an alumni mentoring program, computerized interview scheduling and data bases, national marketing efforts and more opportunities to participate in practice interviews.

These activities were part of the office's on-going assistance to students in planning their careers and looking for employment. The office holds regular career information seminars and workshops on resume writing, interviewing techniques and job search strategies. They schedule campus interviews for students with visiting companies, post job openings and publish books containing resumes of graduating students.

Every year the Placement Office staff visits with potential employers to market the school's placement services and to present resumes of graduating students. Last year the staff visited local companies such as FMC, Northwestern National Life, Minnegasco, Peat Marwick Mitchell & Company, Norwest Bank, St. Paul Companies, Valspar, General Mills, Pillsbury, Price Waterhouse and The Carlson Companies.

The Placement Office increased its national marketing efforts in 1986-87. Several trips to Chicago included visits to Northern Trust, FMC, Hewitt Associates, O'Connor and Associates, Zenith, Deloitte Haskins and Sells, First Chicago, Leo Burnett, Foote Cone and Belding, American National Bank, Amoco, Harris Bank, Continental Bank, Inland Steel and R.R. Donnelley. In San Francisco the staff visited Hewlett Packard, Intel, Chevron, Dole and Pacific Gas and Electric. They also participated in the Western College Placement Association meeting, the Eastern College Personnel Organization meeting and the Los Angeles MBA Job Fair.

Placement results were good in 1986-87, with MBA salaries up 7.4 percent and MAIR salaries up 8.5 percent over 1985-86. Students were placed at many companies in the Twin Cities and the Midwest, as well



as at companies such as Pfizer, Inc., Irving Trust and Prudential in the East, Procter & Gamble in Cincinnati, Tandem Computers in California and Weyerheuser in Washington.

Campus recruiting activity was up last year. Visiting campus were 185 companies, compared to 164 the year before. Company representatives made 384 visits, compared to 355 the prior year. They held 5,847 interviews, which represents 1,000 more than in 1985-86.

By August 31, 1987, 72 percent of the students registered with the office who were actively seeking employment had been placed. Of the 707 registered

students, 41 were not actively looking and 84 did not respond to recent inquiry.

According to Jan Windmeier, director of Career Planning and Placement, these figures reflect current trends in the job market. "With many companies downsizing, and with frequent mergers and acquisitions, we're finding that many of the larger companies aren't hiring as many as in the past. More and more of the job openings are in smaller companies. We had more companies coming to campus last year, but they had fewer openings."

1986-87 salary offers

	No. Persons Receiving Offers	No. of Offers	Annual Range	Annual Average
Master's degrees				
MBA	103	159	\$19,440-\$72,000	\$32,885
MAIR	27	38	\$24,996-\$45,000	\$32,371
Bachelor's degrees				
BSB-Accounting (all areas)	106	139	\$13,008-\$36,000	\$21,160
Public Accounting	49	66	\$15,000-\$25,200	\$21,559
Industrial Accounting	62	73	\$13,008-\$36,000	\$20,779
BSB-Regular	204	247	\$12,000-\$48,000	\$20,560

MBA salaries reflect a 7.4% increase over 1985-86.

MAIR salaries reflect an 8.5% increase over 1985-86.

BSB-Accounting salaries reflect a 1.7% increase over 1985-86.

BSB-Regular salaries reflect a 4.7% increase over 1985-86.

Placement Office services

- **Campus interviewing:** The Placement Office schedules regular campus interviews from October through April, and at other times of the year if needed.
- **Job listings:** The office maintains a listing of permanent, part-time and summer jobs. Full-time job notices are also sent to alumni registered with the office.
- **"New grad" and "available immediately" lists:** The office maintains capsule resumes of students graduating each quarter and the prior year's graduates who are actively looking for jobs. Employers frequently use these to fill immediate openings.
- **Resume books:** Each year in the fall the office distributes books containing resumes of all degree candidates and master's intern candidates.
- **Resume referral:** Resumes for master's, undergraduates and alumni are sent to employers upon request for openings in specific areas.
- **Internships:** The Carlson School of Management offers four formal internship programs: an industrial accounting internship, a public accounting internship, an MBA internship and a Master's in Industrial Relations internship.
- **Alumni placement:** Placement Office services are also available to alumni of the school. Reactivated alumni receive a monthly job list and a mid-month update. The office sends their resumes to employers with specific job openings.
- **Special events:** Several of the school's organizations sponsor special events during the year that bring together students and employers. Regular events include an Accounting Career Fair in October, an Industrial Relations Center Annual Institute in the fall, an MBA Recruiter Reception in December, an Undergraduate Career Fair in January and a schoolwide Business Day in April. ■

Salary offers by type of employer

Type of Employer	Bachelor's Degrees		Master's Degrees	
	Percent of Offers	Average Annual	Percent of Offers	Average Annual
Accounting - public	17.9	\$21,615	2.6	\$26,278
Accounting - consulting	0.8	21,996	9.7	28,489
Aerospace	1.6	18,982	2.6	34,800
Automotive & mechanical equipment	2.6	24,990	4.6	33,577
Banking	5.7	20,039	7.7	31,804
Finance	6.2	20,521	4.1	37,982
Insurance	6.5	20,405	3.1	28,884
Building manufacturers & construction	1.6	20,660	—	—
Chemicals & drug allied products	6.8	22,415	10.2	34,510
Computers & business machines	2.1	21,446	8.7	33,338
Electrical machinery & equipment	0.5	22,746	2.6	30,840
Electronics & instruments	4.4	21,992	3.6	31,218
Engineering design & construction	—	—	0.5	36,000
Food & beverage processing	7.5	22,995	11.7	34,263
Glass, paper, package & allied products	0.8	21,068	2.6	34,746
Health care products, hospital supply	0.8	22,544	3.1	33,332
Health care & medical services	0.8	19,300	1.0	29,796
Merchandising & services	23.6	19,126	8.7	32,588
Metals & metal products	—	—	0.5	32,400
Petroleum & allied products	0.3	20,052	4.1	36,772
Research/consulting organizations	0.5	21,504	2.6	30,115
Utilities	3.6	20,240	2.6	27,720
Federal government	2.1	18,075	—	—
Local/state government	1.8	18,420	1.0	25,242
Non-profit organizations & education	1.0	16,296	1.0	29,796
Other	0.5	19,998	1.0	—

An emphasis on research: The year's highlights

Faculty research is the driving force in building the strength and reputation of the Carlson School of Management. A strong research faculty helps us attract the kind of new faculty and students we want. And research creates a stimulating teaching environment, where the process of learning is just as important as the material learned.

A quality research program reveals itself over time as the work of individuals adds incremental knowledge in a field. Early gauges of success come through funding awards and the acceptance of work for publication. Other measures of a researcher's contribution are invitations to present work at academic meetings, citations in other scholarly articles, editorial responsibilities at leading journals, participation in major organizations and being named to distinguished professorships.

The following list includes a selection of the grants awarded, articles and books published and academic honors received by Carlson School faculty in 1986-87.



Department of Strategic Management and Organization

Faculty research in this department falls into three sub-specialties—organizational studies; business, government and society; and strategic management and policy. To unify their research goals as a department, the faculty have defined their orientation to be the development of theory that is driven by applied managerial and organizational problems.

Many strategic management and organization faculty members have received national attention for their work. One very important strength of the department in attracting top scholars is its connection with the Strategic Management Research Center, which provides financial support for research and fosters outstanding interdisciplinary projects.

Professors

Richard Edwards, acting chair
Frederick R. Kappel Chair in Business
and Government Relations
Bruce Erickson
Andrew Van de Ven
3M Chair in Human Systems
Management
Ray Willis

Associate Professors

Stuart Albert
Harold Angle
Balaji Chakravarthy
Laurent Jacque
Yun-Zhong Mah
(Visiting in 1987-88)
Ian Maitland
John Mauriel
Mary Nichols
Peter Ring

Assistant Professors

Philip Bromiley
Stefanie Lenway
Charles Manz
Alfred Marcus
Elaine Mosakowski
Richard Saavedra

Major Research Awards

Philip Bromiley: National Science Foundation award for "Organizational Risk-Taking and Performance."

Philip Bromiley: Graduate School award for "A Behavioral Model of Organizational Risk-Taking."

Philip Bromiley: McKnight Foundation award for "A Study of the Determinants of Risk-Taking by Minnesota Farmers and the Effect of Such Risk-Taking on Future Economic Performance."

Balaji Chakravarthy: McKnight Foundation grant for "Strategic Planning for Legitimacy, Viability and Flexibility."

Balaji Chakravarthy: Graduate School award for "Strategic Adaptation in the U.S. Telecommunications Industry."

Stefanie Lenway: McKnight Foundation grant for "The Impact of U.S.-Canadian Bilateral Trade Negotiations on Firm Strategy."

Ian Maitland: McKnight Foundation grant for "Test of a Market Failure Theory of Multinational Enterprise."

Ian Maitland: Graduate School award for "Political Action Committee Contributions of Major Defense Contractors."

Charles Manz: McKnight Foundation grant for "Leading Organizational Human Resources to Lead Themselves."

Alfred Marcus: Graduate School award for "Market Deterrent to Socially Undesirable Behavior."

Alfred Marcus: Dean's Innovation Fund award for "The Implementation of Central Office Directives at Plant Sites."

Alfred Marcus: Dean's Innovation Fund award to complete *Business Strategy and Public Policy*.

Mary Nichols: McKnight Foundation award for "A Theory of Managing the Scope of an Issue."

Mary Nichols: 3M grant for "Capital Justification Decisions."

Peter Ring and Stefanie Lenway: Carlson School grant for "The Management of Political Risk."

Peter Ring, Stefanie Lenway and Ian Maitland: Dean's Innovation Fund award for a conference on disinvestment in South Africa.

Andrew Van de Ven: Grants from 3M, IBM, Honeywell, the Bush Foundation, the McKnight Foundation and the Minnesota Agricultural Experiment Station for the continuance of the Minnesota Innovation Research Program.

Selected Publications

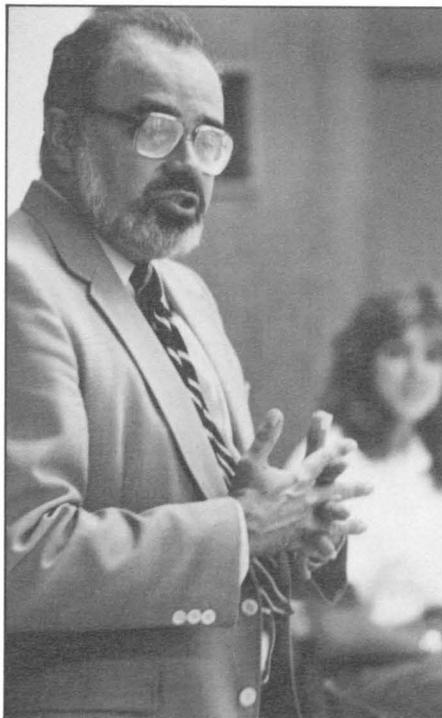
Harold Angle and J. Perry, "Dual Commitment and Labor-Management Relationship Climates," *Academy of Management Journal*, 1986.

Harold Angle and Charles Manz, "Can Group Self-Management Mean a Loss of Personal Control: Triangulating on a Paradox," *Group and Organization Studies*, 1986.

Philip Bromiley and K. Euske, "The Use of Rational Systems in Bounded Rationality Organizations: A Dilemma for Financial Managers," *Financial Accountability and Management*, 1986.

Philip Bromiley, "Shareholder Value and Strategic Management: Some Caveats," in Guth (ed.), *Handbook of Business Strategy: 1986/87 Yearbook* (Warren, Gorham and Lamont) 1986.

Balaji Chakravarthy, "Human Resources Management and Strategic Change: Challenges in Two Deregulated Industries," in Niehaus (ed.), *Strategic Human Resource Planning Applications* (Pelum Publishing) 1987.



Balaji Chakravarthy and H. Singh, "Value-Based Planning: Applications and Limitations," in R. Lamb and P. Shrivastava (eds.), *Advances in Strategic Management* (JAI Press) 1987.

Balaji Chakravarthy, "Measuring Strategic Performance," *Strategic Management Journal*, 1986.

Ian Maitland, "The Structure of Business and Responsible Corporate Behavior," in S. Sethi and C. Falbe (eds.), *Business and Society: Dimensions of Conflict and Cooperation* (Lexington Books) 1987.

Ian Maitland, "The Case for Strengthening Business Collective Organizations," in A. Marcus, A. Kaufman and D. Beam (eds.), *Business Strategy and Public Policy* (Quorum Press) 1987.

Ian Maitland, "The Limits of Business Self-Regulation," in T. Beauchamp and N. Bowie (eds.), *Ethical Theory and Business* (Prentice Hall) 1987.

Charles Manz, "Self-Leadership: Toward an Expanded Theory of Self-Influence Processes in Organizations," *Academy of Management Review*, 1987.

Charles Manz and H. Sims, Jr., "Leading Workers to Lead Themselves: The External Leadership of Self-Managing Work Teams," *Administrative Science Quarterly*, 1987.

Alfred Marcus, A. Kaufman and D. Beam (eds.), *Business Strategy and Public Policy: Perspectives from Academia and Industry* (Quorum Press) 1987.

Alfred Marcus, Philip Bromiley and R. Goodman, "Does the Stock Market Dependably Discourage Managers From Engaging in Actions That Lead to Corporate Crises?" *Columbia Journal of World Business*, 1987.

Alfred Marcus and R. Goodman, "Compliance and Performance: Toward a Contingency Theory," *Research in Corporate Social Performance and Policy*, 1987.

Alfred Marcus, "U.S. Firms Responses to Regulation: Opportunities and Stonewalling," *Long-Range Planning*, 1987.

Alfred Marcus and A. Kaufman, "Why It Is Difficult to Implement Industrial Policies: Lessons from the Synfuels Experience," *California Management Review*, 1986.

Alfred Marcus and R. Goodman, "Airline Deregulation: Factors Affecting the Choice of Firm Political Strategy," *Policy Studies Journal*, 1986.

Alfred Marcus, "A Comparison of Japanese and American Approaches to a Policy Problem," *Public Policy Analysis and Management*, 1986.

Mary Nichols, "A Theory of Managing the Scope of an Issue," *Best Paper Proceedings, Academy of Management*, 1986.

Richard Saavedra, T. D'Auno and B. Georgopoulos, "Hospital-Physician Relations Under Hospital Prepayment," *Medical Care*, 1987.

Andrew Van de Ven, Roger Schroeder, Gary Scudder and D. Polley, "Managing Innovation and Change Processes: Findings from the Minnesota Innovation Research Program," *Agribusiness Management Journal*, 1986.

Andrew Van de Ven and M. Poole, "Paradoxical Requirements for a Theory of Organizational Change," in R. Quinn and K. Cameron (eds.), *Paradox and Transformation: Toward a Theory of Change in Organization and Management* (Ballinger) 1987.

Andrew Van de Ven, "Four Requirements for Processing Analysis," in A. Pettigrew (ed.), *The Management of Strategic Change* (Basil Blackwell) 1987.

Andrew Van de Ven and R. Garud, "A Framework for Understanding the Emergence of New Industries," in R. Rosenbloom and R. Burgelman (eds.), *Research on Technological Innovation, Management and Policy* (JAI Press) 1987.

Andrew Van de Ven and R. Garud, "Innovation and the Emergence of Industries," *Academy of Management Proceedings*, 1987. Selected as one of the top three papers by the R & D/Technology/Innovation Division at the Academy of Management Conference.

Outstanding Honors

Philip Bromiley served as special associate editor for *Management Science*.

Alfred Marcus received the Fourth Annual Theodore Lowi Award for the outstanding

Policy Studies Journal article published in 1986; served as the plenary speaker at the 13th Annual Symposium of the Institute for the Study of Regulation: "Prospects for Electric Utility Deregulation: Why More Progress Has Not Been Made"; and served on the editorial review boards of *Policies Studies Journal*, *California Management Review*, *Administrative Science Quarterly*,

Western Political Quarterly and *Policy Sciences*.

Mary Nichols served her fourth consecutive year on the editorial board of the *Academy of Management Review*.

Andrew Van de Ven began service as Innovation Department editor for *Organization Science* and was a member of the editorial review board of *IEEE Transactions on Engineering Management*,

Academy of Management Review and the *Journal of Business Venturing*. He was an invited guest speaker at the Organization Behavior Group of the Harvard Business School, at the Policy and Strategy Group of Stanford University and at the Organizational Studies Group of the University of Michigan. He continues to serve as director of the Minnesota Innovation Research Program.

Department of Industrial Relations

Minnesota was a pioneer in the development of industrial relations as an academic field, and the department is now recognized as one of the top three graduate programs nationwide. The faculty are known for their outstanding work in labor economics, staffing, training and development, employee compensation and reward, and collective bargaining.

Major Research Awards

Dennis Ahlburg and P. Schumann: McKnight Foundation grant for "Gender in the Determination of Wages."

Dennis Ahlburg: National Centre for Development Studies, Australian National University grant for "Migration Within and From the South Pacific."

Dennis Ahlburg: Graduate School award for "Work, Welfare and Remittances: A Study of Mexican Illegal Immigrants to the U.S."

Mario Bognanno: U.S. Department of Labor grant for "Employee Relations and Technological Change in the Office: A Case Study of Minneapolis' 911 Innovation."

Mario Bognanno: Kyungnam University, Seoul, Korea grant for "North-South Korea Reunification and Price Negotiations."

Mario Bognanno: Ilhae Foundation, Seoul, Korea grant for "Demand for Labor in Korea's Manufacturing Sector."

John Fossum: McKnight Foundation grant for "Empirical Test of Efficiency Wage Theory."

Rebecca Luzadis, Raymond Noe and Brian Steffy: McKnight Foundation grant for "The Relationship Between Career Stages, Portfolio Decisions, and Propensity to Leave an Organization."

Rebecca Luzadis: Social Security Administration grant for "Pension Responses to Changes in Social Security."

Raymond Noe: National Association of Secondary School Principals grant for "Evaluation of the Effects of Springfield

Professors

John Fossum, chair
Richard Arvey
Mario Bognanno
John Flagler
Karen Koziara
(Visiting in 1986-87)
James Scoville
George Seltzer
Mahmood Zaidi

Associate Professors

Dennis Ahlburg
Ross Azevedo
Martin Duffy

Assistant Professors

Gregory Hundley
(Visiting in 1987-88)
Rebecca Luzadis
Raymond Noe
Cheri Ostroff
Joshua Schwarz
Brian Steffy

Simulation on Educators' Job and Career Attitudes, Development Behavior, and Performance."

Selected Publications

Dennis Ahlburg and M. Schapiro, "Why Crime Is Down," *American Demographics*, 1986.

Dennis Ahlburg, "The Impact of Population Growth on Economic Development: The Evidence from Macroeconomic-Demographic Models," in G. Johnson and R. Lee (eds.), *Population Growth and Economic Development* (University of Wisconsin Press) 1987.

Richard Arvey, H. Miller, R. Gould and P. Burch, "Interview Validity for Selecting Sales Clerks," *Personnel Psychology*, 1987.

Richard Arvey, "Sex Bias in Job Evaluation Procedures," *Personnel Psychology*, 1986.

Mario Bognanno, "A Model of Arbitration and the Incentive to Bargain," *Advances in Industrial and Labor Relations*, 1986.

Mario Bognanno, "Production and Non-Production Labor Demand in Korea's Manufacturing Sector," *Journal of East and West Studies*, 1987.

John Fossum, "Labor Relations: Research and Practice in Transition," *Journal of Management*, 1987.

Rebecca Luzadis, "Defined Benefit, Defined Contribution, or No Pension?" *Proceedings of the Thirty-Ninth Annual Industrial Relations Research Association Meeting*, 1987.

Raymond Noe and N. Schmitt, "The Influence of Trainee Attitudes on Training Effectiveness: Test of A Model," *Personnel Psychology*, 1986.

Raymond Noe, "Trainee Attributes and Attitudes: Neglected Influences of Training Effectiveness," *Academy of Management Review*, 1986.

Joshua Schwarz and T. Shawstad, "Establishing Stability in Labor Law: A Lesson from the Landrum-Griffin Act's Provisions for the Construction Industry," *Labor Law Journal*, 1987.

James Scoville, "The Traditional Industrial Sector: An Update on Its Role and Functioning," *American Journal of Economics and Sociology*, 1986.

James Scoville, "Economic Analysis of Labor Market Premia for Traditional Skills in LDCs," *Proceedings of the Thirty-Ninth Annual Industrial Relations Research Association Meeting*, 1986.

James Scoville, "A Conceptual Framework for Appraising the Economic Effects of Workers' Participation," *International Institute for Labor Studies Symposium*, 1986.

Mahmood Zaidi, "Do Income Policies Restrain Wage Inflation? Some Evidence From Australia, Canada and the United States," *The Economic Record*, 1986.

Outstanding Honors

Richard Arvey was elected to the executive board of the American Psychological Association.

Mario Bognanno received the Industrial Relations Center Advisory Council's Outstanding Service Award for 1987 and the Plaque of Appreciation from Sogang University and the Korean Labour Economics Association for a paper presented at an international symposium sponsored by each organization. He was appointed to the editorial review board of *The Employee Responsibilities and Rights Journal*.

John Fossum was named consulting editor for the *Academy of Management Journal*.

James Scoville was recognized by the Public Employer Relations Board acclaiming the quality and timeliness of arbitrations for them and was chosen as the MSID mentor for India.

Mahmood Zaidi was elected vice president of the Eastern Economic Association. He was the *Proceedings* editor for the *Eastern Economic Journal* in 1986 and was elected to the Advisory Board and Executive Committee of the North American Economic and Finance Association.



Department of Marketing and Business Law

Faculty in the Department of Marketing are best known for their research in managerial and behavioral marketing issues. Significant research activity by current faculty members and several outstanding new hires are considerably strengthening the department's reputation nationally, as is the recent appointment of Mike Houston, chairman of the department, as editor of the *Journal of Marketing Research*.

Major Research Awards

Terry Childers: McKnight Foundation grant for "Processing of Visual Information."

Michael Houston: McKnight Foundation grant for "Age Differences in the Processing of Consumer Information."

Deborah Roedder-John: Wisconsin Milk Marketing Board award for "Age Differences in Children's Choice Behavior: The Impact of Available Alternatives."

William Rudelius: McKnight Foundation grant for "Quantifying the Projected Benefits and Costs of a Proposal for Developing a Long-Range Strategy for the Biotechnology Industry in the State of Minnesota."

Robert Ruckert and Orville Walker: Marketing Science Institute and McKnight

Professors

Michael Houston, chair
Richard Cardozo
Curtis L. Carlson Chair in
Entrepreneurial Studies
Kenneth Roering
The Pillsbury Company-Gerot Chair in
Marketing
Ivan Ross
William Rudelius
Orville Walker

Associate Professors

Terry Childers*
Robert Hansen
George John
Barbara Loken
Deborah Roedder-John
Robert Ruckert*

Assistant Professors

Akshay Rao

*Received tenure in 1986-87

Foundation awards for "The Sharing of Marketing Resources Among SBU's: Strategic Context and Organizational Outcomes."

Selected Publications

Richard Cardozo and S. Shipp, "How New Selling Methods Are Changing Industrial Sales Management, *Business Horizons*, 1987.

Terry Childers, A. Dubinsky and E. Gencturk, "On the Psychometric Properties of a Scale to Measure Leadership Substitutes," *Psychological Reports*, 1986.

Terry Childers, A. Dubinsky and S. Skinner, "Selected Determinants of Salesperson Performance: A Path Analysis," *Journal of Risk and Insurance*, 1987.

Terry Childers and D. Krugman, "Pay-per-View: An Assessment of the Competitive Environment," *Journal of Broadcasting and Electronic Media*, 1987.

Terry Childers and S. Heckler, "Hemispheric Lateralization: The Relationship of Processing Orientation with Judgment and Recall Measures for Print Advertisements," *Advances in Consumer Research*, 1986.

Michael Houston and C. Cole, "Encoding and Media Effects on Consumer Learning Deficiencies in the Elderly," *Journal of Marketing Research*, 1987.

Deborah Roedder-John and C. Cole, "Age Differences in Information Processing: Understanding Deficits in Young and Elderly Consumers," *Journal of Consumer Research*, 1986.

Deborah Roedder-John, J. Bettman and C. Scott, "Covariation Assessment by Consumers," *Journal of Consumer Research*, 1986.

Barbara Loken, "Family Branding: Generalization of Brand 'Image' to Similar and Dissimilar Line Extensions," *Psychology and Marketing*, 1987.

Barbara Loken and J. Ward, "Measures of Attribute Structure Underlying Product Typicality," *Advances in Consumer Research*, 1987.

Barbara Loken, P. Pirie, R. L. Hinkle, K. Virnig and C. Salmon, "The Use of 0-10 Scales in Telephone Surveys," *Journal of the Market Research Society*, 1987.

William Rudelius, J. Cross and J. Walton, "Improving the Managerial Relevance of Market Segmentation Studies," *Review of Marketing*, 1987.

William Rudelius and D. Gobeli, "Managing Innovation: Lessons from the Cardia-Pacing Industry," in E. Roberts (ed.), *Generating Technological Innovation* (Oxford University Press) 1987.

Robert Ruekert and Orville Walker, "Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence," *Journal of Marketing*, 1987.

Robert Ruekert and Orville Walker, "Marketing's Role in the Implementation of Business Strategies: A Critical Review and Conceptual Framework," *Journal of Marketing*, 1987.

Robert Ruekert and Orville Walker, "Interactions Between Marketing and R & D Departments in Implementing Different Business Strategies," *Strategic Management Journal*, 1987.

Orville Walker, Robert Ruekert and Kenneth Roering, "Picking Proper Paradigms: Alternative Perspectives on Organizational Behavior and Their Implications for Marketing Management Research," *Review of Marketing*, 1987.



Orville Walker, N. Ford, G. Churchill and S. Hartley, "Selecting Successful Salespeople: A Meta-Analysis of Biographical and Psychological Selection Criteria," *Review of Marketing*, 1987.

Outstanding Honors

Richard Cardozo was named to the Curtis L. Carlson Chair in Entrepreneurial Studies.

Michael Houston was selected as the next editor of *Journal of Marketing Research* and continued to serve as editor of *Review of Marketing*. He was program chair for the 1987 Association for Consumer Research National Conference.

Akshay Rao was co-winner of the tenth annual Robert Ferber Award for Consumer Research for the best interdisciplinary article on consumer behavior based on a recent doctoral dissertation, co-sponsored by the Association for Consumer Research and the *Journal of Consumer Research*.

Orville Walker, G. Churchill and N. Ford were invited to present a summary of their work to the 25th Anniversary Meeting of the Marketing Science Institute's Board of Trustees. Invitation was in recognition of the continuing impact of their sales management research over the past fifteen years on both academic researchers and practitioners.

Department of Finance and Insurance

The Carlson School's finance faculty are conducting research primarily in areas such as prices in financial markets, optimal financial contracts, inflation and stock returns, and financial intermediation. The establishment of the Institute for Financial Studies at the end of last year will further strengthen the department's research agenda, and will help in the intense national competition for finance faculty in the coming years.

The insurance faculty are known for their work on insurance rate regulation and risk management.

Major Research Awards

Dongsae Cho: McKnight Foundation grant for "Equity Between Existing and New Policy Holders of a Mutual Insurer."

Michael Dothan: Carlson School research grant for "Risk and Return in Financial Markets."

Patrick Hess: McKnight Foundation grant for "Inflation and Stock Returns."

Professors

Michael Dothan, chair
Gordon Alexander
IDS Professor in Finance and Insurance
John Kareken
Banking Chair
Timothy Nantell
Gelco Professor in Finance and Insurance
Andrew Whitman
C. Arthur Williams
Insurance Industry Chair

Associate Professors

James Gahlon
Patrick Hess
Peter Rosko
Michael Stetzer
(Visiting fall, 1987)

Assistant Professors

Chun Chang
Dongsae Cho
Larry Glosten
(Visiting in 1986-87)
Ravi Jagannathan
(Visiting in 1986-88)
Paul Richardson

Ravi Jagannathan: McKnight Foundation award for "The Relationship between Money, Real Activity, Inflation and Security Hikes."

John Kareken: Grant from the Federal Home Loan Bank Board of San Francisco for "Deposit Insurance and Overlapping Regulatory Jurisdictions."

Paul Richardson: McKnight Foundation grant for "The Term Structure of Interest Rates and Exchange Rates."

Paul Richardson: McKnight Foundation grant for "A Multi-Country Model of Equilibrium in International Goods and Capital Markets."

Selected Publications

Dongsae Cho, "The Impact of Risk Management Decisions on Firm Value: Gordon's Growth Model Approach," *Journal of Risk and Insurance*, 1987.

Dongsae Cho, "Some Evidence of Scale Economies in Workers' Compensation Insurance," *Journal of Risk and Insurance*, 1987.

Michael Dothan, *Modern Theory of Financial Markets* (Oxford University Press) 1987.

Michael Dothan, "Equilibrium Interest Rates and Multiperiod Bonds in a Partially Observable Economy," *The Journal of Finance*, 1986.

Michael Dothan, "A Random Volatility Correction for the Black-Scholes Option Pricing Formula," *Advances in Futures and Options Research*, 1987.

Larry Glosten and L. Harris, "Estimating Components of the Bid-Ask Spread," *Journal of Financial Economics*, 1987.

Larry Glosten, "Components of the Bid-Ask Spread and the Statistical Properties of Transaction Prices," *Journal of Finance*, 1987.

Patrick Hess, "Empirical Determinants of the Relative Yields on Taxable and Tax-Exempt Securities," *Journal of Financial Economics*, 1986.

Patrick Hess, "Stock Returns, Treasury Yields and the Corporate Capital Structure

Decision," *Proceedings, The Seminar on the Analysis of Security Prices*, 1987.

Ravi Jagannathan and R. Korajczyk, "Assessing the Market Timing Performance of Managed Portfolios," *The Journal of Business*, 1986.

Ravi Jagannathan, W. Breen and A. Ofer, "Correcting for Heteroscedasticity in Tests for Market Timing Ability," *The Journal of Business*, 1986.

Ravi Jagannathan, V. Chari and A. Ofer, "Seasonalities in Security Returns: The Case of Earnings Announcements," *Journal of Financial Economics*, 1987.

John Kareken, "The Emergence and Regulation of Contingent Commitment (Off Balance Sheet) Banking," *The Journal of Banking and Finance*, 1987.

Arthur Williams, "Workmen's Accident Compensation Insurance: Japan's Lesser Known Social Insurance Scheme," *Keio Business Review*, 1986.

Arthur Williams, "Workers' Compensation Insurance Rates: Their Regulation and

Determination," in J. Chelius (ed.), *Current Issues in Workers' Compensation*, (W. E. Upjohn Institute for Economic Research) 1986.

Arthur Williams, "Social Security: Past, Present and Future," in J. VanDeherhei (ed.), *Search for a National Retirement Income Policy* (Wharton School Pension Research Council) 1987.

Outstanding Honors

Larry Glosten received the Roger F. Murray Prize from the Institute of Quantitative Research in Finance for "Estimating Components of Bid-Ask Spread."

Andrew Whitman was appointed by Governor Perpich to the Board of State Fund Worker's Compensation Insurance Company.

Arthur Williams completed his second three-year term as editor of *The Journal of Risk and Insurance* and served on the editorial advisory board of *Insurance Review*.

Department of Management Sciences

The Department of Management Sciences includes three sub-specialties — decision sciences, management information systems (MIS) and operations management — each with a highly respected, active research agenda.

Much of the recent research by the decision sciences faculty has focused on managerial problem solving and decision processes, including work on expert systems and problem formulation. Other methodological research has looked at optimal experimental design and simulation.

The MIS faculty are known for their work on conceptual development of the field and for research on the management of MIS and information systems. Recent research includes use of graphics, group decision support systems and the strategic management of information systems. The MIS Research Center publishes the *MIS Quarterly*, considered the leading scholarly journal in the field, and has primary editorial responsibility for *Data Base*.

In the operations management area, significant work has been done recently on scheduling models, MRP systems, the relationship of operations to strategic management and quality processes. Many of the faculty members have leadership positions in major professional associations and editorial responsibilities for the major journals.

Professors

Carl Adams, chair
Fred Beier
Norman Chervany
Gordon Davis
Gary Dickson
Don Harper
Tom Hoffmann
Paul Johnson
Roger Schroeder
James Wetherbe

Associate Professors

John Anderson
George Benson
Gerardine DeSanctis*
Gordon Everest
Arthur Hill
David Kelton*
Salvatore March
Christopher Nachtsheim
David Naumann
Gary Scudder

Assistant Professors

Cynthia Beath
Shawn Curley
Dale Goodhue
Rema Padman
Jerry Smith
Detmar Straub

*Received tenure in 1986-87

In 1985, based on the strength of the department, the school successfully competed for a five-year, \$2 million grant from IBM for the Program in Support of Education.

Major Research Awards

Carl Adams, Cynthia Beath, George D'Elia and Detmar Straub: Grants from the Council on Library Resources and University Academic Affairs for "The Planning and Design of a Model Academic Integrated Information Center."

Carl Adams and F. Niederman: McKnight Foundation grant for "Understanding Human Information Processing."

Carl Adams: Minnesota Energy and Economic Development Agency grant for "Technology Product Investment Program."

George Benson and Shawn Curley: Carlson School grant for "Forecasting Corporate Earnings: The Incentives and Biases of Security Analysis."

Gordon Davis, J. Brancheau and T. Larsen: 3M grant for "Managing the Diffusion of End-User Computing."

Gordon Davis, James Wetherbe, T. Larsen and J. Brancheau: St. Paul Companies grant for "Diffusion of End-User Computing at St. Paul Companies' Human Resources Department."

Gerardine DeSanctis, Gary Dickson, M. Scott Poole, R. Watson, I. Zigurs and V. Sambamurthy: Funding from NCR Corporation, the Graduate School, the Humphrey Institute Conflict Management Project and IBM for "Group Decision Support Systems."

Gordon Everest and Sal March: State of Minnesota, Department of Transportation grant for "Logical Database Design for the Statewide Transportation Information System."

Don Harper: Center for Transportation Studies grant to conduct two energy related research projects and seminars in the next two years.

Arthur Hill: Minnegasco Paul R. Doelz Faculty Enrichment award for "Defining JIT and CIM Research Opportunities."

Tom Hoffmann, Gary Dickson and Gordon Davis: IBM grant for "Management of Information Systems."

Paul Johnson, W. Thompson and J. Slagle: Center for Microelectronic and Information Sciences grant for "Intelligent Systems."

Paul Johnson: Control Data Corporation grant for "Model-based Diagnostic Reasoning and Strategies for Knowledge Acquisition."

Paul Johnson, J. Slagle and W. Tsai: Center for Microelectronic and Information Sciences grant for "Software Engineering of Expert Systems."

Paul Johnson: IBM grant for "A Model-based Diagnostic Expert System."

David Kelton: McKnight Foundation grant for "Point Estimators for Markov Chain Models: Performance of Least Squares vs. Maximum Likelihood Estimators."

David Kelton: Graduate School award for "Prediction Intervals for Terminating Computer Simulation."

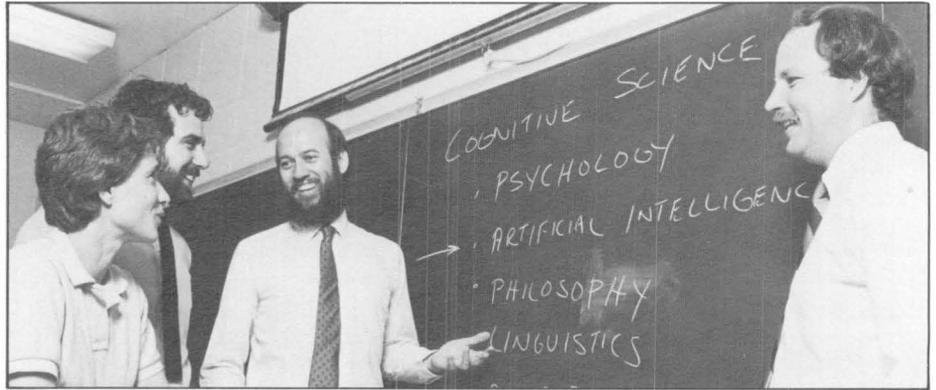
Salvatore March: McKnight Foundation grant for "The Definition of Information as an Organizational Resource."

David Naumann, S. Juhn, C. Wells, T. Larsen, M. Alanis and R. Ye: Grants from the Graduate School, the IBM Project and the Carlson School for "The Representation Research Program."

David Naumann, Cynthia Beath, R. Ye and M. Alanis: Project WOKSAPE and IBM Project funding for "The Knowledge Interview Subject System Project."

Rema Padman: Graduate School awards for "Design Analysis and Implementation of Parallel Algorithms for Network Problems" and "The Parallel Algorithms for Construing Minimum Spanning Tree Problems."

Roger Schroeder: IBM grant for "The Use of Spread Sheet Modeling for Operations Management."



James Wetherbe and J. Brancheau: MIS Research Center and Society for Information Management grants for "Key Information Systems Management Issues."

Selected Publications

Gordon Alexander, George Benson and E. Gunderson, "Asset Redeployment: Trans World Corporation's Spinoff of TWA," *Financial Management*, 1986.

George Benson and H. Ohta, "Classifying Sensory Inspectors with Heterogeneous Inspection-Error Probabilistics," *Journal of Quality Technology*, 1986.

Gordon Davis and N. Bjørn-Andersen (eds.), *Challenges of Information Systems Assessment* (North-Holland, Amsterdam) 1987.

Gerardine DeSanctis and R. Gallupe, "A Foundation for the Study of Group Decision Support Systems," *Management Science*, 1987.

Gordon Everest, "Database Administration: Organization and Functions," *Information Technology*, 1986.

Gordon Everest, *Database Management: Objectives, System Functions, and Administration* (McGraw-Hill) 1986.

Arthur Hill and T. Vollmann, "Reducing Vendor Uncertainties in a JIT Environment," *Journal of Operations Management*, 1986.

Paul Johnson, I. Zualkernan and S. Garber, "Specification of Expertise," *International Journal of Man-Machine Studies*, 1987.

Paul Johnson, Christopher Nachtsheim and I. Zualkernan, "Consultant Expertise," *Expert Systems*, 1987.

David Kelton, "Replication Splitting and Variance for Simulating Discrete-Parameter Stochastic Processes," *Operations Research Letters*, 1986.

David Kelton, W. Hancock and D. Bischak, "Economically Optimal Sample Size, Frequency, and Capability Indices Using X-bar Charts," *International Journal of Production Research*, 1987.

David Kelton and C. Kelton, "Comparison of Hypothesis Testing Techniques for Markov Processes Estimated from Micro versus

Macro Data," *Annals of Operations Research*, 1987.

John Lehman, "Business Graphics: A Taxonomy for Information Systems Managers," *Data Base*, 1986.

Christopher Nachtsheim, "Tools for Computer-Aided Design of Experiments," *Journal of Quality Technology*, 1987.

Christopher Nachtsheim, "Discussion of Assessment of Local Influence," *Journal of the Royal Statistical Society*, 1986.

Rema Padman, D. Klingman, N. Phillips, D. Steiger, R. Wirth and R. Krishnan, "A Optimization-Based Integrated Short-Term Refined Petroleum Product Planning System," *Management Science*, 1987.

Rema Padman, D. Klingman and N. Phillips, "An Intelligent Decision Support System for Supply, Distribution and Marketing Planning," in T. Reufli et al. (eds.), *Integrated Modeling: AI in the Business and Economics Contest*, 1986.

Roger Schroeder, Gary Scudder and M. Pesch, "Approaches to Managing the Cost of Materials," *International Journal of Physical Distribution and Materials Management*, 1986.

Roger Schroeder and E. White, "A Simultaneous Control Chart," *Journal of Quality Technology*, 1987.

Roger Schroeder, "A Reformulation of the Aggregate Planning Problem," *Journal of Operations Management*, 1986.

Roger Schroeder, "The Content of Manufacturing Strategy: An Empirical Study," *Journal of Operations Management*, 1986.

Gary Scudder, "Scheduling and Labor Assignment Policies for a Dual-Constrained Repair Shop," *International Journal of Production Research*, 1986.

Detmar Straub and R. Leitheiser, "Service Support Levels: An Organized Approach to End-User Computing," *MIS Quarterly*, 1986.

James Wetherbe and J. Brancheau, "Information Architectures: Methods and Practice," *Information Processing and Management*, 1986.

James Wetherbe, D. Vogel and C. Roger, "Alternative Strategies for Organizing the IS Function," *Information Management Review*, 1987.

Outstanding Honors

John Anderson was named associate editor of *Decision Sciences*.

Cynthia Beath and Detmar Straub received Honorable Mentions in the International Center for Information Technologies Doctoral Award for 1986.

Gordon Davis was awarded the first appointment as Shaw Professor of Information Systems and Computer Science at the National University of Singapore and was on leave in Singapore for the academic year. He was also invited to lecture in the Peoples' Republic of China, Thailand, Malaysia and Indonesia. He is the United States Representative to the International Federation for Information Processing and is vice chairman of their Information Processing Technical Committee. He is on the editorial board of the *Information Systems Research Journal*.

Gerardine DeSanctis was named associate editor of the *MIS Quarterly* and was named to the editorial board of the new *Information Systems Research Journal*, to be published by the Institute of Management Sciences.

Gary Dickson was selected to serve as the AACSB John F. Mee Distinguished Professor at St. Cloud State University.

Gordon Everest was appointed to the editorial board of *CAD/CIM Alert* published by Management Roundtable, Inc.

Don Harper was appointed to his fourth three-year term on the editorial review board of the *Transportation Journal*.

Tom Hoffmann served on the editorial review board of *Production and Inventory Management*.

Paul Johnson edited a special issue of *The Journal of Expert Systems*.

David Kelton was named associate editor of *Operations Research* and program chair for the 1987 winter simulation conference.

Salvatore March was named editor-in-chief of *ACM Computing Surveys* and program chair for the sixth International Conference on Entity-Relationship Approach.

Christopher Nachtsheim has been department editor for the *Journal of Quality Technology* and associate editor for the *Journal of Statistical Computation and Simulation*.

Roger Schroeder served as associate editor of *Journal of Operations Management* and was elected to the board of directors of the Operations Management Association. He was invited to teach at the INSEAD Sevin Executive Program in Fontainebleau, France.

James Wetherbe was chairman of the editorial board for *Data Base*, a publication of the Association for Computing Machinery.

Department of Accounting

Accounting faculty at the Carlson School conduct research primarily in the areas of public policy in accounting, accounting measurement, the effectiveness of accounting systems and accounting education. They are considered one of the top accounting research faculties in the country and are forerunners in experimental markets research, which uses controlled laboratory experimentation to test market theories.

Major Research Awards

Matthew Anderson, Gordon Duke and Shyam Sunder: Graduate School award for "Experimental Markets Research."

Matthew Anderson and Shyam Sunder: McKnight Foundation award for "A Study of Representativeness in Market Settings."

Lane Daley: Graduate School award for "Experimental Tests of the Value of Communication in Contracts."

John Dickhaut: McKnight Foundation grant for "The Ability of Laboratory Generated Rates to Serve as Statistics for Private Information."

Gordon Duke: McKnight Foundation grant for "A Game Theoretic Analysis of the Role of the Independent Auditor in Capital Markets."

Jack Gray: Minnegasco Paul R. Doelz Faculty Enrichment award to study "Early Warning Systems for Management of Firm Operations."

Professors

David Dittman, chair
Glen Berryman
John Dickhaut
Jack Gray
James Jordan
Shyam Sunder
Honeywell Professor in Accounting

Associate Professors

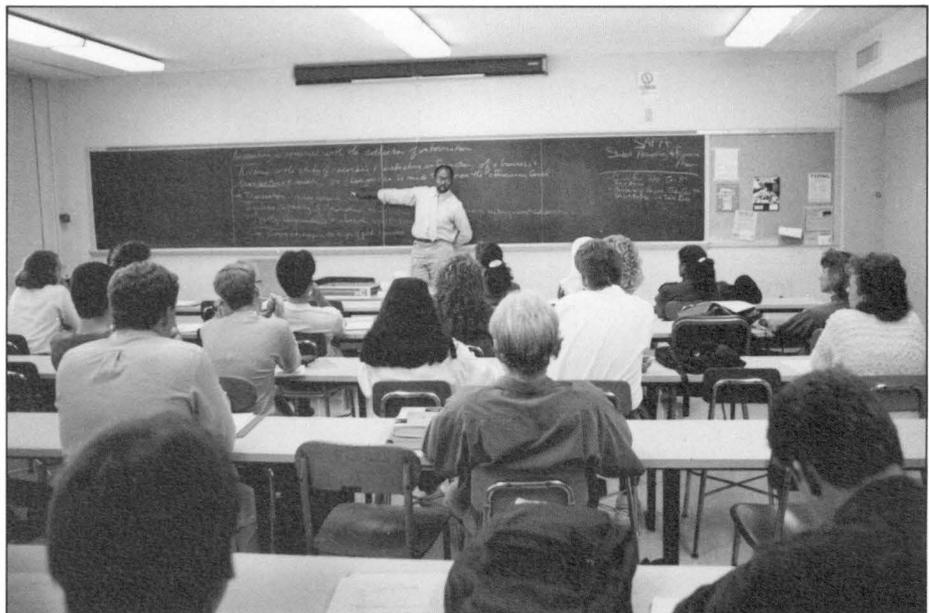
Amin Amershi
Grover Cleveland
Lane Daley*
Gordon Duke
Edward Joyce
Chandra Kanodia
Robert Vigeland

Assistant Professors

Matthew Anderson
Sarah Bonner
Gary Carter
Doris Holt
Abdeldegit Khemakhmem
(Visiting Fulbright professor,
summer 1987)
Gordon Potter
Judy Rayburn

*Received tenure in 1986-87

Chandra Kanodia, Lane Daley and J. Berg: Canadian Certified General Accountant's Research Foundation grant to study "Experimental Test of the Value of Communication in Contracts."



Judy Rayburn: Peat, Marwick, Mitchell Fellowship for two years for "The Relationship Between Macroeconomic Performance Indicators and Accounting Data," "Mandated Quarterly Reporting and Risk Factors for Firms" (both with Gordon Potter) and "The Economic Effects of Trade Protectionism in the Semi-Conductor Industry" (with Stefanie Lenway).

Shyam Sunder: McKnight Foundation grant for "The Effect of Accounting Information on Corporate Production-Investment Decisions and Equilibrium in Security Markets."

Selected Publications

Amin Amershi and P. Cheng, "Implementable Equilibria in Accounting Contexts: An Exploratory Study," *Contemporary Accounting Research*, 1987.

Amin Amershi, "Accounting Standard Setting: Steps Toward a Non-Walrasian Economic Theory," invited guest editorial in *Journal of Accounting and Public Policy*, 1987.

Amin Amershi, "Discussion of a Model of Standard Setting in Auditing," *Contemporary Accounting Research*, 1986.

Glen Berryman, "Independence, Skepticism and Duty: An Accountant's Perspective," *Minnesota Institute for Legal Education — Program on Accountant's Liability-Critical Issues*, 1986.

Gary Carter, "The Commissioner's Nonacquiescence: A Case for a National Court of Tax Appeals," *Temple Law Quarterly*, 1986.

Lane Daley, R. Bowen and D. Burgstahler, "Evidence on the Relationships Between Earnings and Various Measures of Cash Flow," *The Accounting Review*, 1986.

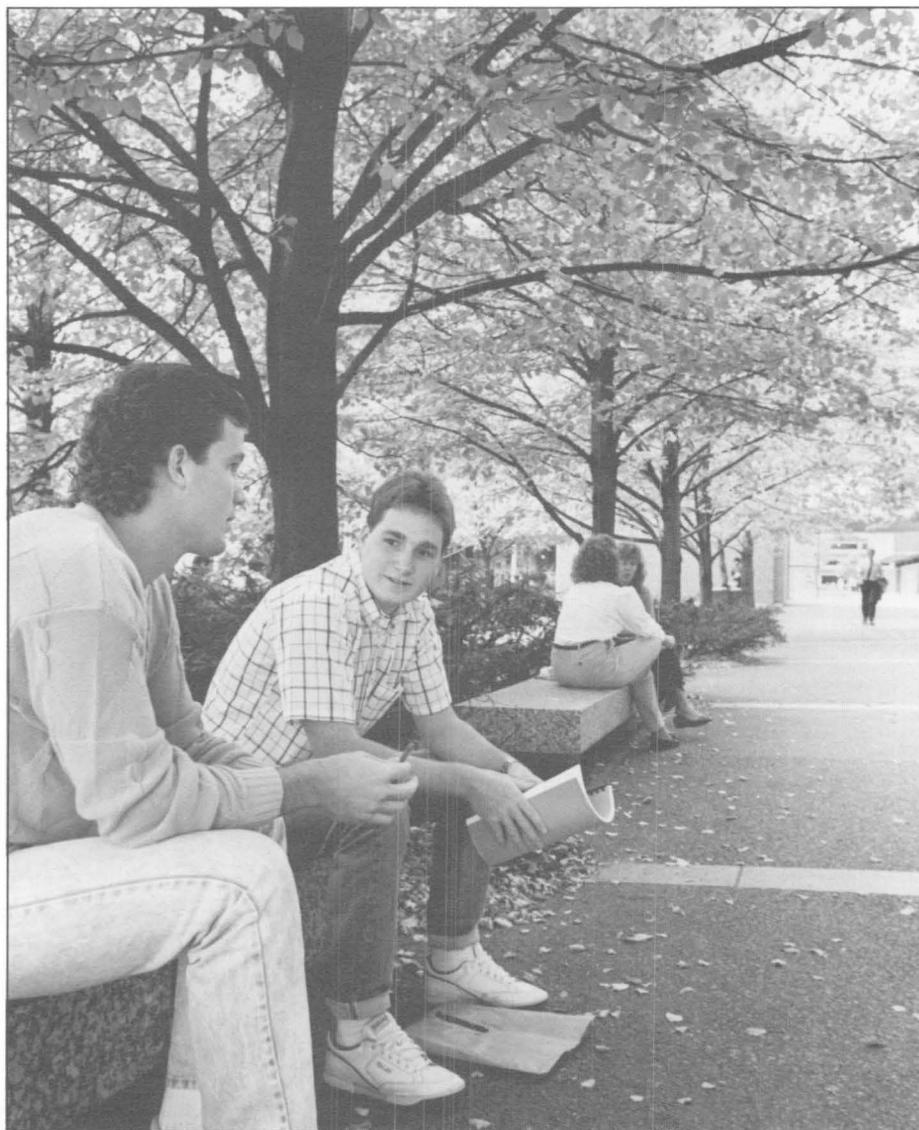
Lane Daley, Joyce Berg, John Dickhaut and J. O'Brien, "Controlling Preferences for Lotteries on Units of Experimental Exchange," *Quarterly Journal of Economics*, 1986.

David Dittman, R. Krasniewski and M. Smith, "Contracting Strategies for Maximum Benefit in Sales Contracts with Governments: The Installment Sales Alternative," *Research in Governmental and Non-Profit Accounting* (JAI Press) 1987.

David Dittman and R. Morey, "Optimal Type and Timing of Account Audits in Internal Control," *Management Sciences*, 1986.

Jack Gray and D. Matson, "Early Warning Systems," *Management Accounting*, 1987.

Doris Holt, P. Danos and A. Bailey, "The Interaction of Science and Attestation Standard Formation," *Auditing: A Journal of Practice and Theory*, 1987.



James Jordan, "Instability in the Implementation of Walrasian Allocations," *Journal of Economic Theory*, 1986.

Judy Rayburn, "The Association of Operating Cash Flows and Accruals with Security Returns," *Journal of Accounting Research*, 1986.

Shyam Sunder, R. Duh and S. Moriarty, "Base Rate Fallacy: Incentives and Learning in a Market Environment," *Laboratory Market Studies*, 1986.

Shyam Sunder and M. Shih, "Design and Tests of an Efficient Search Algorithm for Accurate Linear Valuation Systems," *Contemporary Accounting Research*, 1987.

Outstanding Honors

Gary Carter served on the editorial board of *Advances in Taxation*.

Jack Gray received the Robert Half Manuscript Award, Viking Chapter, National Association of Accountants, 1986.

Edward Joyce served on the editorial boards of the *Journal of Accounting Research* and *Auditing: A Journal of Practice and Theory*.

Chandra Kanodia served on the editorial board of the *Journal of Accounting Research*.

Shyam Sunder is a founding member and member of the editorial board of the *Journal of Accounting and Economics*. He served on the editorial boards of the *Journal of Accounting Research*, *Contemporary Accounting Research* and *Journal of Accounting Literature*. He also served as a member of the executive committee and head of the Accounting, Finance and Organization section of the Economic Science Foundation and was a member of the Distinguished Visiting Faculty, Doctoral Consortium for the American Accounting Association. ■

Two new centers broaden the school's research and outreach activities

Two new research centers—The Institute for Financial Studies and the Logistics Management Research Center—got their start in 1986-87, expanding the school's research and executive outreach activities. Research centers, now totaling seven at the Carlson School, provide funding and other resources for faculty research, fulfill special executive education needs and stimulate interaction between the business community and the school. They are also symbols of the school's commitment to research and academic leadership in a particular field. And this is what is important in attracting top faculty members and graduate students.

The Institute for Financial Studies

The Institute for Financial Studies was established last year through funding by First Bank System, The Minnesota Bankers Association, Northwestern National Life Insurance Company and Norwest Corporation. Its goal is to be a focal point for the intellectual interaction of the finance faculty and students with both academic and industry finance professionals. Although the institute's orientation is academic, part of its mission will be to communicate recent research in financial economics to finance professionals.

The Department of Finance and Insurance is striving to become a national leader in financial economics. The institute will help in achieving this goal by funding high quality research, by attracting a truly outstanding finance faculty and by providing a forum for the discussion of research among faculty at the University of Minnesota and other universities. A top-flight finance faculty can also play a useful role in attracting the best students and future employees to the Twin Cities and in attracting employees interested in furthering their education.

Patrick Hess, associate professor of finance, has been named director of the center.

Logistics Management Research Center

The Logistics Management Research Center was created last spring with a \$250,000 gift from Union Pacific

Corporation in honor of William S. Cook, the company's former CEO and Carlson School graduate. The center's goal is to become recognized nationally as a catalyst for improvement in the management of logistics, distribution and transportation.

"Important changes in how products are distributed have been occurring as a result of changing economics, technology and the regulatory environment," said management sciences professor Fred Beier, who was recently named the center's director. "The center will be the first of its kind in the country to foster research into issues brought about by these changes."

Industrial Relations Center

Established in 1945, the Industrial Relations Center (IRC) investigates and explains behaviors of employees and employers and the problems they face. The center's research focus reflects the diverse background of its faculty, whose primary appointments are in industrial relations, economics, psychology, history, sociology and business administration.

Some recent projects developed economic models to explain caste systems; identified genetic heritability factors associated with job satisfaction; analyzed the effects of technological change, employee training and organizational structure on employee relations; and predicted the effects of proposed National Labor Relations Board rules for health care organization union elections on the outcomes of the election.

Other research interests include demographics and the labor force, pensions, fairness in hiring and selection, compensation practices, collective bargaining and international comparative industrial relations.

Industrial relations professor John Fossum is director of the center.

Outreach

The IRC sponsors many outreach activities that communicate research findings to policy makers and labor professionals. These include industrial relations workshops (15-20 each year); the Working Paper Series and Reprint Series (20-25 papers each year); and the "Policy Studies Series," a policy study and development service.

The center also offers these professional training programs to help people in management, labor and the public sector update their skills:

- The Labor Education Service (LES) trains Minnesota workers and their organizations on collective bargaining, steward training, occupational safety and health, labor law, communication, labor and politics, labor history, parliamentary procedure and union administration. LES offers 33 courses in the Union Leadership Academy.
- The Employer Education Service (EES) last year offered 106 seminars and conferences attended by 2,110 people. These included the popular Arbitration Conference and "Breakfast with the Experts" series. Professional certificate programs are available through EES in human resources, computer applications and supervision. More than 132 people are currently enrolled in certificate programs; 27 graduated last year.

The Industrial Relations Reference Room is open to business, government and labor representatives, as well as university students and faculty.

Accounting Research Center

The Accounting Research Center (ARC) was established in 1977 to provide resources for faculty and students in conducting accounting research and to establish scholarship and teaching programs.

The ARC sponsors basic research into the behavior of accounting information, managerial decisions and market equilibrium. Research methods include empirical field investigation, controlled laboratory experimentation and analytical analysis.

The Minnesota Accounting Research Workshop presents a forum where innovative accounting research is presented and discussed. During 1986-87, eight nationally acclaimed visiting scholars participated in the workshops.

David Dittman, chairman of the accounting department, is director of the ARC.

Outreach

In 1986-87, the ARC published eight papers in their Working Paper Series. The center sponsors the Minnesota Breakfast Forum Series, presenting

speakers who are actively involved with professional, public or academic issues in accounting. These forums, open to the public, provide an opportunity for interaction with members of the accounting community.

Former IRS Commissioner Roscoe Egger, Jr., spoke on tax reform at the fall 1986 forum. Jerry D. Sullivan, chairman of the Auditing Standards Board of the American Institute of CPAs, spoke on increased auditing responsibility in spring 1987.

Operations Management Center

Established in 1983, the Operations Management Center (OMC) works closely with practicing operations managers to develop and communicate state-of-the-art research in the field.

OMC's research projects include technological innovations in operations, investigation of quality management practice, principles for the management of successful operations, system design strategies for high-contact service, evaluation of current quality control practices, scheduling in cellular manufacturing, operations strategy and challenges for operations management in the 1990s.

The center's director is operations management professor Roger Schroeder.

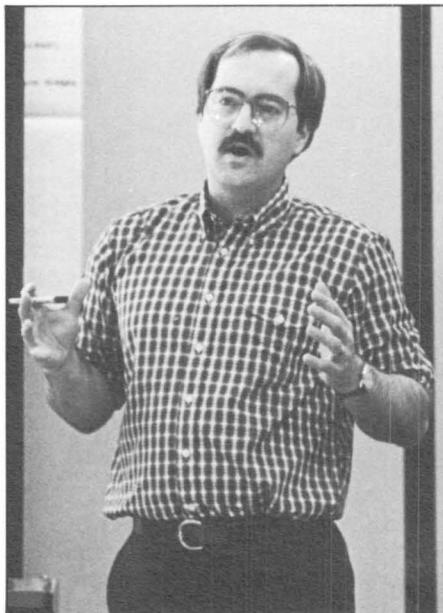
Outreach

Each year the OMC sponsors roundtables where the center's faculty meets with its company sponsors to discuss operations management challenges. Three half-day roundtables were held in 1986-87. David Collier, from the Ohio State University, spoke about customer service and quality levels in service organizations. Ken Roering, Carlson School marketing professor, discussed marketing and operations challenges. And Chuck Manz, Carlson School strategic management and organization assistant professor, gave a presentation on developing superleaders.

Last year 16 papers were published in the center's working paper series.

Strategic Management Research Center

Founded in 1983, the Strategic Management Research Center (SMRC) studies strategic questions faced by top and mid-level managers that cut across the functional lines of organizations. To adequately address these cross-disciplinary problems, the SMRC adopted



an interdisciplinary focus, receiving support and faculty involvement from the Carlson School of Management, the Hubert H. Humphrey Institute of Public Affairs and the Department of Agricultural and Applied Economics.

Currently 56 researchers from 11 university units are working on 34 research projects in the areas of managing innovation and change; international management; strategic planning and decision making; small business development and management; and mergers, acquisitions and divestitures. A new area of research, government-business relations and global competition, is currently being developed.

In May 1987, the center's Managing Innovation and Change Research Program held a two-day conference to discuss interim findings. The conference was attended by company representatives, innovation scholars from the United States and the United Kingdom, as well as SMRC researchers. The 20 papers presented are now being revised and will be published in two volumes by Ballinger Publishing Company in 1988.

Nine workshops were presented last year in SMRC's Not For Prime Time Series, a forum to promote interdisciplinary collaboration on research in its early stages.

The center's director is Mary Lippitt Nichols, Carlson School associate professor of strategic management and organization. Its two associate directors are John Bryson, associate professor of planning and public administration at the Humphrey Institute of Public Affairs and Robert King, the E. Fred Koller Professor of Agricultural Management Information Systems in the Department of Agricultural and Applied Economics. Royce Hanson, associate dean of the Humphrey Institute

of Public Affairs, was acting associate director while John Bryson was on leave in 1986-87.

Outreach

The center's research findings are available through the SMRC Discussion Paper Series, the Advanced Management Practices Paper Series and the Cases in Strategic Management Series. In 1986-87, 24 papers were published.

The SMRC sponsors a Colloquium Series, a forum for both managers and academics to address strategic management and organization issues. Speaking in the series last year were internationally-recognized scholars from 16 universities and top executives from three organizations.

The Bush Principals' Leadership Program, an innovative leadership training program for school principals, is now in its third year. It graduated its charter class of 29 members this fall.

Management Information Systems Research Center

Established in 1968, the Management Information Systems Research Center (MISRC) conducts research on the managerial use of computers in organizations. The center promotes a productive research relationship between the MIS practitioner and the academic community.

In 1986-87, faculty were involved in 20 research projects in the areas of MIS management and planning, systems development, computer graphics, databases, end-user computing, decision support systems, and organizational and behavioral issues of MIS. Faculty completed 25 articles, 16 working papers and two new books.

MISRC has gained national leadership through its work with the Society for Information Management, the *MIS Quarterly*, the Association for Computing Machinery and the International Conference on Information Systems, which it will host in December 1988.

The director of the MISRC is James Wetherbe, professor of MIS.

Outreach

MISRC sponsors a variety of activities that bring together MIS professionals and academicians. Last year 13 seminars were held and 10 discussion groups were formed. MISRC co-sponsored four national MIS programs with the school's Executive Development Center and helped place students in MIS projects or internships at associate companies. ■

1930-39

Jim and Gen (Budge) Annett, both '37, participated in their fifth ElderHostel program at California State-Los Angeles this summer. Jim has been the 1986-87 chair of Minneapolis SCORE (Service Core of Retired Executives), a program of the Small Business Administration.

Orem Robbins, '36, will relax on a cruise to the Panama Canal this fall.

1940-49

Charles E. Anderson, '47, is a partner in Creative Advertising Associates, Inc., in Fort Myers, Fla. In February, 1987, he started his new full-service marketing firm, operating in Charlotte, Collier and Lee counties. He has a full-time staff of five.

Henry E. Geerdes, '49, died on February 24, 1987. He had been the director of taxes at the H.B. Fuller Co. in St. Paul for nearly 20 years.

Bette Jean Latick Knudson, '46, and her husband, **Charles**, participated in the Univ. of Minn. ElderHostel program this summer.

1950-59

Benjamin R. Blesi, '57, was recently named marketing manager of Frankenmuth Mutual Insurance Company, a regional property and casualty insurance company doing business in Michigan, Ohio, Indiana and Wisconsin.

1960-69

John M. Braasch, '66 PhD, is chief executive officer for Share Health Plan of Nebraska in Omaha, Neb.

Richard A. Lidstad, '62, is staff vice president for human resources operations at 3M in St. Paul.

Charles E. Peterson, '68, is vice president-finance for Gravely International, Inc., Clemmons, N.C. Before this move, he was corporate controller for The Ariens Co. in Brillion, Wis.

Scott W. Rahn, '67 MBA, is president of ConAgra Consumer Frozen Food Co., St. Louis, Mo.

1970-1979

Daniel L. Ben-Asher, '70 MAIR, is senior research associate for the New Jersey State Legislature in Trenton, N.J.

Richard E. Edin, '72, recently left the Donaldson Company to establish a consulting practice, Edin & Associates, in Edina, Minn., serving the government contractor community.

Tayo Fashoyin, '74 MAIR, is professor of industrial relations at the Dept. of Industrial Relations and Personnel Management, Univ. of Lagos. At the Seventh World Congress of the International Industrial Relations Association held in Hamburg, W. Germany, Fashoyin was appointed chairman of the Organizing Committee charged with responsibility for the First African Regional Congress of Industrial Relations to be held in Lagos.

Jim J. Gebhard, '78 MBA, is engineering manager for Walt Disney World Co. in Lake Buena Vista, Fla.

Jim (Walter) Hurley, '73 MBA, is vice president for DFS Group Ltd. in Hong Kong.

Gary M. Lechko, '76, is assistant vice president for real estate development at Norwest Bank Minneapolis.

Michael Lenarz, '76, is executive director of the Minnesota Medical Alley Association. He received his MBA in '83.

Jim Miller, '75 MBA, is director of marketing retail for Hazell-Cardinal, Josten's Business Products in Washington, Mo.

David H. Moser, '75 MBA, is point-of-sale product manager for Harris Trust and Savings Bank in Buffalo Grove, Illinois.

John M. Olson, '75 MBA, has recently accepted a faculty appointment of assistant professor with the College of St. Catherine in St. Paul. He will be teaching finance in the Business Administration Department beginning fall '87.

A. R. (Tony) Ozark, '74 MBA, is manager for new business development for the Upjohn Co. in Kalamazoo, Mich.

Thomas E. Poe, '79 MBA, is director of administration and control for corporate information systems with The Pillsbury Co. in Minneapolis.

Matthew Lawrence Rowles, '74, was recently promoted to manager of Prudential's ordinary agencies marketing unit, which provides marketing support for the 11 states in Prudential's north central and mid-America marketing operations. He also recently received the "Chartered Financial Consultant" designation from the American College in Bryn Mawr, Penn.

Charles S. Salewsky, Jr., '79 MBA, is sales manager for operations with Ansul Fire Protection in Marinette, Wis.

Edward Sarnoski, '76 MBA, is department manager of the marketing division for UARCO, Inc., Barrington, Ill.

John L. Shannon, Jr., '79 MBA, is president of Threshold Ventures, Inc., Minneapolis.

Gregory D. Timmers, '78, was admitted as a partner to the CPA firm of Deloitte Haskins & Sells in Chicago.

Gary L. Tobison, '79 MBA, is senior manager with Peat Marwick Main & Co. in Minneapolis.

Mark A. Zorko, '77 MBA, is controller for Zenith Computer Group (a part of Zenith Electronics Corp.), St. Joseph, Mo. He was formerly finance manager with Honeywell, Inc., Minneapolis.

1980

Anwar H. Bhimani, '80 MBA, is a manager with Coopers & Lybrand in Minneapolis.

William P. Brady, '80 MBA, is consulting manager for Coopers & Lybrand, Minneapolis. He lives in Lakeville, Minn.

Jane S. Haakenstad, '80 MBA, is a self-employed marketing research consultant working out of her home in Minneapolis. She gave birth to Caroline Marie Holewa on May 6, 1987.

Keith A. Meyer, '80 MBA, is manager of administration-controller with Plan Mark in Eden Prairie, Minn.

K. C. Sukumar, '80 MBA, is president of Taj Technologies, Inc. in Edina, Minn.

1981

Feresthteh Azad, '81 MBA, is a financial planner with IDS Financial Services in Richardson, Texas.

T. Craig Britton, '81 MBA, is director of new concept development for The Pillsbury Co. in Minneapolis.

Jay P. Carstenbrock, '81 MBA, is district manager for Ohio Oil Co. in Columbus, Ohio.

Paul P. Cheney, '81, is a manager for Burger King in Osseo, Minn. He is married and has one child.

Mary Anne Guberud, '81 MBA, is director of marketing for Executive Development, Inc. in Minneapolis.

Michael T. Jackelen, '81 MBA, is marketing manager for The Pillsbury Co. in Minneapolis.

Andrea L. Kelly, '81 MBA, is a supervisor for external reports with IDS Life Insurance Co. in Minneapolis.

Edward V. Lauing, '81 MBA, is president of ChannelMark Corp. in San Mateo, Calif.

Jon S. Lebewitz, '81 MBA, is owner of Ad Missions, St. Louis Park, Minn.

David H. Messick, '81 MBA, is a coordinator at the Univ. of Minnesota. In 1986 he chaired the Second Triennial International Gay & Lesbian Association of Choruses (Gala Choruses) Festival in Minneapolis. More than 1200 singers from 25 choruses throughout the U.S. and Canada participated in the five concerts held at Orchestra Hall during July 4th weekend. Festival revenues exceeded expenses by nearly \$10,000.

Jeffrey D. Moran, '81, was promoted to corporate controller with the American Roller Co. in Bannockburn, Ill. He is also pursuing an MBA in finance from the J. L. Kellogg Graduate School of Management at Northwestern.

Patrick F. Muldary, '81 MBA, was recently promoted to director of engineering and quality assurance with Nichols-Homeshield Inc. in Rice Lake, Wis.

Karen Peterson-Ford, '81 MBA, is an account executive for the Carlson Marketing Group/E. F. MacDonald in Minneapolis.

David E. Reynolds-Gooch, '81 MBA, is product manager, Europe, with the Consumer Specialties Division of 3M, St. Paul. He and his family will move to Brussels, Belgium in Sept., where he will assume responsibility for building a European business in consumer skin care and health care.

Virginia L. Smith, '81 MBA, is now senior product manager with NCR Comten in St. Paul.

Linda Ulbrich, '81 MBA, is the proud parent of a son, Gregory, 7 years old, and a daughter, Katherine, 3 years old. Linda is very involved with the Minneapolis schools, with Gregory in first grade and Katherine in nursery school. She is working herself right out of a job!

Jeanne M. Volgelzang, '81 MBA, is an associate with Baker & McKenzie in Chicago.

Brett Vollmar, '81 MBA, is operations planning manager for the Uncle Ben's division of M & M/Mars in Houston, Tex.

1982

John T. Barber, '82, was recently promoted from district sales manager-Southern California to national account sales manager-western division for Pepsi-Cola's Fountain Beverage Division of Pepsi U.S.A. in Irvine, Calif.

Nancy A. Beadling, '82, was promoted to manager, commercial audit division, of Arthur Andersen & Co., Minneapolis. She is also treasurer of the board of directors of the Parkwood Terrace East Association.

Milind Bhat, '82 MBA, is assistant professor at the College of St. Benedict, St. Joseph, Minn.

Christopher L. Bretoi, '82 MBA, is an advanced analyst for 3M's international operations in St. Paul.

Lori Lee Eliason, '82, is an accountant with Singer Librascope, Glendale, Calif.

John A. Gappa, '82 MBA, is a manager of planning and analysis for The Pillsbury Co. in Minneapolis.

Cheryl R. Hatfield, '82 MBA, is a senior economic analyst for Northern States Power in Minneapolis.

Stephen R. Henderson, '82 MBA, is a consultant for Cytrol, Inc. in Edina, Minn.

Ryan D. Johnson, '82 MBA, is a financial analyst for Super Valu Corp. in Eden Prairie, Minn. He has two daughters, 3-year-old Kiersten and 3-month-old Shannon.

Allen Lindh, '82 MBA, is a marketing manager for 3M/TelComm in Austin, Texas.

Lindsay A. E. Shorter, '82, is a special projects manager at the Mayo Clinic in Rochester, Minn. She enjoys the diversity and excitement of working for the Mayo Clinic, which is expanding into fields such as satellite clinics and integration with hospitals. She received her MBA in '83.

Robert C. Mayeron, '82 MBA, is a business manager and partner with KKE Architects, Inc. in Minneapolis.

Blake J. Omlie, '82 MBA, is with Piper, Jaffray & Hopwood, Inc., in international institutional equity sales. He will be opening their first international office in London on January 1, 1988.

Glen E. Parcmann, '82 MBA, is part owner and account manager for PACKET/PC, Inc., a start-up software firm in Farmington, Conn. He has also been elected secretary of the Connecticut chapter of the Appalachian Mountain Club, a hiking and environmental organization.

Glenda J. Sime, '82 MBA, is a financial planner for Honeywell, Inc. in Hopkins, Minn.

Monica A. Theobald, '82 MBA, is a senior marketing analyst for Lee Data Corp. in Eden Prairie, Minn.

1983

Patricia A. Agee, '83 MBA, is lead marketing analyst with Fingerhut Corp., Minnetonka, Minn.

Thomas J. Anderson, '83 MBA, is a sales representative for Digital Equipment in St. Louis, Mo.

Susan E. Baer, '83 MBA, is a master scheduler for Syva Company in Cupertino, Calif.

Mark W. Bassinger, '83 MBA, is a data processing manager for ITA in Eagan, Minn.

Steven O. Bergeland, '83 MBA, is a systems analyst for The Pillsbury Co. in Minneapolis.

Mark H. Boeyink, '83 MBA, is director of marketing for Western Bank & Insurance in St. Paul.

Anne C. Fosse, '83 MBA, is president of her own consulting firm for computer applications, the Micro Group Inc., in Minneapolis. They sell hardware and software, and have specialists working with attorneys, CPAs, architects/

engineers and medical, construction, manufacturing and wholesale/retail distribution firms.

Gaylen J. Harms, '83, is a financial planner for North Star Resource Group, Minneapolis.

Bonnie A. Kennedy, '83 MBA, is a commercial lending officer for First Bank Minneapolis.

Janet E. Kramer, '83 MBA, is a personal financial planner with IDS/American Express in Minnetonka, Minn. She was also a candidate for the Minnesota House of Representatives in 1986.

Dale E. Lampson, '83 MBA, is a support manager for corporate financial reporting systems with Hewlett Packard in Palo Alto, Calif.

Joseph J. Mullen, '83 MBA, is a marketing manager for Metafile Information Systems in Bloomington, Minn.

Susan Black Narayan, '83 MBA, is a marketing research supervisor for 3M, St. Paul.

Joel J. Olson, '83, is the owner of Guaranty Coin of Anoka in Anoka, Minn. He is married and has a new baby daughter.

Marcia L. Page, '83 MBA, is portfolio manager for Cargill in Minneapolis.

Daniel R. Peterson, '83 MBA, is manager of planning and analysis in the international foods division of The Pillsbury Co. in Minneapolis.

Cindy Ann Pickard, '83, is senior accountant in loan operations for TCF Banking & Savings in Minneapolis.

B. Timothy Swanson, '83 MBA, is an assistant vice president with Norwest Bank St. Paul.

Jack R. Veach, '83 MBA, is president of Artic Fox Heater, Hopkins, Minn.

Anthony W. Waldera, '83 MBA, is vice president of administration for Sentry Technologies, Inc. in Excelsior, Minn.

Randall H. Zats, '83 MBA, is an accountant with the Smithsonian Institution in Washington, D.C. He lives in Arlington, Va.

1984

Christine Anderson, '84 MBA, is project director for Market Trends, Inc., Minnetonka, Minn. She gave birth to her first child, Elliot, in June.

Priscilla R. Dixon, '84 MBA, is an assistant staff manager for product management with Wisconsin Bell in Milwaukee, Wis.

Craig J. Drake, '84 MBA, is marketing communications manager for UFE Inc. in Stillwater, Minn.

Dan Elron, '84 MBA, is senior manager for Nolan, Norton & Co. in Lexington, Mass.

Gary P. Gengel, '84 MBA, is an attorney for The Pillsbury Co. in Minneapolis.

Thomas W. Harold, '84 MBA, is a marketing manager with The Pillsbury Co. in Minneapolis.

Randall Hedman, '84 MBA, is working for the Employee Benefits Administration in Minneapolis.

Lynne M. Heuton, '84 MBA, is manager of forecasting and investment management for Land O' Lakes in Minneapolis.

Kent W. Jones, '84 MBA, is vice president for finance and administration/treasurer with Louisville Presbyterian Theological Seminary, Louisville, Ky. Jones was formerly assistant to Vice President for Finance David Lilly at the Univ. of Minn.

Gerald R. Just, '84 MBA, is director of internal audit, St. Paul Medical Center, Dallas, Texas. He was previously with Peat Marwick Main & Co., Dallas.

Michael J. Kelberer, '84 MBA, is publisher of *The Phoenix* in Roseville, Minn.

Catherine G. Kriske, '84 MBA, is supervisor, corporate marketing research, with 3M, St. Paul.

William J. McCabe, '84 MBA, is administrator, Division of Education, for the Metropolitan Museum of Art, New York. He was formerly vice president of administration at the Minneapolis College of Art and Design.

Kevin J. McCarthy, '84 MBA, is supervisor of transportation network operations for Target in Minneapolis.

Melanie J. Mogg, '84 MBA, is a senior tax specialist for Lurie, Eiger & Beiskof CPAs in Minneapolis.

Mary Kroll Mohrenweiser, '84 MBA, is a programmer analyst with BASF Corp., Inmont Division in Clifton, N.J.

R. Allan Morrison, '84 MBA, is supervisor, management control system for FMC Corp., Minneapolis.

Cynthia J. Mueller, '84 MBA, is a marketing engineer with Hewlett Packard in Boise, Idaho.

Erick J. Nyquist, '84 MAIR, is human resource supervisor, 3M, New Ulm, Minn.

Mark L. Patzloff, '84 MBA, is a market analyst for business planning with Northwest Airlines in St. Paul.

Christine E. Zahn Rifkin, '84 MBA, married her classmate **Ross Rifkin** and they have a daughter, Samantha, born in October, 1986. Christine is a CPA/supervisor with Schweitzer Rubin Gottlieb & Karon in Minneapolis.

Paul D. Rimmeried, '84 MBA, is a senior financial analyst with Federal Reserve Bank in Minneapolis.

Paul T. Runice, '84 MBA, is manager, treasury operations, for The Pillsbury Co. in Minneapolis.

Susan K. Fadlovich Schwickert, '84, is married and works as a marketing coordinator for Hubbard Milling Co. in Mankato, Minn.

Marjah C. Tajibnapis, '84 MBA, is a senior credit analyst for First Bank Robbinsdale in Robbinsdale, Minn.

Charles Tatsuda, Jr., '84 MBA, is a commercial banking officer for Norwest Bank Minneapolis.

Darrell G. Tilleskjoer, '84 MBA, is a production staff accountant for Honeywell, Inc. in Hopkins, Minn.

Steven W. Virnig, '84 MBA, is a senior systems analyst with The Pillsbury Co. in Minneapolis.

Mary L. Ward, '84 MBA, is a senior consultant with Arthur Andersen & Co., Minneapolis.

Susan J. Wheeler, '84 MBA, is an assistant vice president with First Bank St. Paul.

Ralph R. Wilkes, '84 MBA, is manager, accounts payable, for Burlington Northern Railroad, St. Paul.

1985

John C. Bergstrom, '85 MBA, is an associate with Cherry Tree Ventures in Minneapolis.

Julie A. Davis, '85 MBA, has recently accepted a position as marketing analyst with First Bank System's Metropolitan Division in Minneapolis.

James C. Flaa, '85 MBA, is a financial analyst with First Bank System in Minneapolis.

Pamela K. Graves, '85 MBA, works for Financial Organization Services in Minneapolis.

Ruth A. Lotsof, '85 MBA, is a programmer with First Bank System in St. Paul.

Debbie Fumall McClernon, '85, is a media research analyst with Carmichael-Lynch in Minneapolis.

Lisa C. Nemer, '85 MBA, is a cost analyst with IDS Financial Services, Inc., Minneapolis.

Lizbeth E. Olson, '85 MBA, is an account executive with Trans World Systems, Inc., St. Paul.

1986

Bill Rodriguez, '85 MBA, is a senior account executive with Mona, Meyer & McGrath, Minneapolis.

Melanie Anderson Smith, '85, works for the marketing department of Lutheran Brotherhood in Minneapolis. She is considering a "Jazzercise" franchise.

Kathryn E. Steffey, '85 MBA, is a business analyst with IDS/American Express, Minneapolis.

Michael McCoy Taylor, '85 MBA, is a pricing analyst with FMC in Fridley, Minn.

Janet Allen Thompson, '85 MBA, is a systems development analyst with Burlington Northern Railroad, St. Paul. She married Jim Thompson on May 23, 1987.

Pankaj Vaish, '85 MBA, is a senior consultant with Arthur Andersen & Co. in Chicago, Ill. He will be moving to Bombay, India by December, 1987 to help start up Arthur Andersen & Co.'s consulting practice in India.

Susan Geiser Alexander, '86 MBA, is research director with the Nashville Consulting Group in Nashville, Tenn.

Steven J. Bloomquist, '86 MBA, is a financial analyst with Cub Foods, Stillwater, Minn.

Deanna Bonrud, '86, is a management trainee with Deluxe Check Printers, Inc. in Arden Hills, Minn.

Neal C. Erickson, '86 MBA, is an assistant product manager for FBS Card Services, Inc. in Minneapolis.

Nicholas M. Healy, '86 MBA, is with Peoples Electric Contractors in St. Paul.

Joni E. Jallo, '86 MBA, is a credit representative for First Bank Minneapolis.

Keith H. Pedersen, '86 MBA, is supervisor of construction for AT&T in Chicago, Ill.

James G. Riley, '86, is a certified public accountant with Touche Ross & Co. in Minneapolis.

Jim Schoettler, '86 MBA, is a special agent for Northwestern Mutual Life, St. Paul. He works with business and professional people on their life and disability insurance needs.

Victoria Selep, '86 MBA, has left 3M and is a senior database analyst with Burlington Northern in St. Paul.

Lois Sonstegard, '86 MBA, is vice president for Interhealth, St. Paul, a joint development company that enables health organizations to cooperate on applied research and development projects.

Randy L. Stacy, '86 MBA, is a senior MIS specialist for Hennepin County in Minneapolis.

Amy L. Stern, '86 MBA, is a senior marketing analyst for 3M in St. Paul.

Mark J. Vieno, '86 MBA, is a manager/direct investment group for Kidder, Peabody & Co. in Minneapolis.

Hirokazu Yuihama, '86 MBA, is with the securities research

division of Yamaichi Research Institute, Tokyo, Japan.

Kent M. Zarbock, '86, is working on his M.S. in taxation at Texas A & M Univ. He expects to graduate in May 1988 and will work as a tax specialist with Peat, Marwick, Main & Co. in Houston.

Alumni Directory to be published

The Carlson School has arranged to publish a comprehensive alumni directory, to be available in 1988.

To make sure you're included, complete and return the biographical update packet that will be mailed to you soon. You'll also receive a form for ordering your personal copy.

Don't miss this chance to find out what your classmates are doing, where they work and live, and how to contact them. Watch for your packet and return your forms without delay!

Alumni update and address correction form

Please use this form to report an address change or to let your classmates know what you've been doing that's new or exciting. In the space below, let us know what information you'd like to share about your career, awards, family, trips, mini-reunions, etc. Photos are welcome, too. We'll include your news in the "Alumni Update" section of the next *Minnesota Management Review*.

If you have a change of business or home address, please affix the address label from this issue in the space indicated, and write your new address(es) on the lines below.

Send this form to: Jeanne Katz, director, Alumni Development and Student Relations, Curtis L. Carlson School of Management, University of Minnesota, 271 19th Avenue South, Minneapolis, MN 55455.

Name _____ Date _____
first middle or maiden last

Year of graduation and degree(s) granted from the Carlson School of Management _____

Employer _____ Home _____
position mailing address

_____ company/organization city/state/zip

_____ city/state/zip home phone

_____ work phone

Information you would like to share:

For address corrections, affix old label here:

CALENDAR

November

5 Tax Planning Seminar. Professor Grover Cleveland will discuss personal tax planning in light of the new tax bill and year-end strategies to maximize your tax situation. 5:00 p.m., Management Conference Center, \$10.00. Discount to MAA members.

13 University of Minnesota Presidents Club Dinner, Radisson Plaza Hotel. 7:00 p.m. Attendance is by invitation only.

17 Mentoring seminar and reception. Hosted by the Mentoring Committee of the Alumni Advisory Council for alumni and current students. 5:00 p.m., Management Conference Center.



21 Mentoring seminar and reception. Hosted by the Mentoring Committee of the Alumni Advisory Council for alumni and current students. 5:00 p.m., Management Conference Center.

January

26 Athletic Teams as a Business Seminar. Local sports managers and business partners will talk about the business of sport. 5:30 p.m., Management Conference Center, open to everyone.

February



2 International Forum. Reception begins at 5:00 p.m., Management Conference Center.

11 Wine and Cheese Mid-term Gathering. Hosted by the Alumni Resources Committee of the Alumni Advisory Council for current students to meet and mix with alumni. 5:00 p.m., Grandma's Restaurant.

LOOKING AHEAD...

March 31 Networking Reception, Alumni Club, 50th floor of the IDS Tower. Hosted by the Alumni Programs Committee of the Alumni Advisory Council for alumni to meet and network. 5:00 p.m.

April 19 Business Day, University Radisson Hotel, 1:00-8:00 p.m. For alumni, corporate representatives, faculty and students.

For more information about these events, or about Alumni Advisory Council committee meetings and activities, call Jeanne Katz at (612) 625-1556.

And in conclusion



With the return of fall and a new academic year, Northrop Mall is busy once again. See inside for the full picture on 1987-88 enrollments at the Carlson School of Management.

Minnesota Management Review

Curtis L. Carlson School of Management
University of Minnesota
271 19th Ave. S.
Minneapolis, MN 55455

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