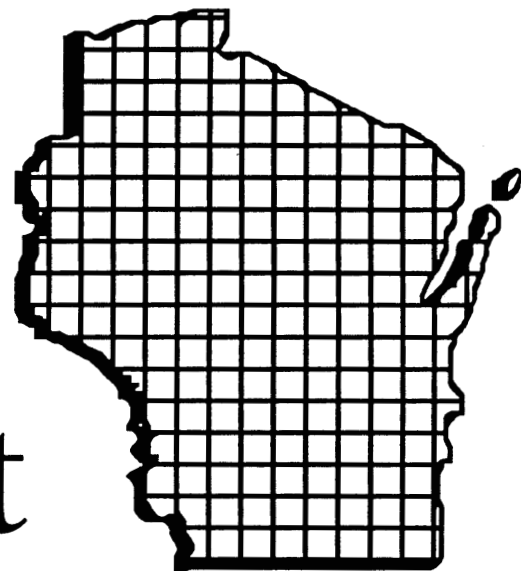


Wisconsin

Policy
Research
Institute
Report



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**The University
of Wisconsin System**

An Agenda for the 21st Century

Report from the President:

We thought that as we move closer to the 21st century, it would be an appropriate time to examine the University of Wisconsin System. We asked Professor Daniel Alesch, a Wisconsin native, a Professor of Public Environmental Affairs and Coordinator of the Graduate Program in Administrative Science at UW-Green Bay, and a Senior Research Fellow at the Institute, to study the role of the university system.

Alesch begins by painting a picture of the enormous impact the university had on Wisconsin in the 19th century. It framed much of Wisconsin's economy for the 20th century by developing agricultural research that changed Wisconsin from a wheat state into a dairy state. He points out that as we go into the 21st century, there are demographic changes that will make the University's role even more crucial to Wisconsin's economic future. These demographics will force the University System to change from its current structure if it hopes to continue its impact on the state.

For example, it is clear that older, placebound students, will become a much larger part of the University than in the past. In the future, residents will be much more likely to use the University over their entire lives rather than just having a four-year undergraduate degree. These changes mean that the System's resources, direction, and mission must be redefined over the next decade.

Our population increases show that Milwaukee, the Fox Valley, Green Bay, and Madison will have a much larger part of Wisconsin's population than in the past and will need more resources.

There is also the question of graduate and Ph.D. degree programs. Should placebound students not be allowed to get a Ph.D. because they do not live in the vicinity of UW-Madison and Milwaukee?

Alesch also develops the concept of regional universities and more cooperation between the vocational-technical system and the UW System. He has some very interesting ideas about teaching loads and tenure and the adjustments that will have to be made if the University is to adapt to the demographic changes that are sweeping Wisconsin.

Finally, he believes that the system must change if it is to continue its historic role of contributing to the economic, social, and cultural future of the state of Wisconsin.


James H. Miller

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The University of Wisconsin System

An Agenda for the 21st Century

by
Daniel J. Alesch

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EXECUTIVE SUMMARY

INTRODUCTION

This is an analysis of what the University of Wisconsin must become, as Wisconsin enters the next century and the University enters its second quarter century. Universities did well the past three decades without much thought about how social and economic changes would affect them. Those days are over. There have been massive, fundamental, and irrevocable changes during the past few years — in what we do for a living, where we live, and what our families are like. More changes are on the way. They demand new thinking about what the University should be.

Too many professors and administrators think everything would be better at the University if they just had more money and less outside interference. They are wrong. Wisconsin needs the University of Wisconsin System more than ever before, but the University must change what it does and how it does it.

FORCES DRIVING CHANGE

Three driving forces demand new responses from the UW System: fundamental changes in the state's economic structure, the redistribution of the population, and changes in Wisconsin families. Moreover, there are persistent and strident calls for increased efficiency on the campuses. Ready or not, these forces will change the UW System. The only question is whether the changes will come from within the University or be forced on it from the outside.

- Jobs that pay well and do not require high skills are disappearing fast. The economy has changed. Our new economy consists of leaner, more nimble companies that use advanced technologies, sophisticated management, and highly skilled, versatile employees. These are businesses that can flourish in the new global economy. People unable to make it in this new job market are doomed to jobs that pay near the minimum wage.
- The baby boom upset the traditional population pyramid. Older people are beginning to outnumber younger people for the first time ever. The baby boomers' children are now reaching college age, but there are fewer of them than there were of their parents. The age distribution of the population will oscillate in complicated ways for the next 50 years.
- Most Wisconsinites live in three places: metropolitan Milwaukee; Madison, and its surrounding towns; and the Fox River Valley, from Oshkosh to Green Bay. These three areas contain Wisconsin's 11 fastest-growing counties, and they account for two-thirds of all growth in Wisconsin from 1960 to 1992. We're moving south and east.
- The baby boomers have changed family life in Wisconsin. Ozzie-and-Harriet families — a working husband, a wife at home, and kids under 18 — are in the minority. Women are working outside the home more than ever before. Some are forced into jobs by divorce or because the family needs two paychecks to make it. Others enter the job market because women have been emancipated and are free to pursue careers in whatever fields they want. Family has changed forever.
- Consumer confidence in the University is not what it used to be. Students of all ages have trouble getting into the University, the major, and the classes they want. It's hard to graduate in four years. Worst of all, a college degree is no longer an assurance of a good job.

IMPLICATIONS

The major shifts in the economy, the population, and changing roles and families have important implications for the University System.

- To a considerable extent, Wisconsin's economic and social well-being hinges on how well the University can adapt to the watershed changes in Wisconsin and the world.
- A high-quality University System is essential for the state to flourish in the new world economy. The new economy is based on advanced engineering, scientific, and management technologies. The University is a key to the new economic infrastructure. It must supply highly skilled graduates, basic and applied research, and sophisticated continuing education for returning workers.
- The University needs more partnerships with business and government. Universities have no monopoly on new knowledge. More than ever before, knowledge flows from business and industry to the University. Working together can create synergies so everyone can benefit.
- Recent high school graduates will no longer dominate University planning and programs the way they have for 30 years.
 - More people will return to the University for one or two courses, for a second baccalaureate degree, or for graduate study. The useful half-life of knowledge is getting shorter every day and people change jobs and careers more than before. The University will be the primary way for people to adapt to personal and social changes and to a tough job market.
 - There will not be as many recent high school graduates as in the past, but more of them need some kind of higher education. People who would not have thought about the University a decade ago — students who did not rank high in their high school graduating classes — are at the door now. They have no acceptable alternatives. They need some.
 - The average age of students will rise. There are more returning adults, students stay in college longer to learn more, and older people are coming to college for the first time. There will be greater racial and ethnic diversity, reflecting Wisconsin's changing population.
 - Fewer students can go away to college than ever before; these placebound students are concentrated in Wisconsin's three big metropolitan areas. Older, returning, and minority students often have family or job responsibilities or financial circumstances that keep them from leaving their homes for extended periods.
- The University and the technical colleges have more in common than ever before. This is because the economic structure and technology have changed. More of us are wearing light-blue collars; distinctions between management and labor are getting blurred as new management techniques and new industries emerge.

RECOMMENDATIONS

Change is never easy. An old Chinese proverb says that there are always 10,000 stalwart guardians of the past standing at the crossroads of change. It is time, however, for the University of Wisconsin to revitalize and reinvent itself to address new needs. The changes will take a decade or more, but it is absolutely critical that they start now.

- The University of Wisconsin System needs a new vision. The vision should reflect a proactive institution that is market-driven and customer-oriented. It should reflect what the University System would be if it were to start today "from scratch." The University should dedicate itself to making the vision a reality.
- The new University of Wisconsin System should capitalize on the real benefits that can come from having a "system." That is, the whole must be more than the sum of the parts. Today, the System is like 26 campuses held together by state statute. Students on every campus should be able to take a course from a brilliant teacher on one campus. Teaching advances on one campus should be shared with the others. There should be more and better cooperation and joint efforts among campuses. University policymakers have to learn what business learned from the past decade. They should build effective processes, decentralize, empower, and facilitate. Experimentation should be encouraged and rewarded.
- The University needs to develop more kinds of universities to meet diverse regional and statewide needs. A single flagship campus and a set of smaller regional institutions will not meet the state's needs. Wisconsin needs metropolitan campuses that address mainly regional needs, have a broad array of degrees, and serve mostly commuter students. It needs regional residential campuses with a special focus. It needs one or more universities with special emphasis on graduate students. It needs kinds of universities we have yet to invent. The point is that we need several kinds of campuses to address diverse challenges. We cannot afford to oversimplify our needs.
- The University should become a more proactive partner in social and economic development across the state. Several campuses will need a full array of scientific, technical, and engineering programs. Several additional campuses will have major research missions and selected doctoral programs in their areas of greatest competency and regional need.
- Becoming a more proactive partner in development means that continuing education must be better than ever. It has to be integrated into the individual campuses much more than it is today. Continuing-education programs should become just as sophisticated and rigorous as other academic programs. Despite earlier efforts, the UW-Extension is still not integrated into the universities.
- The University should lead an effort to capitalize on the very real benefits that can come from a close partnership with some of the state's technical colleges. It will require changes in both institutions, but the state needs the benefits that can come from exploiting areas where the two institutions are coming together. Instead of denying the merging mutual interest, the two institutions might cooperate, for example, to create a third kind of graduate — extraordinarily skilled technicians with exceptional problem-solving skills and a well-rounded education.
- The University must become much more efficient. To do that, it must look at all the factors of production: facilities, faculty, staff, and financial resources.

- We should be sure to measure productivity sensibly. It doesn't make sense to measure a cow's productivity by how much she eats. We want to know how much she produces given what she eats.
 - Wisconsin's universities operate at capacity only 60% of the year. Especially those in metropolitan areas should operate at full tilt all year around. The highest cost to students is deferred income. Year-round universities make it possible for older, more diverse, and placebound students to graduate in four years. Students can attend only two semesters a year if they want to, but we cannot afford to let hundreds of millions of dollars of capital facilities stand idle when there are people who need to go to school.
 - The University has to teach smarter. We've learned a lot about how people learn, but college-level teaching hasn't changed much in centuries. Professors must improve how they teach, how they help others learn, and what gets taught. They must use new technologies and techniques to help students learn better and faster. Chaining professors to the blackboard to do the same old thing does not increase efficiency very much.
 - Productivity gains will come from reallocating resources from low-priority programs and places to higher-priority programs and places. Some institutions and programs must make do with smaller budgets. The University has to bite the bullet and put more of its resources where the people are.
- Tuition reciprocity with Minnesota must be revisited. Wisconsin and Minnesota students can attend universities in each other's state for resident tuition. The states make up the difference between resident and out-of-state tuition. But many more Minnesota students come to Wisconsin than vice versa — about 6,500, or a whole university's worth. There are extremely high costs to this, and the people who are bearing those costs are the ones who can least afford it. They are placebound, older, minority, and poor students. They are the ones who cannot move across the state or to Minnesota to complete their degrees and for whom there is no room at the university closest to them. For them, reciprocity means they are out of luck.
 - The state must be a partner in helping the University of Wisconsin finance proactive initiatives to become a critical component of the economic infrastructure. Most of the money must come from greater efficiency, by reallocating resources in the System, and by bringing Wisconsin's extremely low tuition closer to the national average. When the University starts to prove it is an active partner and is being more efficient, then the state should make additional, essential investments from tax revenues.
 - The University of Wisconsin needs better management practices. The way the University decides priorities and allocates resources is inadequate for today. Academic administrators are usually drawn from the ranks of professors, few of whom have any formal training in management, policymaking, planning, budgeting, or organizational change. We cannot afford to run a multibillion dollar organization with untrained managers. Trial and error won't cut it anymore. The University must ensure that academic administrators get adequate training.

I. NEW KINDS OF CHALLENGES

PURPOSE

Wisconsin's society and economy have changed so much that they now place important new demands on the University of Wisconsin System — demands to which the University must respond to remain a vital resource for the people of the state. This is an analysis of what the University must become in the face of its rapidly changing, turbulent new environment.

Universities flourished for four decades without much strategic analysis of how society and the economy were changing and of the consequences for the university. Administrators could make decisions based on modest changes in enrollment trends and by talking only with one another. Classrooms were full, budgets were adequate, and doing what was done yesterday and the day before worked just fine. It does not work just fine anymore.

There have been massive, fundamental, and irrevocable changes in the economic order, where we live, our families and social life, and what we do for a living. More changes are on the way. The watershed changes we're experiencing demand new thinking about what the university should be. Too many professors and university administrators think all that is required to make things better is more money and less outside interference. They are wrong. Unless we recognize the basic underlying problems and address them straight on, universities, including the University of Wisconsin System, will be in real trouble. The University of Wisconsin System is operating on a narrow and outmoded vision of what universities and university systems ought to be. The old vision worked well for a century, but it is increasingly out of touch.

Universities change, but only slowly, rarely without outside prodding, and almost never in anticipation of society's changing needs. Like the earth, they change marginally and almost imperceptibly. Occasionally, however, jolting shocks change the earth, as they did in Los Angeles this past January. Inexorable forces for change are now building on the University of Wisconsin System. Prospective students are much more diverse. The need for high-quality, continuing education is on an order of magnitude greater than ever before. Programs of study needed across the state are more sophisticated and diverse than ever before. The useful "half-life" of knowledge is shorter than ever before — for both students and professors. There are persistent demands for increased productivity and greater accountability. These underlying forces will continue to move inexorably, building stress at the seams until they overcome inertia and bring dramatic, sudden, forceful change. As with earthquakes, the jolt may occur when we least expect it. It will happen, ready or not. It will generate havoc, damage, and expense. When the dust settles, things will be changed forever, but not the way we would have changed them had we thought about it in advance. Ultimately, the UW System and its constituent campuses will change what they do and how they do it. A new vision and a new set of models will emerge. The big question is whether the UW System can make thoughtful, planned changes before unpredictable changes are forced on it from the outside.

This is written by one of the faithful — one who believes that the future of Wisconsin is tied inextricably to how well the state's university system can adapt to the fundamental changes we're experiencing. It is written in the unshakable belief that the UW System has been and can be one of Wisconsin's most valuable assets. However, unless it changes proactively to address fundamental societal change, the system will suffer the consequences of being more burden than help.

Now is an appropriate time to think strategically about what the University of Wisconsin System ought to be. Not only are we about to enter the new century, but the UW System is about

to enter its second quarter century. If it responds appropriately to the new demands, the University of Wisconsin System will be a much different institution a decade from now.

A BRIEF DESCRIPTION OF THE UW SYSTEM

Wisconsin created the University of Wisconsin System ("the UW System" or "the System") in 1971 by a merger of the University of Wisconsin and the Wisconsin State Universities System.¹ The System is governed by a Board of Regents appointed by the governor. Members have overlapping terms so one governor does not appoint all of the regents. The regents appoint a president to head the System. Each campus is headed by a chancellor. Chancellors are named by the Board of Regents from lists submitted by the respective universities in the System. Each university in the System is responsible for its staff, but tenure to each institution is granted by the regents.

The original University in Madison was founded in 1848, the same year Wisconsin was admitted to the Union. The University of Wisconsin-Milwaukee was added in 1956. UW-Parkside (located between Kenosha and Racine) and UW-Green Bay were added in 1969.

The Wisconsin State Universities System had its origins in 1857, with the creation of a system of normal schools in the State.² In 1927, the normal schools became State Teachers Colleges when they were authorized to grant baccalaureate degrees in education. Other programs were added, and, in 1951, the schools were designated State Colleges. They were redesignated State Universities in 1964.

The mission of the System, in which each institution of the University shares, was reformulated by the Board of Regents in 1989. It is succinct:

The mission of this system is to develop human resources, to discover and disseminate knowledge, to extend knowledge and its application beyond the boundaries of its campuses, and to serve and stimulate society by developing in students heightened intellectual, cultural, and humane sensitivities; scientific, professional, and technological expertise; and a sense of value and purpose. Inherent in this mission are methods of instruction, research, extended education, and public service designed to educate people and improve the human condition. Basic to every purpose of the system is the search for truth.³

The Numbers

Today, the UW System comprises 26 campuses where 160,000 people of all ages pursue an extraordinary range of studies. Total UW System expenditures are more than \$2 billion annually. UW-Madison and UW-Milwaukee offer a wide range of baccalaureate, masters, and doctoral degrees. Those two campuses are designated as the System's primary research institutions. Eleven campuses offer baccalaureate and masters degrees. They are the Universities of Wisconsin at Eau Claire, Green Bay, La Crosse, Oshkosh, Parkside, Platteville, River Falls, Stevens Point, Stout, Superior, and Whitewater.

¹ Laurence A. Weinstein, former president of the University of Wisconsin System Board of Regents, provides an informative history of the merger of the two systems in his book, *Moving a Battleship With Your Bare Hands* (Madison, Wis.: Magna Publications, Inc., 1993).

² Normal schools were two-year institutions created primarily for the purpose of training elementary-school teachers.

³ University of Wisconsin System, System Administration, "Mission of the University of Wisconsin System," Madison, Wis., Feb. 1989.

The System includes 13 two-year centers. They are in Baraboo, Fond du Lac, Janesville, Manitowoc, Marinette, Marshfield, Menasha, Rice Lake, Richland Center, Sheboygan, Waukesha, Wausau, and West Bend. The Centers were intended originally for students unable to leave home to attend a residential campus for the first two years. The students would presumably conclude their educations with a two-year associate degree or transfer to one of the state's four-year campuses to finish their baccalaureate degrees.

There is one university without a campus. The UW-Extension offers programs statewide through its Continuing Education and Cooperative Extension divisions. The Continuing Education division offers programs world-wide. Almost all UW-Extension faculty members are located in Madison and Milwaukee, but programs are offered statewide partly through faculty and staff on UW campuses across Wisconsin.

Behind the Numbers

Statistics cannot tell what the University means to Wisconsin. The UW campuses are woven into the lives of almost every Wisconsinite. Some of my own earliest school recollections, for example, are painting and drawing with Let's Draw! and singing with Professor Gordon on the Wisconsin School of the Air. Tens of thousands of us share those early influences. It would not be much of a surprise if Wisconsin's progressive environmental policy stems from lessons so many of us learned on the radio with Ranger Mac. Those of us who have been here for a long time simply always understood that "the boundaries of the campus are the boundaries of the state."

Over the decades, the University of Wisconsin graduated our teachers, scientists, engineers, social scientists, physicians, attorneys, city planners, managers, artists, farmers, and businesspeople, among others. The University reaches hundreds of thousands through its outreach and extension programs in agriculture, business, and the arts and humanities. For a century, faculty and staff research has contributed significantly to the economy and to the quality of life within the state and beyond. Athletic and cultural events at every campus contribute to Wisconsin's quality. People across Wisconsin are proud of UW-Madison's long-awaited football resurgence and Rose Bowl victory. They enjoy Badger hockey, UW-Stevens Point's immense success in NAIA hockey, UW-Oshkosh's outstanding baseball tradition, and UW-Green Bay's very successful basketball programs. Cultural events draw tens of thousands to campuses across the State. Wisconsin's extraordinary public-radio and television networks add immeasurably to the quality of living here.

For many thousands of us, the University is a source of pride and an object of gratitude. My own story is like thousands of others. Without the University, its accessibility, quality, scholarships, and low tuition, I probably could not have gone to college and would not have spent the past 30 years in government, non-profit research organizations, and university teaching.

SYMPTOMS AND COMPLAINTS

Changing Markets and Perceptions

Colleges and universities across the country are in trouble. For almost 50 years, they sailed a rising tide of demand for traditional programs. GIs, returning from World War II and financed by the GI Bill, filled university classrooms. Korean-war veterans followed. Not far behind were the huge enrollments of postwar babies bolstered by young men eager to avoid service in Vietnam. Federal grants and state budgets for public higher education were generous. Large enrollments buoyed private school budgets. Nobody in the universities had to do much strategic thinking; they were in a seller's market and they had the only product in town.

The tide has changed. Universities, colleges, and university systems face problems they have never had to deal with before. At the same time the number of recent high school graduates plummeted when the baby boomers graduated, demand for higher education increased rapidly among older, returning, and nontraditional students. For some campuses, the precipitous decline in recent high school graduates means empty dormitories and classrooms. For others, enrollment pressures have never been higher. Meanwhile, the cost of operating universities is increasing faster than the cost of living. State budgets are tight because of skyrocketing costs in other programs, a sluggish economy, and fewer federal grants. Resources are stretched and getting stretched further. During the 1992-93 academic year, 20 states cut their higher-education budgets.⁴

Consumer confidence in colleges and universities is not what it used to be. Students can't get into the majors, classes, or school they want. It is tough to graduate in four years. A college degree is no longer assurance of a decent job. Besides, most universities are not "user-friendly," except for traditional students. They are ill-equipped and have the wrong mindset to deal with the needs of returning adults. The University of Wisconsin System doesn't even accept credit cards for tuition payment. The corporate classroom is growing rapidly, in large part because universities are unable or unwilling to change to meet new kinds of needs.

To add to their woes, there is widespread belief that universities are the last refuge of the leisure class. Many people believe professors earn big salaries, teach only a few hours a week, and use most of their time for lucrative consulting or research on obscure, useless topics. Like all stereotypes, it is an overgeneralization. True, almost half the full-time faculty across the country say they spend no more than four hours a week on research and scholarly writing and almost half of all professors in the United States did not publish professionally over a two-year period.⁵ On the other hand, many professors really are overworked and underpaid; they have large classes, teach many different courses, and suffer with inadequate equipment. Still, there is little wonder why cries for greater productivity from the University are increasingly strident and persistent.

Diverse Responses

Colleges and universities are scrambling. Those most vulnerable financially were among the first to respond to changing markets. Faced with rapidly declining enrollments, small private colleges were particularly vulnerable. Some made almost instantaneous transformations from their humanities and liberal-arts programs to business programs, with very little change in faculty. They offer off-site programs in Wisconsin's larger cities. They are cashing in on placebound students who want a business degree and are willing to pay high tuition and accept questionable quality to get it. Some universities went "back to the basics" in the futile hope that what once worked in a simpler world would work in a much more complex one.

For the University of Wisconsin System, the dominant strategy for dealing with the decline in recent high school graduates was "enrollment management." Most of the campuses in the University of Wisconsin System are designed primarily to serve recent high school graduates. Faced with the prospect of declining enrollments in those schools and demand that far exceeded capacity in others, the System announced a constriction of enrollment until the number of students came into balance with its resources. This took pressure off schools that had more demand than they could handle. It was also a boon to schools facing empty classrooms because recent high-school graduates, unable to enroll near their homes, were forced to enroll in schools with declining enrollments. Other placebound prospective students were out of luck.

⁴ Gene I. Maeroff, "College Teachers, the New Leisure Class," *TheWall Street Journal*, Sep. 13, 1993.

⁵ *Ibid.*

Meanwhile, private and public colleges alike are looking forward to the "echo effect" of the baby boomers. The first wave of boomers' children is just now preparing to enter college, giving some beleaguered administrators hope for a modest return to the halcyon days of the sixties and seventies.

Alas, any administrator who looks for the echo effect to rescue colleges and universities from the current set of challenges is in for a surprise. We cannot go back to what used to be; it isn't there anymore. The world has changed so much over the past two decades that the old models for universities and university systems are increasingly irrelevant if not downright dysfunctional. Doing more of the same old thing will not meet the needs of a different world. College and university administrators who believe their schools can flourish in the new order by doing what they used to do are deluding themselves and putting the rest of us at great risk.

System Symptoms

This is not meant to be a litany of complaints about the University System and its institutions, faculty, and administrators. Pointing fingers doesn't buy very much. The whole purpose is to look strategically at the forces shaping the University's future and, in the light of those forces, define what the University of Wisconsin ought to be. Criticism and complaints are identified, but only because we have to know the complaints to address them explicitly. There is no intent to belittle or offend.

In addition to the external challenges universities face, there is unhappiness within the University System. Professors and administrators across the System complain privately that UW System Administration is overstaffed, overcentralized, and overbureaucratized. They complain about micromanagement and a deluge of paperwork forced on them from above. Some lament that UW System administrators appear to be more interested in maintaining the existing array of institutions the way they are than in meeting the needs of the people of Wisconsin. There is a sense that people who should be leading the charge for change have too narrow a vision of what a university can and should be today.

Professors say classrooms, equipment, and laboratories are out of date, and that students who reach the university are ill-prepared for their higher education. They complain about inequities in resources and workloads across the System. Professors are concerned that garbage collectors make more money than many assistant professors and that the purchasing power of their salaries has fallen for decades. Returning adult students from business are alternately stunned or amused by the outmoded equipment and support services with which the campuses have to make do.

Outside Madison, some professors and administrators complain that UW System Administration is "Madison-centric." Some say privately that System policymakers have succumbed to what might be called the Sacred Badger Syndrome. The syndrome is characterized by an unquestioned belief that Wisconsin can afford only one really good university and that it will be UW-Madison. The syndrome fosters the operating assumption that the UW System's other universities are inferior, as are their programs, professors, and graduates. It leads to lower teaching loads for professors at doctoral campuses compared with other campuses no matter whether the individual faculty member tutors doctoral students or conducts research. It suggests, implicitly, that students at other campuses are not worthy of equal education. Some people believe that when outside critics see what they think is inadequate class contact and undergraduate instruction in Madison, they shoot at it but hit other campuses. The perception that a Madison-centric mindset drives UW System policy is very divisive.

The UW System and its campuses are making changes, many of which deserve our sincere applause. The System is, for example, becoming more like a system and less like a loose

confederation of autonomous fiefdoms. UW System and campus administrators are trying to ensure effective review of tenured professors and achieve increased productivity. Administrators are trying to achieve greater racial diversity among professors and students. The University is making headway increasing the number of female faculty members in traditionally male-dominated fields, especially now that more women have doctorates in those fields.⁶

UW System Regents and administrators and chancellors and vice chancellors on the individual campuses face tough challenges. In the face of this difficult situation, professors have not been very much help. Faculties are often like sea anchors, dragging against the currents of change. They have not added much to devising ways for meaningful review of tenured faculty members or contributed to good faith efforts to increase productivity. Too often, they remain tied to archaic perceptions of what universities and professors ought to be. Campus administrators are caught frequently between a rock and a hard place, trying to respond to changing demands while being figuratively stoned by the faculty and handcuffed by System administrators.

System policymakers, too, are struggling against difficult odds. Sometimes, they seem to have taken the path of least resistance — bowing, for example, to demands for more faculty time in the classroom instead of holding out for ways to really increase productivity. Sometimes, they have centralized decisionmaking instead of empowering administrators and holding them accountable. Other times, they have forced changes on the individual campuses that had to be made and that the campuses were unable or unwilling to make. The University needs a better strategy.

The time has come for major changes in what we do and how we do it. Much of the old vision remains valid and valuable, but a new, updated vision will result in a UW System that is more proactive, more productive and accountable, more oriented to the needs of the state, and more committed to continual improvement.

WE CAN ACCOMPLISH CHANGE: AN IMPORTANT LESSON FROM THE PAST

As difficult as it is for universities to change, it does happen. A century ago, Wisconsin's economy was in trouble. Wheat was king in Wisconsin agriculture in 1850, but by 1870, wheat farming was declining rapidly. Disease and pests, unstable prices, and growing competition from Iowa, Minnesota, and the Dakotas made Wisconsin wheat farming risky business. Wisconsin's farmers turned to dairy farming, but dairying then was largely subsistence farming. At that time, farmers typically let their cows go dry in the winter in the mistaken belief they would be more productive the next summer. Cows wintered on hay and forage. Cheesemaking was unorganized and average in quality. Something was needed to launch dairying and cheesemaking into a major, profitable industry. The University provided that "something," but not willingly and not without controversy.

By the 1860s, the University of Wisconsin in Madison had a department of agriculture. The University's agriculture curriculum reflected the typical educational philosophy of the time. It focused on "trigonometry, physiology, astronomy, political economy, logic, aesthetics, and conic sections."⁷ Farmers were skeptical of the value of such a program, so even up to 1880, there were almost no agricultural students in Madison. There were no full-time agriculture professors and little interest in applied research. In 1878, a pioneering dairy farmer from Sheboygan named Hiram Smith changed all that. When he was appointed to the Board of Regents, one of his first acts was to engineer an effort to bring William A. Henry to the University's agriculture program.

⁶ System President Katharine C. Lyall outlines progress in some areas in "Getting A Head Start on Accountability." See *Wisconsin Ideas*, Sep. 1993, at 2.

⁷ *Ibid.* at 289.

The joint efforts of Smith and Henry led to a major transformation of the University's agriculture program, making it a national model. They also led to contributions to the dairy industry that made Wisconsin dairying preeminent in the nation.

Henry's main interest was developing improved cattle-feeding practices and bringing that knowledge to farmers. He was particularly instrumental in bringing a radical idea to Wisconsin from France. The radical notion was that cows could flourish on fermented chopped corn—silage through the winter, rather than subsist on hay and forage. Largely because of Henry, silos began to dot the Wisconsin landscape around the turn of the century, cows produced milk throughout the year, and cheesemaking flourished. Henry's work was aided, no doubt, by data from Regent Smith, who kept detailed records of his own dairy herd's production while eating silage through the winter. Henry's activities at the University led to major innovations by other faculty. Stephen M. Babcock, for example, solved a major problem for the dairy industry — assessing milk quality to determine how much it was worth — by inventing a simple butterfat test. Research by other members of the faculty in those early years resulted in a cold-curing process for making cheese and many other improvements that transformed the dairy industry.

The agriculture faculty did not limit its radical activities to agricultural science and technology. It also pioneered ways to bring the new knowledge to farmers across the state. One of these innovations was the agricultural short course, which became a national model in a very short time. The short course provides farmers with university training on the campus for substantially less than the typical four years.

Originally, the faculty, including even the innovative and entrepreneurial Henry, opposed the radical notion of a "short course." That was not how things were done at the University. The success of the agricultural short course is due to the efforts of two regents, William Vilas and H. D. Hitt, who pressured the faculty into developing and carrying out the short courses. The faculty finally succumbed to the pressure, created the short courses, and they and agriculture reaped the rewards.

The real significance of the activities by Smith, Henry, and the others is that they changed the University forever. Before them, the University focused on classical education and traditional scholarship. After them, the University expanded its approach to embrace applied research, bringing that knowledge to people throughout the state, and devising new approaches to learning. In today's language, their activities led to a major paradigmatic shift.

The parallels and the lessons for today of the efforts a century ago to bring the resources of the University to bear on a major state problem are obvious. Except for a few farsighted and persistent regents and faculty, the University was dragged, kicking and screaming, into a new model. It moved from a classical model to the current model of applied research and outreach. The shift a century ago changed the face of Wisconsin and yielded extraordinary benefits. It took the dairy industry, working through its associations and with the Progressives, to get a skeptical and often hostile legislature to finance the new model and its applied research.⁸ It took bold, farsighted regents to pressure faculty members into applied research and experimentation with instructional programs. The payoffs from the vision and perseverance of those few shaped not only the state's rural landscape, but the University and the state's economy, self-perception, and culture. Today, Wisconsin faces economic and social challenges at least equal to those that created the need for fundamental change in the University in 1880. The University of Wisconsin System must respond appropriately now. It must transform itself now into a model that is relevant for today and for the coming decades.

⁸ *Ibid.*

II. DRIVING FORCES AND MAJOR IMPLICATIONS FOR THE UW SYSTEM

The forces driving the changes in the University's environment are woven in a complex fabric. The population is changing. There are fewer people in the age group that traditionally attended college, but more people are trying to get into college. Wisconsin's population is declining in the west, southwest, and north and growing in the Milwaukee, Madison, and Oshkosh-Green Bay economic centers. The traditional Ozzie-and-Harriet family — in which the husband works, the wife is the homemaker, and the kids play ball and have paper routes — is now in the minority. In its place is a collage of family types, including families with two wage earners and many single-parent households. Minority populations are growing. The basic structure of the economy is changing. A single paycheck is rarely enough to support a family. There are not enough good jobs to go around, especially for people with limited skills, but even for people with college degrees.

Perhaps the most basic forces influencing what the University must become stem from economic changes. Jobs that pay well and require little formal training are disappearing. Businesses seeking a better foothold in the global economy, are getting leaner. Rapid development of high-technology business requires employees with exceptional, sophisticated skills. Two kinds of jobs are growing: those requiring very high levels of knowledge and those requiring very little and paying near the minimum wage.

All these changes are interrelated and have important implications for what the University System ought to be as we enter the next decade. A recent RAND report draws similar conclusions:

The challenge to higher education emanates from dramatic changes simultaneously occurring in its role in society, the demographic composition of students, societal demands for research and service, the costs of instruction and research, and the availability of public support.⁹

BASIC CHANGES IN THE ECONOMIC ORDER

Three Fundamental Changes

Denial of Traditional Expectations. There are not enough good jobs in manufacturing for all those who want them. Some jobs moved to countries with lower wages. Others were replaced by technology. Even 20 years ago, there was the promise of lifelong employment, high wages, and decent benefits across Wisconsin in paper mills and in manufacturing. No longer. A paper-recycling plant that employs 30 people and costs a million dollars a job produces as much pulp as 400 workers produced in a sulfite pulping mill — before it was closed. Good jobs are hard to find.

Someone once observed that more revolutions are caused by the denial of traditional expectations than by rising expectations. Many Wisconsinites are having trouble realizing their traditional expectations. The fundamental changes in our economic structure eliminated jobs many people expected to hold when they graduated from high school. Now, they face the prospect of minimum-wage jobs unless they can develop marketable skills for an increasingly competitive and uncertain workplace.

At the same time good jobs in manufacturing declined, the number of people seeking them increased. First, women were no longer obligated to serve in traditional roles and in jobs as secretaries, nurses, teachers, and kitchen or assembly-line workers. They compete effectively for

⁹ Roger Benjamin, Stephen Carroll, Maryann Jacobi, Cathy Krop, & Michael Shires, *The Redesign of Governance in Higher Education* (Santa Monica, Calif.: RAND Corporation, 1993) (report number MR-222-LE) [hereinafter Benjamin].

the good jobs in business, industry, and the professions. Second, many families need two wage earners to make ends meet, so more women were forced into working outside the home. Third, the postwar baby boom brought hundreds of thousands of people into the job market just as many more women entered the labor force and as manufacturing jobs dried up. Fourth, the baby boomers' extraordinarily high divorce rate gave many women little alternative but to enter the job market. The number of good jobs simply did not expand fast enough.

Increased Competition Sends People to School. There are good jobs in Wisconsin, but even those who hold them are not secure. At the same time blue-collar jobs are disappearing, white-collar jobs are also disappearing. Competition is so intense in the new global economy that almost everyone in Wisconsin has a friend, neighbor, or co-worker who was "made redundant" or "downsized." The need for continually developing new and updated skills, knowledge, and understanding is greater than ever before.

People with good jobs often feel the need to go back to the university for more training. Some go back to provide a cushion against potential pitfalls in their spouse's increasingly uncertain career. Others go back for specialized training to give themselves an extra edge to help compete in a tough job market.

High Technology as the New Economic Driver. Every Sunday supplement talks about how we've entered the information age. There is much more to it than that. We are in the midst of a fast-paced, fundamental, worldwide economic transformation driven by a complex web of phenomena. It includes economic development in less-developed countries based on microchip technology and cheap labor. It includes extraordinary and rapid scientific advances in this country in such fields as genetics and superconductivity and their rapid conversion to technology-based products. Advances in scientific understanding are being converted to new technology and business and consumer products at a rate absolutely unprecedented in history. Many of Wisconsin's new jobs are based on rapidly changing technologies in information processing, biotechnology, engineering, and a dozen other fields. More than ever before, business success requires continual research and development, a workforce at the forefront of skill and understanding, and access to the most pertinent and immediate information.

Implications

These fundamental and amazing changes have enormous implications for the University as it enters the next century. The changes are altering our basic expectations, creating ambiguity and uncertainty, and increasing, perhaps by an order of magnitude, the importance of the university and university research in our daily lives and career expectations.

One consequence is that universities are no longer the sole repositories of advanced knowledge. Today, business and industry are likely to be far ahead of university professors in technology, management methods, engineering applications, and other knowledge, including teaching methods. The old one-way flow from university to industry is now a two-way flow. One reason is that the university does not have a monopoly on Ph.D.'s. Business employs them, too. Not long ago, Lester Thurow, then the dean of the Massachusetts Institute of Technology's Sloan School of Management, lamented that "only one of our last 13 Ph.D. candidates in finance stayed in universities."¹⁰

Students Who Didn't Expect to Be at the University Are There. An important consequence of the decline in good blue-collar jobs is that many people who were not considered

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"It's So Hard to Keep Good Professors Nowadays," *Business Week*, Nov. 28, 1988.

"college material" a few years ago are now at the door, seeking entry. Terrence MacTaggart, chancellor of the Minnesota State Universities, states:

Many students who currently enroll at (liberal arts colleges and four-year regional universities) do so because they find no respectable alternative to attending college. Low graduation rates at the regional universities may testify to this lack of enthusiasm for the liberal arts and conventional majors. If offered a practical alternative, such as a challenging apprenticeship leading to a high-paying job, many students will turn their backs on the traditional four-year options.¹¹

We have not yet invented very good ways to help these people meet their needs, but we had better. Europeans address the problem with very high-quality technical schools separate from the universities. There are some difficulties with that approach, but we need to learn what others are doing and then invent something better.

Older and Returning Students on Campus. There are growing numbers of older students and prospective students, especially in metropolitan areas. They want access to the University for many reasons. Some, having tried the workplace without a degree, hope that attending the University will help them find a better life. Some returning students already have degrees, but think their chances for decent employment will be better with a different undergraduate major or a graduate degree. Still others are the victims of downsizing and are back in school to develop new or updated skills. Certainly not least among the older, returning students are those who have good jobs, but who need to update and expand their skills.

Another reason for older students on campus is that we're going to go to school longer. Frequently, the baccalaureate degree does not provide the education and specialized training one needs for even entry-level positions in sophisticated employment settings. Because the number of good jobs did not expand fast enough, some students continue on in graduate school immediately after completing their undergraduate degree simply so they can compete for employment. It is little wonder that the average age of graduate students across the University System has been getting younger.¹² Recent graduates find they need to get more education to increase their competitive edge.

It is not just that we will study the same subject longer. More people will become knowledgeable in several fields. This will happen because both problems and new technologies cut across traditional disciplines, but also because having skills in more than one field gives one a competitive advantage. Even five years ago, the MBA gave a competitive edge. Now, the hot prospects are "corporate triathletes," MBAs with engineering and computer-science skills. According to *Business Week*, "as companies go from vertical to horizontal, they want cross-disciplinary managers."¹³

Placebound Students. Few of the older, returning students have the luxury of going away to school. The result is that we who teach at universities in the growing metropolitan centers see hundreds of older, placebound students at "Window 3" of the registrar's office. Some have low incomes and few resources. They cannot leave. Others hold responsible positions — as well as mortgages, minivans, children, and pets — and simply cannot pick up, move across the state for several years, and return to pick up their lives. The number of prospective students who are placebound is increasing by leaps and bounds for all the reasons discussed above. Right now,

11 Terrence J. MacTaggart, "The New Vocationalism: Peril and Promise," *Trusteeship*, Nov.-Dec. 1993.

12 The data showing a declining average age for UW System graduate students is drawn from UW System Enrollment Management III guidelines, 1993. The inference that it is because they seek a competitive edge for employment is mine.

13 "Now Comes the Corporate Triathlete," *Business Week*, Jan. 31, 1994.

they are limited to whatever majors and degree opportunities UW System Administration has seen fit to allow the campus closest to them to offer.

Unfortunately, the UW System has not yet served placebound students very well, so, frequently, they have to settle for what they can get or look for a suitable program at some other institution. Even worse, since their needs are not well met at UW institutions, they do not show up in System's data series and are not taken into account in UW System planning.

Some schools are responding to the increased demand for graduate and undergraduate education by older Wisconsinites. Some entrepreneurial out-of-state universities, like the University of Maryland, have figured out it makes sense to bring education to Wisconsin corporations. Others are small private schools that responded to the decline in recent high school graduates by offering off-campus degrees in places like shopping malls and by making themselves extremely accessible to nontraditional students. Unfortunately, many of them rely heavily on part-time, minimally qualified instructors and grant transfer credits too generously to have their programs withstand serious scrutiny. These schools survive because they serve a need that the UW System has failed to recognize and address.

Reduced Useful Half-Life of Technical Knowledge. An important implication of the changing economic structure is that the useful half-life of a college education is becoming shorter. Engineering, microbiology, geology, accountancy, finance, limnology, physics, astronomy, archaeology, agriculture, food science, and almost every other field face rapid expansion of knowledge and understanding. Old ideas and theories are giving way to new ones. The changes in most fields are occurring more rapidly than ever before. That means that more of us will need additional education and training throughout our lives. We will get it at work, at home, or at the University, but we will get it or we will be hopelessly outdated.

Increasingly Diverse and Sophisticated Majors Needed. Not only will students go to school longer and return more often, but they will study an increasingly diverse and complex set of academic programs. The array of majors must, of necessity, continue to increase to match the diversity of economic and social activity. Traditional disciplines will give way to studies that cut across disciplines to deal with phenomena that are systemically related and focused on problems: biochemistry, bioengineering, artificial intelligence, and so on. One might also expect some traditional disciplines to merge with one another, especially at the undergraduate level. It is not unreasonable to expect to see an integrated social-sciences major incorporating elements of economics, political science, sociology, and anthropology.

The University as the New Economic Infrastructure. One of the very most important implications of the change in the economic structure is that it makes the University, more than ever before, a critically important part of the state's economic infrastructure. Ever since William Henry induced farmers to use silage, the University of Wisconsin has been important to Wisconsin's economy. Today, however, the relationship is orders of magnitude more important than ever before.

Madison provides an excellent example of the new relationship. Madison has always owed its existence to state government and the University. Indeed, the city might not even exist today had it not been for a corrupt land deal that moved state government there a century and a half ago. Even 30 years ago, without state government and the University, Madison would have not been much different from a half-dozen other communities in south-central Wisconsin. Today, that is changed. Part of the change is because public investment in the interstate highway linking Chicago, Minneapolis, and Milwaukee connects at Madison, creating locational advantages. Even more important, however, is the investment by Wisconsin's taxpayers that created the University as a major research complex. It generates enormous spillover benefits in the immediate metropolitan area, resulting in a wide variety of sophisticated high-technology firms.

The Madison experience demonstrates the new relationship between the university and economic development. Because universities are no longer the center of knowledge, exciting, productive synergies occur when opportunities are created for interaction between firms and university researchers. The university must be close at hand because it provides continuing education for highly skilled employees and opportunities for cooperative education and internships for students. It also provides consultancies and learning opportunities for faculty members. Finally, since few high-technology firms must locate near natural resources like coal or pulpwood and need not be in major metropolitan centers, the immediate proximity of the university provides cultural and social amenities many find attractive.

The implications are clear. In the economic future unfolding before us, metropolitan areas with universities that have explicit missions and financial support for research, teaching, and outreach will have a critically important — probably essential — element of economic-development infrastructure. Not even the prospect of an information highway reduces the need for immediate physical access to the university. It is critical. We have no other way to generate the access and the synergies. Anyone who seriously believes that the function can be performed, for example, by the UW-Extension's Small Business Development Centers or other traditional delivery systems simply is not familiar with them.

Essential Interfaces and Overlaps with Technical Colleges. Still another implication of the changing economy is that much of the gap that used to exist between the roles of Wisconsin's technical colleges and System universities is gone. Now, instead, there are overlaps. The overlaps exist because of the structural shifts in the economy and the changing nature of jobs and who gets them. Surveyors use lasers, and machine tool operators deal with higher mathematics. Business graduates track and move inventory, and graduate chemists work with and as technicians. The old distinction between blue-collar and white-collar is blurred. More of us wear light-blue collars as successful corporations eliminate layers of middle management and empower workers.

The overlaps between the focus of technical colleges and some university programs will grow. Wisconsin must accept that reality. Rather than deny its existence, we should make the most of it. Making the most of it would help provide skilled technicians the new industries need, reduce the demand for and disillusionment with traditional college programs by people who would rather be doing something else, and represent a proactive response to the changing economic order.

DEMOGRAPHIC AND SOCIAL CHANGE

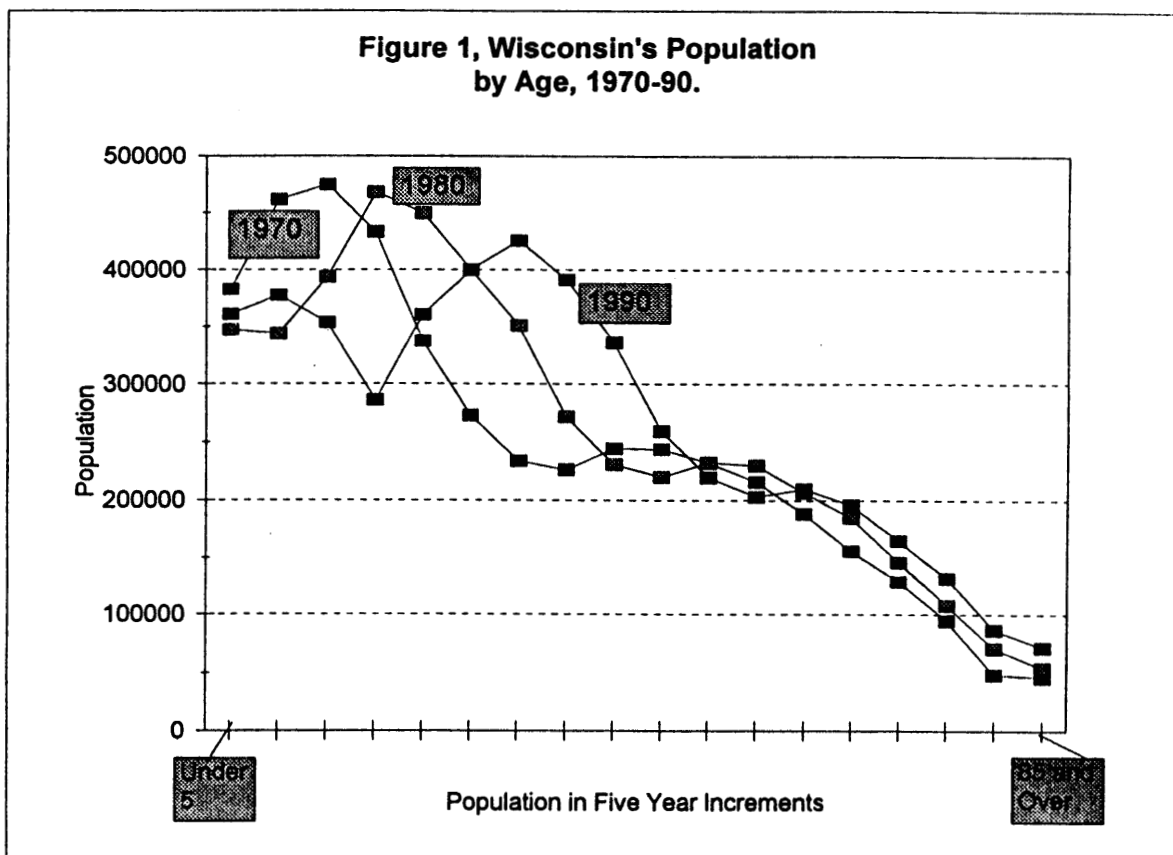
A second major force affecting the University is Wisconsin's changing population. The traditional population pyramid doesn't exist any more, changing academic planning. People have redistributed themselves across the state, so many of the University's resources are in the wrong places. Wisconsin's families are much different from what they were a generation ago, and the roles of women have changed dramatically.

The Changes

Shifting Population Bulges. The baby boom was a jolt to American education. For 30 years following the end of the War, education planners had a simple goal: more schools, more classrooms, more desks. The problem was that, everywhere the baby boomers went, they left empty schools, empty classrooms, and empty desks behind them. They also left school planners with serious problems.

Figure 1 on the next page shows the dominant effect of the baby boom on the state's population. Like a pig passing through a python, the baby-boom generation is gradually,

inevitably passing through the age distribution on its way to old age. The traditional "population pyramid" is giving way to a much more complicated population pattern. The pattern is further complicated by the "echo effect" or "boomlet" that is now evident in our population. Many baby boomers deferred child bearing and have fewer children than their parents. Nonetheless, their children are following them and the first of them are preparing for college now.



We should not expect a return to the traditional population pyramid very soon, if ever. Oscillations in the population distribution will continue for decades.

We're Moving to the Southeast Corner. Not only is the population distribution shifting by age, but Wisconsinites are becoming concentrated in only a few metropolitan areas. More than half of the state's population lives in eight counties in the Milwaukee, Madison, and Green Bay-Appleton-Oshkosh metropolitan areas. Those are the same places that account for most of the State's growth over the past 30 years. Seven counties in those three areas account for more than half of the state's growth during that period and 11 in those three areas account for two-thirds of the growth. (See Figures 2 and 3 on the next page.) Fifteen Wisconsin counties lost population over the same three decades. We are moving steadily and inexorably into the southeast corner. Exceptions are the spillover into Wisconsin from the Minneapolis-St. Paul metropolitan area and a few places, like Eau Claire, in the Chicago-Minneapolis corridor.

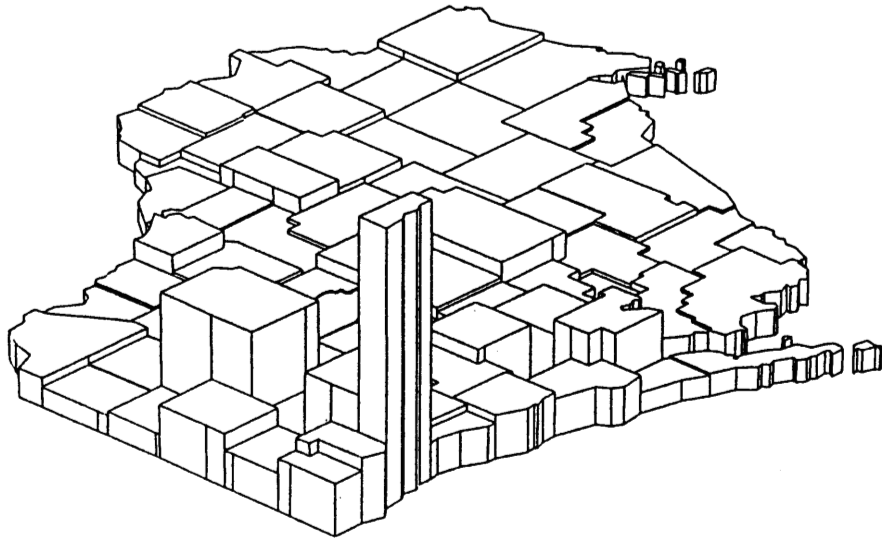


Figure 2. Wisconsin's Population by County, 1992 Estimates.

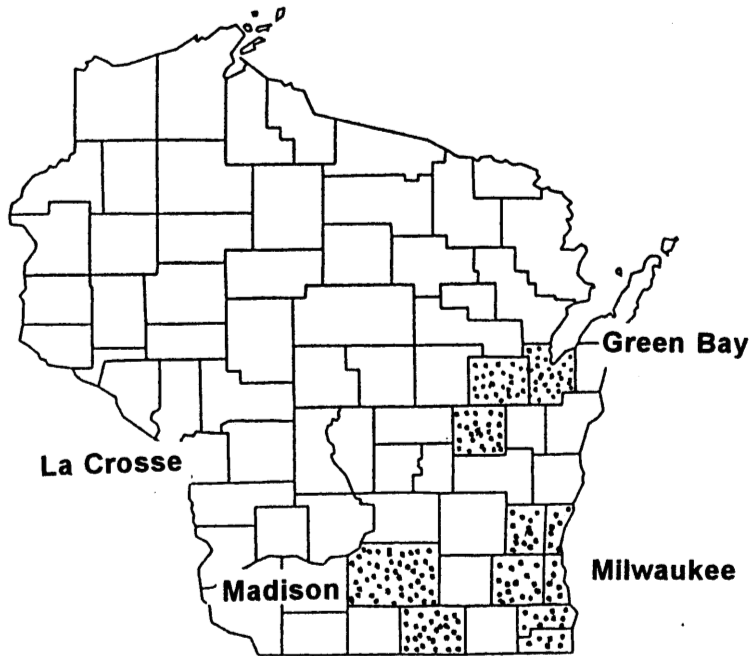


Figure 3. Eleven Counties Accounted for Two-Thirds of Wisconsin's Population Growth from 1960 to 1992 — Brown, Dane, Kenosha, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Washington, Waukesha, and Winnebago.

Changing Roles and Families. One way to see the social changes is to look at the faces of the University of Wisconsin students. There are more women than ever before. Students are older. There are more students of color. And there are more students who would not have been considered "college material" a generation ago.

From 1974 to 1984, for example, women increased from 12% to 62% of the students in business and accounting programs at UW-Green Bay, while the number of men in those programs grew slowly. The emancipation of women brought with it significant changes in the college classroom. Women are now represented in almost every program in about the same proportion as they are found on the campus. Women, however, appear more likely to attend a college near their homes than do men. Recent high school graduates may be placebound more often, or, perhaps, many Wisconsin families still send the son away to school, but the daughter, if she wants a college degree, better get it at the local institution.

There are many older women in the universities, too. One reason is the high divorce rate. Divorce brings single women heading households into the job market. For many, that means college. Some who come to college have never been there before. Others are there to finish baccalaureate degrees. Some are in college to complete a second major. Having found that the first major did not give them a competitive edge in finding a job that will support a family on a single paycheck, they come back for a major that they think *will* do so. Highly motivated and with considerable savvy, these women are often more competitive in the classroom than recent high school graduates can handle.

Implications

The shifting demographics and social changes, coupled with demands generated by the changing economy, have important implications for the University.

Relatively Fewer Recent High School Graduates. The number of recent high school graduates will not reach past levels for decades to come, even with the baby-boom echo effect. Consequently, universities that rely primarily on recent high school graduates for enrollment should expect relatively low enrollments and considerable variability in enrollments over the next few decades.

More Nontraditional, Returning Adult, and Placebound Students. A larger number of persons in their twenties, thirties, and forties will return to the classroom than ever before. Those numbers will continue to be large for decades. There will be lots of people in those age categories and a larger proportion of them will return to the University to maintain or develop skills needed by the changing economy and the reduced half-life of knowledge. Students will have more diverse social and economic backgrounds. They will also be more racially and ethnically diverse.

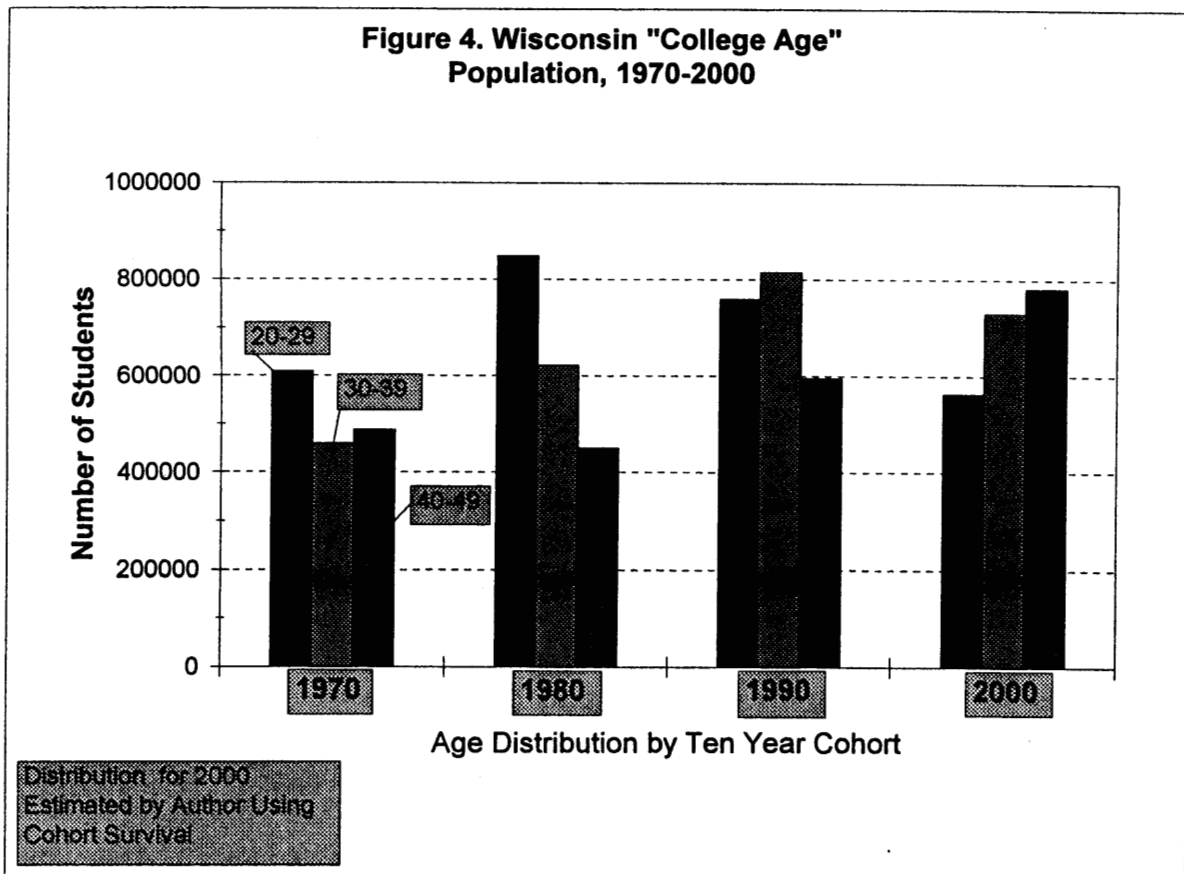
The changes are not just in Wisconsin. RAND analysts, looking at the need to redesign how we govern higher education, note the changes nationally:

Most of the increases in enrollments since the mid-1970s resulted from increasing participation by nontraditional groups While detailed data on students' characteristics are not available prior to 1965, the changes since then are dramatic. The proportion of students who are female, older, minority, or part-time has grown considerable both absolutely and relative to their respective male, younger, white, or full-time counterparts.¹⁴

14 Benjamin, *supra* note 9, at 15.

The report goes on to say that, nationally, the proportion of female students increased from 38% in 1962 to 54% in 1990. The proportion of students over 35 increased almost 500%, from four percent to 19%. RAND projects these enrollments to increase to one-fourth of all students by 2000. Nationally, minority students tripled as a percentage of students from 1965 to 1990.

If the University System responds to the needs of its customers, the proportion of older people attending the universities will continue to grow and enrollment pressures on the System as a whole will stabilize. As shown in Figure 4 below, the population of college-age students, ages 20 to 50, will oscillate among the groups, but, in total, remain relatively constant. If, however, the UW System ignores the demands of older and returning students or is unable to meet them, then the System will continue to be driven primarily by the number of recent high school graduates. To a considerable extent, what happens will be a self-fulfilling prophecy. Older, placebound students will not enroll if there are no spaces and no programs for them. From a standpoint of nurturing the state's economic and social development, however, the UW System needs to plan now for enrollment pressures from people distributed more evenly over a wide range of ages, many of whom are unable to attend school far from home.



More Demand in the Southeast Third of the State. Two of the three largest and fastest-growing metropolitan areas in the state — metropolitan Milwaukee and the Fox River Valley — are relatively underserved by the University of Wisconsin System; that is, the resources allocated to them are disproportionately small compared with the population they serve. Unless

those areas that demand will increase most rapidly. Along with Madison, those are the areas with the most people and with the most industry, so demands for initial and for continuing education will grow more rapidly here than elsewhere.

Different Effects and Different Needs in Different Areas. University of Wisconsin System students are more diverse in terms of age than they used to be, but not uniformly across the campuses. As shown in Table 1 below, the campuses in the three most populous centers of the state have a higher proportion of students over 25 years of age. Except for UW-Superior, which is by almost any measure an anomaly, the comprehensive residential campuses in the less-populated and slower-growing regions have much-higher proportions of recent high school graduates enrolled than do Milwaukee, Green Bay, Parkside, and Madison. The population centers have an age distribution very near the mean for the System.

TABLE 1 Students by Age Category for University of Wisconsin System Institutions, Sorted by Percentage of Students Over 25 Years, 1992

	24 and Under	Over 25	25-39	40 and Older
Superior	55.90%	44.10%	28.70%	15.40%
Milwaukee	56.10%	43.90%	35.10%	8.80%
Green Bay	62.70%	37.30%	28.10%	9.20%
Parkside	64.30%	35.70%	28.40%	7.30%
Madison	66.50%	33.50%	28.10%	5.40%
Centers	68.40%	31.60%	24.00%	7.60%
<i>Mean</i>	<i>70.20%</i>	<i>29.80%</i>	<i>23.70%</i>	<i>6.10%</i>
Oshkosh	71.40%	28.60%	22.40%	6.20%
River Falls	76.70%	23.30%	17.90%	5.40%
Whitewater	77.70%	22.30%	16.70%	5.60%
Stevens Pt	79.00%	20.30%	15.90%	4.40%
Stout	80.60%	19.40%	15.90%	3.50%
Platteville	81.20%	18.80%	13.70%	5.10%
Eau Claire	82.40%	17.60%	13.30%	7.30%
LaCrosse	84.00%	16.00%	12.80%	3.20%

Source: UW System, "Planning for Enrollment Management III" (1993), Table 11

One would expect that the more populous, more industrialized metropolitan areas in the state would have a higher proportion of older students seeking higher education. One reason is that the economy demands it. A second reason is that Wisconsin's students generally prefer to attend campuses near their homes.¹⁵ The pressure on those campuses comes largely from placebound students. In addition, System universities in sparsely populated areas must recruit heavily in metropolitan areas to ensure themselves of students. They do not have many placebound students, but they attract the mobile recent high school graduates from other areas.

Several policy decisions buffered the effect of the major decline in recent high school graduates on enrollments on UW System institutions highly dependent on such recent high school graduates. UW-River Falls, for example, has become, to a considerable extent, a commuter school for students from Minneapolis and St. Paul. Almost half of its students, about 2,300, cross

¹⁵ University of Wisconsin System, "Planning for Enrollment Management III, Working Paper No. 8, October, Participation and Demographic Projections by Region" (1993).

the Mississippi from Minnesota.¹⁶ So many students come from Minnesota that the UW System includes population data on the Twin Cities in its regular reports on recent high school graduates to guide campus planning. In fact, approximately 6,500 more Minnesota students use the Wisconsin-Minnesota tuition-reciprocity agreement than do Wisconsin students — about the same number as a middle-sized university.

The fact that the UW System offers some highly desirable majors at only a few campuses buffered other universities from the decline in traditionally aged students. Students who want degrees in those programs must go where they are offered. UW-Platteville, for example, is located in the very far southwest corner of the state, about 20 miles from the Iowa border. It offers five engineering programs. The other engineering programs in the UW System are at UW-Madison, with 10 engineering programs, and UW-Milwaukee with six. Students who want to study engineering go to one of those institutions, out of state, or to a private college. There are no engineering programs in Wisconsin north of a line from Milwaukee to Madison to Platteville.

DEMANDS FOR EFFICIENCY AND ACCOUNTABILITY

A third major force for change is borne of persistent demands from the legislature and the public for greater productivity from the University. Students are tired of not being able get into classes, majors, or their university of choice. They do not like being unable to graduate in four years. They particularly do not like graduating from the University with skills that are not as marketable as they had expected. This contributes to hostility in students, their children, spouses and parents, and legislators. University professors are easy targets. People equate University productivity with professors. The reason that there are problems must be because the professor isn't working hard enough.

The University itself is looking for greater productivity simply because budgets are so much tighter. If administrators hope to support teaching and research at anywhere near earlier levels, they must make better use of the resources they have. That means squeezing out fat and cutting out deadwood. It means taking resources from programs without much payoff and moving them to programs with more potential. It means setting priorities better than ever before, making tough choices, and sticking with them.

Finally, pressure for greater accountability in the University comes from the managerial revolution that is affecting organizations across the country. Not even universities can escape the realization that we're fully engaged in a tough competitive environment and we have to make the most of what we have.

Demands for increased productivity are not going to go away. Giving increased productivity lip service will not do this time around. The University must demonstrate, first, that it is making serious efforts at achieving greater productivity and, second, that it is achieving some greater efficiencies. Unless it does that on its own, the University should expect adverse consequences.

¹⁶ University of Wisconsin System, *Fact Book 92* (1992).

III. RECOMMENDATIONS

The University holds the potential for being more important to the people of the state than ever before. It can become the core infrastructure that helps to drive the new economic engine. The University cannot perform that role effectively, however, unless it changes what it is doing and how it is doing it. The world has changed faster than the University; the current UW System model is not sufficiently sophisticated and differentiated to meet the demands of the new environment. It is too tied to what used to be — too tied to an environment that was more stable, more predictable, and considerably simpler.

To a very considerable extent, Wisconsin's future hinges on successful adaptation by its University System. The accelerated changes in society require a University System whose graduates are highly qualified, competent problem solvers who can deal effectively with ambiguity, who are active learners, and who will continue learning for the rest of their lives. It must do the same in continuing education. The System must also learn from its environment, generate new knowledge and new ways to apply knowledge, and must disseminate that knowledge effectively. Money used to accomplish these objectives is not an expenditure. It is an investment.

THE UNIVERSITY MUST UPDATE ITS VISION

Key Elements of an Updated Vision. What is an appropriate vision of the University of Wisconsin System as it enters its second quarter century? First, the System ought to be proactive; it should define the characteristics of its campuses and their programs in terms of the emerging needs of the people of Wisconsin in the light of increasing diversity among the state's regions and people.

Beyond that, one would look for a System fully engaged in creating synergies so that the whole is more than the sum of its constituent parts. In such a vision, the individual university would become more of a window to knowledge than ever before. The campuses would be more closely linked, they would be fully cooperative and collaborative, and access to any single campus or professor would provide access to the others. One would expect that campuses would be linked more tightly with the region in which they are located, while, simultaneously, collectively providing more service to the entire State.

One would expect the System's campuses to have more mutual-benefit partnerships. The University has no monopoly on knowledge, so it should develop partnerships with other organizations and institutions in pursuit of understanding and in bringing knowledge to bear.

The new System vision ought to be aimed at providing educational services when and where they are needed. That will mean creating a wider variety of majors, cooperation, and resource-sharing across campuses, and developing new ways to deliver educational and research services. The new delivery systems may well mean that more courses are delivered electronically, but it may also mean delivering instructional services in store fronts, shopping centers, and industrial plants.

One would also expect the vision to be one in which the UW System uses its collective facilities and staff as cost-effectively as possible in pursuit of the mission. The greater cost-effectiveness would lead, presumably, to continuing analysis of where and how resources should be allocated to be most productive, eliminating of needless duplication and creating important redundancies, and sharing special competencies and resources across the System.

Market-Driven and Customer-Oriented. Faculty and staff members throughout the System need to accept the proposition that the University has customers. Those customers should help the University learn what it is doing right and what it needs to improve.

Many professors and some administrators will rail at the suggestion that the University should respond to the needs of its customers. They fear that doing so will mean the University will prostitute its intellectual integrity. However, not doing it will ensure irrelevancy. The trick is to avoid both irrelevancy and prostitution, adjusting what the University does and how it does it to meet society's short and longer term needs and performing the its multiple roles as only it can do.

Every institution must serve its customers if it hopes to survive. Students are one of the University's customers, but they are best viewed as internal customers. The University must treat them right, but, in a more fundamental sense, students, along with research and service, are the University's major products. The ultimate customers are those who benefit from what the students learn, from research findings, and from public service.

Being market-driven and customer-oriented does not mean the University should prostitute itself to special interests or abandon traditional roles that serve society well. It does not mean catering to every fashion and whim. It does not mean abandoning basic research, scholarship in the humanities, or concern for problems outside the borders of the state or nation. What is *does* mean is that the University should work proactively to deliver educational and research services to those who depend on them. It means paying close attention to emerging societal needs and helping society respond to *them*. Not least of all, it means being user-friendly. Accept credit cards. Treat students like people. Provide adequate signs for visitors. Break down barriers for community access.

In just the past few years, we have been shaken loose from the basic assumptions of the past half century. The Cold War is over. Women are emancipated. There is a new world economic order. Not least of all, we face emerging domestic crises that threaten the foundations of the republic, stemming from growing disparities between the haves and have nots. The University cannot afford to be aloof. It must engage itself fully in the struggle. It must take its cue from its customers and potential customers.

Focused on the Full Array of Potential Students. Pursuing the mission means that UW System administrators and analysts must look beyond the number of recent high school graduates, the kinds of people who have attended the University, and relative changes in enrollment by groups. Looking primarily at what used to be leads inescapably to self-fulfilling prophecies.

An old story tells of the engineer examining Army Air Corps B-17s on a World War II air strip in England. A farmer, leaning against the fence asks, "What is it you're doing there, young man?" The engineer replies that he is looking for bullet holes and flak damage on bombers that recently returned from a mission. That way, he explains patiently, he will better know where armor ought to be placed. The farmer reflects on that for a moment and offers, "If I were you, sonny, I think I might spend more time looking at where the holes are in the planes that didn't make it back."

Looking at enrollment and participation rates and historical patterns is a lot like looking at holes in the airplanes that made it back. The time has come to spend a lot more attention on prospective students, including those who are older, nontraditional, and placebound.

Reconsider Undergraduate Education. The changes we're experiencing have consequences for teaching undergraduates. The changes suggest the need for significant changes in what is taught and how it is taught. We cannot preclude students seeking vocational training at

the University, but we cannot afford narrow vocationalism because of the shortened half-life of knowledge. Nor can we afford to produce many intellectual dilettantes.

The University should work harder at creating ways to produce graduates who are active learners, problem solvers, and systems thinkers. They need disciplinary depth, but they must be able to span disciplines. They must learn how to learn better than they do now.

IMPROVE MANAGEMENT PROCESSES

Gain the Real Benefits of a System

It is time for the kind of paradigmatic shift that Smith and Henry generated in the University a century ago. Creating the UW System almost a quarter century ago set the stage for the transformation. The fact that we have a System means that we have the potential for generating synergies that will result in enormous rewards for everyone.

Suppose we did not have a System. We would expect Wisconsin to have a dozen or more public institutions of higher learning each pursuing its own agenda. There would presumably be intense competition in the governor's office for resources, constant marshaling of legislative delegations, and even more overlapping solicitation of private gifts than there is now. There would be needless program duplication and more energy spent in conflict than on advancing understanding.

On the other hand, not having a System might have some advantages. Resource allocation might more accurately reflect the distribution of population and legislative representation. There might be greater innovation and experimentation because of increased competition and greater freedom to explore alternative ways of doing things.

The point is this: a University of Wisconsin System makes sense, but only if it really generates the benefits that can come from one. The benefits of a System do not come from centralizing management or from enforcing a narrow definition of what a university is. Economies of scale in management quickly become diseconomies of scale. Larger does not mean smarter, quicker, or more efficient. Nor is a large organization inherently better equipped to deal with diverse challenges. Effective systems are those that simultaneously become more highly differentiated and integrated in the face of increased diversity and intensity of challenge.

If we have learned anything over the past decade in business, government, the military, and foreign affairs, it is that effectiveness requires one to be smarter, more flexible, able to mount rapid responses, more inventive, and more nimble. The primary reason for a System, perhaps the only legitimate reason, is that it makes it possible for us to do things that we could not do without it.

System administration would be foolish to highly centralize administration, problem definition, and analysis. Centralization is a primitive response to managing complex systems. Instead, it is necessary that the central part of the System integrate, coordinate, and facilitate. It is essential that the constituent elements be empowered to address local problems locally. That way, they can address the great diversity among the regions. Centralization leads to oversimplification, rigidity, and control; what is needed is decentralized problem identification, solution invention, and flexible response. The role of the central unit in a complex system is to improve the capacity of the individual parts to work more effectively, to coordinate their efforts with one another, and to respond quickly to emerging challenges. The central administration should create policies in concert with the decentralized elements and provides both incentives and sanctions to encourage the respective components to work together in support of the goals and policies. Administrative centralization stifles creativity and invention and overburdens subordinate institutions with paperwork. It fosters oversimplification and forces uniformity of response to diverse challenges.

Centralization also fosters cloistering, talking within one's referent group, and failure to recognize and adapt to changes in the outside world.

If the System is designed and operated appropriately, there will be great benefits. Improved integration, for example, might enable students throughout the System to benefit from the genius of a particularly gifted teacher, or to have a chance to interact with a Nobel laureate. It might even facilitate transfer of professors among institutions on a visiting or a permanent basis. Even more than now, it could mean more resource sharing, including libraries, special laboratories, and special talents and centers. It might mean using advanced technologies to develop better courses in one place for delivery in many. It is conceivable that the System might start operating as 26 campuses of a single university instead of 26 individual institutions held together by state statute.

When the System was founded, there was some expectation that it would generate substantial savings. It is impossible to tell the extent of savings, if any. In any event, the real benefits come not from administrative efficiencies, but because a system makes it possible to do things that are needed, but cannot otherwise be attained.

Train People in Management Positions

Universities generally have inadequate management processes and too many untrained, unskilled managers. Consequently, even under the best of circumstances, it is difficult for universities to move quickly to increase accountability, raise productivity, and look ahead strategically.

The UW System and its campuses need academic administrators with high levels of skill in management, leadership, and organizational and systems analysis. The University must ensure that those who are entrusted with leading the System and its constituent campuses have sufficient training to do it. Usually drawn from the ranks of professors, academic administrators rarely have the background needed to do the job. Most academic administrators need training in managing complex systems. They rarely have an academic background that prepares them for planning, budgeting, organizing, managing, dealing with role conflict, or changing organizations. Furthermore, they seldom receive training once they are appointed. On-the-job training is not enough. No other organization the size of a university would try to do it with untrained managers, nor should the University.

More than ever, the University must develop the skills needed to manage for innovation and creativity. It cannot afford to manage in old styles aimed at reducing variance. It simply will not do anymore.

Improve Planning and Resource-Allocation Processes

RAND's study on university governance cited four main obstacles to change: complexity, inadequate information, unclear priorities, and dispersed power.¹⁷ Benjamin, Carrol, and their colleagues say the fundamental problem for universities in responding appropriately is that their system of governance is inadequate. Universities and university systems are not good at allowing "decisionmakers to reallocate resources from low to high priorities and to focus missions . . . clearly within and among higher education institutions." Individual university governance is incremental, decentralized, hierarchical, and complex.

¹⁷ Benjamin, *supra* note 9.

The way universities are governed is appropriate only for a slow-paced, simple environment. We need new, more appropriate governance models for the ground-shaking changes taking place now.

Professors and university administrators never want to hear this, but the time has come to learn lessons from successful businesses. Universities should not emulate business, but they should learn from them. Business has been struggling with the issues of centralization and decentralization, empowerment, systems redesign, and cultural transformation for more than a decade, and they have learned some things that universities do not know. The large businesses that did not learn those lessons are dead or dying. Universities have lived on, even when they fail to learn, because they are propped up by a captive audience and state appropriations. But that time is coming to an end.

The UW System must improve its planning and budgeting processes. Budgets should be a two-year plan, reflecting the action steps for moving toward where the organization wants to be several years from now. The UW System's budget process mostly allocates new resources proportionately based on the size of existing campus budgets. The University has to do better. It needs processes to review and reallocate its base budget periodically to meet emerging needs. The UW System budget has not had a major review for perhaps 15 years. It is reasonable to expect the entire base budget be evaluated every decade. Incremental budgeting will not get the University where it needs to be, especially since additional resources are likely to continue to be very small.

The University System must also revisit how various stakeholders in the System participate in policymaking. That requires revisiting "shared governance." Shared governance is the University's way of describing participatory decisionmaking. Shared governance makes sense, but not if it immobilizes the University. Professors, unfortunately, usually call it "faculty governance," suggesting where they believe decision making resides. We cannot rely on professors alone for decisions about the future of the university. It is time to listen to all the stakeholders, inside and outside the University, and develop processes that enable us to govern and manage the University better.

MATCH REGIONAL NEEDS AND INSTITUTIONS

There are many ways to organize a university system. What was appropriate yesterday may not be today. The ways of doing things are limited only by our vision and imagination. We cannot afford to lock ourselves into a single vision of how best to serve the public. There is no reason to believe, in a state as diverse and complex as Wisconsin, that the model of a flagship campus, a second doctoral campus, and a set of comprehensive four-year college is the best way to meet our needs. Just because that's what we have now does not mean that is what we should have in twenty years. Unfortunately, convenient phrases turn on us, locking our minds into thought patterns that can be downright dysfunctional. The phrases "doctoral campuses," "flagship," and "cluster campuses" reinforce outmoded ideas.

For many years, there were only a few models of what constituted a college or university. There was the large research university, the regional comprehensive residential campus, the small liberal arts college, and, occasionally, the urban university to address inner-city needs. Of these, only the large research university and the small, high-quality liberal-arts college have much appeal to most professors. The others are generally viewed as having low status. That has to change. An effective UW System needs more than two or three models of what constitutes a university. Only a set of diverse institutions can meet the needs thrust on the System, so we will have to change the definition of what constitutes a high-quality, world-class university to embrace more models.

What other models make sense? Clearly, there is a need for what have been come to be known as urban universities. Urban universities may perform a variety of functions, but, because of their location, they have special opportunities and obligations to serve minorities. Black Americans are disproportionately poorly prepared to perform well in college without remedial work. Urban institutions must have processes in place to help black and other minority students develop skills to meet university standards. UW-Madison draws a very high percentage of its students from the top 10% of their respective high school graduating classes. Institutions serving inner-city residents have students who are not as well prepared. The kinds of resources required by the two institutions and their performance, measured by such things as graduation rates for entering freshmen, cannot be compared as an indication of performance. The most appropriate places for an urban campus focus is where the minorities are, so that means Milwaukee and Parkside should appropriately take the lead.

Wisconsin also needs "metropolitan" universities.¹⁸ A metropolitan university is "defined primarily by its philosophy. It accepts its relationship to surrounding metropolitan region as its essential rationale ... [M]etropolitan universities are likely to share certain characteristics, such as a high enrollment of commuter and minority students, [but metropolitan] universities are best recognized by an interactive philosophy by which these institutions establish symbiotic relationships with their metropolitan areas."¹⁹ Metropolitan universities should have research missions with special emphasis and support to conduct research aimed at regional needs and problems. They are engaged actively in community outreach, use diverse and imaginative ways to deliver educational and training programs to the metropolitan region, and attempt to meet the needs of a diverse array of students. The UW System campuses that most certainly ought to develop as metropolitan universities are Parkside, Milwaukee, and Green Bay.

Another important university model for Wisconsin is the specialized university. UW-Stout is such an institution. It specializes in bridging the gap between the university and the technical college. It is a preeminent model for developing other specialized campuses in the UW System. Presumably, schools located far from the state's major population centers are the most likely candidates for developing specialties. Campuses in population centers need a comprehensive array of graduate and undergraduate majors to address the needs of placebound students, large numbers of people, and business, industry, and government. As traditional students become a generally smaller proportion of potential students, campuses away from population centers without special capabilities or special focuses will have a harder time justifying their existence.

There is room, too, for the general comprehensive, primarily undergraduate residential campus in the System, especially if it has a special competency. The Universities at Eau Claire, LaCrosse, and Stevens Point may be appropriate candidates. In the Fox Valley, it might be appropriate for UW-Oshkosh to maintain its role as a comprehensive institution, particularly if UW-Green Bay develops along the metropolitan university model. The two institutions are at either end of a 70-mile-long linear city. They already deliver several services cooperatively. Perhaps it makes sense to have them develop as complementary institutions and continue their cooperation.

Expand the Research Mission to More Campuses. The University's research role is already more important than it has been in the past and will be even more important in the coming decades. In simpler times, the University could meet business's needs with short courses, institutes, research papers and monographs. Technology was simpler. It could be delivered across the state or nation fairly simply. Today, the technologies are much more complex, the need

¹⁸ For a thorough treatment of metropolitan universities, see *Metropolitan Universities: An International Forum*, vol. 1, no. 1 (New Brunswick, N.J.: Rutgers — the State University, Transaction Periodicals Consortium).

¹⁹ *Ibid.* at 5.

for interaction is higher because of the two-way flow of information. There is more need for continuing education and training of workers than ever before. To some extent, the interaction can occur through high-technology communication, but it cannot entirely replace physical proximity. High-touch is important.

The notion that there ought to be only one or two research centers in the state doesn't make much sense anymore. There are some economies of scale in having research centralized, but typically only within a single research focus, not across widely diverse fields. If we want to use the University engine to help drive economic development, then we should get rid of the notion that the ground-breaking research will be done only in Madison. We have to develop research and development capabilities in several areas of the state and support that research the same way we support it at UW-Madison. If we want to foster economic development in the areas where there is already momentum, we must create the intellectual infrastructure that supports it in those areas.

In the state's papermaking corridor, for example, there ought to be support for research on paper, biopulping, and related biotechnology. The Lake Winnebago, lower Fox River, and Bay of Green Bay corridor has received international attention concerning remediation and environmental study. The Bay has been the target of many millions of dollars of federally funded research. Expanding and supporting research there in bioremediation and related subjects would be practical as well as provide the basis for economic development and export of technological knowledge.

It is not necessary to create "little UW-Madisons" across the state and spend vast sums to create the necessary intellectual and research infrastructure. The notion that there is a major difference in the quality of faculty between UW-Madison and the other campuses is not nearly as true as it was years ago. UW-Madison has more superstars, more even quality, and greater depth, but it does not have a monopoly on quality. Other campuses in the System have professors who could hold their own at any university. The quality gap is closing for several reasons. The number of high-quality Ph.D.'s that graduated the last two decades outstripped demand in some fields, so high-quality faculty members are more likely to be found in many places. Salaries at regional institutions are lower than at UW-Madison, but they are not nearly as bad as they have been in the past. Finally, some nondoctoral schools attracted high-quality people for special reasons. Sometimes, husbands and wives, both of whom have doctoral degrees, could both find employment at a nondoctoral school. Sometimes professors prefer one region over others. Sometimes, a program, resource, or special emphasis attracts a cadre of highly talented people. The good news is that Wisconsin faculty members are better than ever before.

It may be sensible, however, to create selected doctoral programs on a few UW campuses besides Milwaukee and Madison. First, one reason is that, if we want a successful UW System and to change the status of various models, we must make certain that all the participants in it understand there is something in it for them. Second, if we want to get the most benefit from universities, then institutions in areas already characterized by economic strength need to be reinforced so they can contribute to the development. Research support can be achieved at relatively low cost through imaginative processes that create more faculty linkages and interchange, more joint research funding, and more cooperative use of research facilities.

One point is critically important. Expenditures allocated toward developing research capabilities in several UW universities are an investment that, if made properly, will have exceptional returns for regional economic development. Firms develop, locate, and stay in places that provide the necessary infrastructure, high-quality workers, and quality-of-life amenities at a fair price. As the university provides more of what it alone can provide, then economic development will follow.

ACHIEVE GREATER PRODUCTIVITY

Wisconsin does not spend too much money on higher education. The state ranked 34th among all the states in the combined tuition and state appropriations per full-time equivalent (FTE) student in 1989. (See Table 2 below.) That year, Wisconsin's combined tuition and appropriations were \$5,199 per FTE student, about 10% and \$580 per student less than the national average of \$5,779. On the other hand, Wisconsin has a higher proportion of its population as students than most states, so it was ninth in the nation in expenditures per capita for higher education among the states. It allocated \$367 per capita compared with a \$272 national average. Wisconsin has kept tuition exceptionally low, subsidizing rich and poor alike. The state ranked 36th in the nation in 1989 in tuition costs per full-time equivalent student. At \$1,171, it was only about three-fourths of the national average of \$1,565.

TABLE 2 Tuition and Appropriations per FTE Higher Education Student, 1989, Ranked by Total of Appropriations Plus Tuition

	Appropriations Per FTE	Rank	Tuition	Rank	Appropriations Plus Tuition	Rank
Michigan	\$3,980	13	\$2,417	5	\$6,397	12
Iowa	\$4,155	16	\$1,911	10	\$6,066	15
Indiana	\$3,894	19	\$2,010	8	\$5,904	18
<i>Mean</i>	<i>\$4,214</i>	<i>24</i>	<i>\$1,565</i>	<i>17</i>	<i>\$5,779</i>	<i>19</i>
Minnesota	\$4,231	25	\$1,339	31	\$5,570	23
Ohio	\$3,392	26	\$2,079	6	\$5,471	24
Wisconsin	\$4,028	20	\$1,171	37	\$5,199	34
Illinois	\$3,650	45	\$1,044	43	\$4,694	45

Source: *U.S. Statistical Abstract* (1992), Table 268

Raising tuition to the national average would provide substantial resources for the University System to better meet the needs of the state. It would finance additional research applied to regional and state needs. Before that would be considered seriously, the UW System will have to demonstrate much greater productivity from existing dollars.

Insist on Sensible Measures

There is absolutely no doubt that the University must become more productive than ever before, but really significant productivity increases will not come from chaining faculty members to the blackboard. The University's challenge is to increase productivity sensibly. The UW System must not succumb to demands for oversimplified indicators that do not really measure productivity. Measuring how many hours a faculty member stands in front of a class is like evaluating the productivity of a cow by measuring how much she eats. There is real appeal to standing professors in front of classes more than they do now: it is easy to measure, it doesn't require much thought, and the public can understand it. The problem is that it will not buy very much. We need measurements that really measure work accomplished. We can measure output of instructional activities in terms of student credit hours delivered, but we must also take care to measure the quality of the credits delivered. That will require some measure of value added — the net addition to the student's skills, knowledge, and understanding of the subject.

The University must fight the powerful tendency by others to oversimplify its bottom line. It is complex and difficult to measure. It transcends what happens within campus boundaries. It includes teaching undergraduates effectively and tutoring graduate students who plan to become professors, but it is much more. It also includes supporting the lone scholar intent on tracking

down the answer to some provocative question about the middle ages in the bowels of the library and having professors publish in scholarly journals read mainly by other scholars. The University's bottom line includes the benefits derived from the University's role as repository and center of study for the arts and literature and hosting cultural and sports events. It includes specifically providing continuing education. It includes transferring technology and knowledge beyond the campus to government and business. It includes working with the community, as well, and the benefits that flow from cooperative pursuit of knowledge and its application.

Not long ago, one might have measured the contribution of a university to a community by the size of the faculty payroll, dollar volume of construction contracts, retail sales to students, and the economists' multiplier effect. Today, that part of the payoff is small change. The real payoffs come from interaction between the university and the community within which it exists: social and economic spinoffs and community access to learning resources, faculty members, and continuing education. More than ever before, it is critically important for metropolitan areas to have the immediate, physical presence of a university fully engaged in teaching, research, outreach, and community or regional service.

Look at All the Factors of Production: Facilities, Faculty, and Staff

A basic key to improved productivity is that the Universities get more from all of the factors of production: faculty, staff, and facilities. Focusing on just one of the factors will result in missing opportunities for significant gains from the others.

Facilities. One way to improve productivity is to get more from the hundreds of millions of dollars of physical facilities on the campuses. Most campus facilities are used to capacity only about 30 weeks a year. At least on campuses in metropolitan areas, it is time to rid ourselves of the idea of "summer school" as separate from the "real" academic year. Universities should operate at full tilt the entire year around. At the very least, we should experiment on some campuses with three full semesters each year. A campus could conduct three 14-week semesters and still have 10 weeks left over for getting reorganized, holding basketball and band camps, and catching up on paperwork.

The time has come to say out loud that very few of our students have to go home to the family farm to help hay during the summer. Many are obligated to work, but most of them already work during the regular academic year. If they want to take off school to work for a semester or a summer, let them, but let's not use them as an excuse to reduce our productivity and externalize our costs to those who want to get done in four years. The biggest cost for college students is lost earnings while in school, not tuition or books. We should run campuses all year around, at least the ones in urban areas where most students commute. We may not be able to graduate an engineer, accountant, computer scientist, or teacher in four years consisting of eight semesters, but we surely can graduate them in 12 semesters spread over four years.

Faculty. How can we get more productivity from faculty members? The first thing to do is to stop thinking of faculty as high school teachers with fewer classes or as ivory-tower pundits who spend most of their time strolling about the campus lost in deep thought. We have to start thinking of professors as helpers in the learning process. One of the University's biggest challenges is turning people who have been taught to be passive learners most of their lives into active learners — people who take responsibility for learning what they need to know. In some countries, students do not take courses. They study, go to lectures, experiment, and then take competency tests and earn certificates. When they feel ready, they take a comprehensive examination to gain the degree. I do not advocate that approach entirely, but it does suggest some possibilities.

We need faculty members to help students learn, but we must make use of methods developed since Socrates strolled the groves of academe. Professors have been slow to use new technology in the classroom, but the time has come for it. Multimedia presentations, programmed instruction, downlinked lectures and workshops make sense today, and they can be used with lots of human interaction. We simply need to get down to the business of learning how to use faculty more intelligently.²⁰

It is also time to use some teachers who do not have the highest degrees in their fields. The University should use exceptional teachers in subject areas in which they have mastery, but do not have research skills or ambitions or terminal degrees. They can work with persons of professorial rank to ensure solid lesson plans, learning tools, and pedagogy that makes sense. It is unfortunate that many specialty accrediting bodies for professional programs virtually dictate that all courses be taught by faculty with doctorates. That raises the cost of instruction without ensuring improved quality. Is it really essential that introductory accounting be taught by someone with a Ph.D. in accounting? Aren't there other ways to teach that produce better results at lower costs? Let's have faculty members working to develop software for learning and learning packages, and working in concert with video, writing, graphic, and computer specialists.

We need to ensure that faculty are productive, but we should not put them all in the classroom for eight courses a year. There must be adjustments based on the other things we want faculty to do: we want some to do research on important problems and we want others out working in the community — in businesses, hospitals, factories, galleries, city halls, and so forth. We want others secluded in the library working in solitude on some special question of interest to only a few people, but with the potential for some long term payoffs to society. We want others working closely with graduate students.

What might be done to ensure faculty members are available to keeping universities operating all year around? Most faculty members are on nine-month appointments. Some professors teach in the summer, but only when there is sufficient money on the campus to pay for it. Others get research grants to finance their summers. Some travel. Most write, because they don't have time to do it during the school year. A few fish all summer. If we're going to use the facilities all year, we are going to have to at least experiment with having faculty employed on a 12-month basis.

A potential obstacle is that many people join university faculties because, besides the real pleasures associated with teaching and research, there is considerable flexibility in the workweek and in the summer. It is one of the few fields in which one might choose, for example, to sleep late and work at night, to work all year around or take summers off, and so forth. Moving to full-year universities could pose staffing problems if we don't do it experimentally and sensibly. First, the University should test full-scale, year-round operations at two or three schools. In those schools, faculty members might be given the option of a nine- or 12-month appointment for a specified time period. Those with full-time appointments would need pay increases, vacations, and so forth. Another approach might be to give professors the choice of teaching any two semesters with the third one off. The time has come for bold experimentation.

It is also time to reconsider tenure and what it ought to mean. Tenure means the freedom to seek and say the truth without fear of reprisal. For a few, it means a lifetime job, even if one does little research, publishing, outreach, or committee work. The ability to seek the truth without fear of reprisal is an important benefit for the people of the state. Supporting deadwood is not. The

²⁰ For a provocative discussion of how to increase productivity using new ways to helping to learn, see Bruce Johnstone, "Learning Productivity: A New Imperative for American Higher Education," *Studies in Public Higher Education* (Albany, New York: State University of New York, no. 3, April 1993).

question is how to address the situation to ensure the benefits tenure brings while reducing the probability of the downside effects. Granting tenure to a faculty member is a commitment of a substantial resource to a single institution and, usually, a single program, for perhaps 40 years. In a time of rapid change, we need more flexibility than that. What to do?

The University probably ought to grant tenure a lot less often and to fewer people. Tenure should probably be granted within the System rather than within an individual institution. There are several implications. First, tenure standards vary considerably among institutions and programs, so there would have to be agreed-upon standards. Second, there would have to be alternative positions that are sufficiently desirable to attract and retain high-quality people to the campuses within the System and to keep them. There would also have to be legal guarantees that they could seek and speak the truth without threat or sanction by some administrator or special-interest group with a different view of the truth. If we do not revisit tenure, then the System and its constituent institutions must put much more effort into serious post-tenure review.

Staff. The University also needs more productivity from its nonteaching support staff. Most of the university operates only about 60% of the year. Most support staff has 12-month appointments, so there are ebbs and flows in the workloads in some units. The peaks and valleys are handled in part by hiring students and part time employees, but we can do better. We can redesign processes so they are user-friendly, help the customer, and get a lot more for our money.

Revisit Reciprocity for Productivity Gains

We must also look at how the tuition-reciprocity agreement with Minnesota is working. It does not appear on the face of it to be working as well as one might hope. About 6,500 more Minnesota students are crossing into Wisconsin than Wisconsin students are crossing into Minnesota. The argument is made that Minnesota pays the difference between resident and nonresident tuition, so the State breaks even. Unfortunately it does not. Nonresident tuition does not cover all costs, but that is not the point. The point is that there are enormous opportunity costs from using UW System resources to serve Minnesota students when there are not enough resources to serve Wisconsin students. It is just plain politically indefensible to have almost half of UW-River Falls' students from Minneapolis-St. Paul while other System Universities cannot accommodate prospective placebound students who have no other alternative. That is not being provincial or isolationist. It is being practical. UW universities should not be forced to stop taking applications for Fall admission in February because they cannot accommodate the demand while we make space for almost identical students from across the river. It especially does not make sense under the circumstances to subsidize UW-Superior with lower tuition when UM-Duluth, an outstanding school, is just a few blocks away across a different river. The problem is further exacerbated because Wisconsin residents do not have full reciprocal access to all the University of Minnesota programs. Reciprocity makes sense, but times have changed and it needs to be revisited soon.

Reallocate Resources for Greater Productivity

One way to get more from existing resources is to reallocate them to activities and locations with higher priorities and payoffs. Unfortunately, reallocating resources within or among campuses has all the appeal of self-mutilation. It is like simultaneously raising taxes, eliminating Social Security, and closing military bases. Nevertheless, someone has to step up and do it. The System exists to serve the people, not to maintain the relative size of the existing institutions. The changes in the economy, families, and demographics means that a larger proportion of the total budget ought to be allocated where the people are and not where the institutions are.

There are two simple facts. First, if we were starting over, we would not put the 13 baccalaureate and doctoral campuses and the 13 centers where they are now. Second, sunk costs

have never been a legitimate argument for not reallocating resources. Sending good money after bad is bad business and bad politics. The state is unlikely to engage in any wholesale campus closings — at least not very soon. Consequently, if the UW System really wants to serve the people of the state, it should begin moving resources incrementally from low-priority places and programs to places with higher priorities. It must do so based on clear and explicit analysis with conclusions that a critical mass of stakeholders has accepted.

Perhaps the most sensible approach to resource reallocation is to determine what an equal-cost array of institutions might look like and where it might be located if we were able to start over. An equal-cost analysis is one in which the analysts assume the same level of resources and look at how they might be used to achieve goals in other ways. The analysis would have to consider the forces shaping Wisconsin's development over the next decade or two. The institutional array might conceivably consist of a lot more or a lot fewer institutions. They might have very similar or very different missions. They might be distributed much differently geographically.

Part of the analysis would have to be an assessment of the appropriate future role of center campuses. Looking ahead, one can see the potential for quite-different roles for the two-year centers. Highway improvements have reduced travel times dramatically in some areas. I do not want to pick on the UW-Center at Menasha, but it is a convenient example. It made good sense to have a center there when UW-Oshkosh was perhaps an hour away. Now, the tri-county expressway, a bridge over Little Lake Butte des Morts, and a six-lane expressway bring the UW Center at Menasha within about 20 minutes of Oshkosh and about 40 minutes from Green Bay. It is difficult to imagine that as many as a third of its students are more than half an hour from a four-year campus. It is difficult to argue that the institution is still needed, despite the capital investment in it. Those resources might instead be used to create a center in a more remote part of the state with much less service. Such a center might become a place for "distance learning," outreach programs, and selected undergraduate and graduate courses.

INTEGRATE AND IMPROVE CONTINUING EDUCATION

Many University professors and administrators think of continuing education and outreach as a much-lower status activity than teaching matriculated students on campus. That must change. But, for that attitude to change, continuing education must change. It must take on new meanings and improve in quality. As we enter the next century, continuing education will mean much more than taking a night course to brush up on Italian, ballroom dancing, or How to Think Like a Marketer. That will continue, but continuing education will refer more often to regular, recurring returns to the classroom (whether on the campus, in the shopping center, or in the industrial plant) by a wide range of people so they can maintain and enhance employment skills. Continuing education will consist of a lot fewer half-day sessions on "So You Want to Start a Business" and many more longer term programs aimed at building demonstrably high levels of competency in gene splicing or bioremediation.

Continuing education must be integrated with the on-going activities of most academic departments as a regular part of their activities and responsibilities. It can no longer be a separable afterthought, certainly not for professional programs.

Several years ago, the UW System tried hard to integrate the UW-Extension with the campuses. It didn't work very well. Outreach and extension are not genuinely integrated into most campuses and have not achieved the quality needed to meet the new economic and social realities. The time has come to revisit how we can integrate Extension activities into the campuses. It will probably require much bringing the UW-Extension into UW System Administration and putting UW-Extension faculty on more than the Madison and Milwaukee campuses.

IMPROVE INTERFACES AND COOPERATION WITH TECHNICAL COLLEGES

In his recent book, former president of the Board of Regents Laurence Weinstein suggested that the respective roles of the technical colleges and the university were finally sorted out.²¹ The two institutions, he stated, have different missions and do different things and institutions were in place to deal with any conflicts that might arise. Perhaps once, but no longer. Gaps between what the technical colleges do and what the University does are closing fast. There is not, of course, anywhere near a complete overlap, but the number and array of overlaps is large and growing. It should! The University's goal should not be to separate UW and technical college activities; instead, it should be to ease and coordinate interfaces, mutual interests, and joint programs.

Technical colleges and universities overlap because economic and social changes are driving them closer and closer together. The technical colleges still teach some auto-body work and how to use a serger, but they also teach computer-aided design, teach surveyors laser technology, and are involved in complex technology. The University, too, is engaged in complex technology, so interfaces and overlaps are bound to exist. We need to stop trying to separate who does what and get on with the business of figuring out how best to work together.

Designing appropriate interfaces is difficult because of historical conflicts and because students who start out at technical colleges often find they need a four-year degree to do what they want or because their aspirations change. Since technical colleges have significantly lower entrance requirements than the University and much of the course work in technical colleges, despite similar names, just is not as substantive as University courses. The technical colleges, for example, offer business courses at the lower level that UW students do not take until they are juniors or seniors, but transfers want credit for them when they come to the University. They are not the same courses. This is often difficult for legislators to understand, especially those who have not attended college or wish the problem would go away.

The University and technical colleges ought to develop some experimental programs. A technical college and a university might cooperate to create a third kind of institution that brings technology from the technical college and science, mathematics, and liberal arts from the university. It could create highly skilled, well-educated, light blue-collar workers with extremely high levels of productivity. Such an institution could capitalize on the work ethic of Wisconsin workers and the way they value education to produce some of the finest light blue collar workers in the world.

The most important thing is that we cannot continue to operate on the mistaken assumptions that there is a gap between what the universities and the technical schools and that we have solved the problem. If we do not act now to bring the institutions together in a way that addresses the interfaces and overlaps openly and uses them to our advantage, then the problems have just begun.

21 Weinstein, *supra* note 1.

A FINAL COMMENT

We don't see it from day to day, but Wisconsin is undergoing fundamental social, economic, and demographic changes. These changes make the University more essential than ever. It is an essential part of the infrastructure that will enable us to compete economically and to address issues of social change. But the University can help only if it is fully engaged in the struggle. To do that, it has to change what it does and how it does it. We have changed the University before. We can do it again.

The first thing the University has to do is to change its mindset. The old models of a single flagship campus and a set of small colleges around the state won't do. We need a wide array of universities. Fifteen years from now, we should have reached a point where the University of Wisconsin System is much more than the sum of its individual campuses. Four or five campuses should be offering doctoral degrees and conducting ground-breaking research. All of them should be fully engaged in continuing education that goes beyond what degree programs offer. Students should be able to take courses from any campus without leaving their home campus. Partnerships with government, business, technical schools, and private colleges should abound. Students should be active learners and professors should facilitate learning more than they present facts and theories. Students of all ages will mix and blend in undergraduate, graduate, and special programs. More than ever before, the boundaries of the campus must be the boundaries of the community and the state.

The problems we face are bigger than our old solutions. This is a time to be bold, to think of where we ought to be instead of where we have been.

ABOUT THE INSTITUTE

The Wisconsin Policy Research Institute is a not-for-profit institute established to study public policy issues affecting the state of Wisconsin.

Under the new federalism, government policy increasingly is made at the state and local level. These public policy decisions affect the lives of every citizen in the state of Wisconsin. Our goal is to provide nonpartisan research on key issues that affect citizens living in Wisconsin so that their elected representatives are able to make informed decisions to improve the quality of life and future of the State.

Our major priority is to improve the accountability of Wisconsin's government. State and local government must be responsive to the citizens of Wisconsin in terms of the programs they devise and the tax money they spend. Accountability should be made available in every major area to which Wisconsin devotes the public's funds.

The agenda for the Institute's activities will direct attention and resources to study the following issues: education; welfare and social services; criminal justice; taxes and spending; and economic development.

We believe that the views of the citizens of Wisconsin should guide the decisions of government officials. To help accomplish this, we will conduct semi-annual public opinion polls that are structured to enable the citizens of Wisconsin to inform government officials about how they view major statewide issues. These polls will be disseminated through the media and be made available to the general public and to the legislative and executive branches of State government. It is essential that elected officials remember that all the programs established and all the money spent comes from the citizens of the State of Wisconsin and is made available through their taxes. Public policy should reflect the real needs and concerns of all the citizens of Wisconsin and not those of specific special interest groups.