Institutional Adaptation: Demands for Management Reform and University Administration

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INTRODUCTION

Higher education organizations around the world have always faced environmental changes. However, in the past decade altered societal expectations, new public policies, and technological innovations have created an unprecedented set of challenges for universities. Although the borders of universities have opened in new ways for their services and products, universities have been the subject of increased public scrutiny from diverse constituencies. While under such scrutiny, higher education institutions have been simultaneously identified for their potential as a key catalyst in the development of new knowledge organizations and the "digital" economy, especially in the Western world. Tending to these domains, their management has become increasingly significant at the turn of the century; as Peter Drucker admonished in a recent analysis: "The most important area for developing new concepts, methods, and practices will be in the management of society's knowledge resources—specifically, education and health care, both of which are today overadministered and undermanaged." (Drucker, 1997)

These pressures on universities along with attendant opportunities are prominent features of the contemporary wave of accountability. Higher education organizations are being asked to solve problems of costs, quality, effectiveness, and access (Barrow, 1993; Cameron and Tschirhart, 1992; Kerr, 1994). The accumulation of pressures and opportunities prompts a reconsideration of the relationship between society at large and academic institutions, specifically determining the appropriate balance between independence and control, incentives and constraints, as well as costs and benefits (Berdahl and McConnell, 1994).

In this chapter, we characterize the cumulative challenge for universities as one of institutional adaptation to changing environments, a multifaceted phenomenon that is worthy of conceptual and empirical attention (Cameron and Tschirhart, 1992; Gumport and Pusser, 1997). We examine the prescriptions in this contemporary wave of accountability, specifically the demands on universities for management reform. Demands for management reform, including mandates to apply business-like strategies, are evident in higher education across a wide range of national systems and institutions throughout Europe and the United States (Dill and Sporn, 1995a; Gumport and Pusser, 1997).

Within the higher education literature, researchers have examined several dimensions of institutional adaptation, including retrenchment (Cameron and Tschirhart, 1992; Hearn, 1996; Zusman, 1994), restructuring (Gumport, 1993; Rhoades, 1995; Slaughter, 1995), improved performance, redefined missions, reorganization (Cameron, 1984; Dill and Sporn, 1995a; Gumport and Pusser, 1997; Peterson, 1995), mandated change, governmental reforms, institutional autonomy and accountability (Berdahl and Millett; Van

Vught, 1989), diversification of funds, strengthened administrative core, entrepreneurial periphery (Clark, 1996a; Clark, 1996c; Clark, forthcoming; Slaughter and Leslie, 1997), transformational leadership, and quality management (Cameron and Tschirhart, 1992; Dill, 1993b; Van Vught, 1995).

A close look at this literature reveals an implicit premise throughout: that university administrators are increasingly called upon to orchestrate that adaptation. We highlight this premise because we believe that it entails a potential shift of prevailing authority structures and decision-making procedures within universities (Barrow, 1993; Lazerson, 1997; Kogan, forthcoming). Although the literature attests to the changing nature of the academic environments, we find that prescriptions for the role of administration in university adaptation have been understudied.

The literature on organizational adaptation is based on an open system perspective (Scott, 1992b) and focuses on an analysis of the environment and management challenges. The resulting approaches differ in their emphasis on internal as opposed to external forces shaping adaptation. Accordingly, we review a range of approaches (Cameron, 1984; Hrebiniak and Joyce, 1985) of externally controlled adaptation (Hannan and Freeman, 1977), of a combination of environmental and management imperatives for adaptation (Lawrence and Lorsch, 1986; Pfeffer and Salancik, 1978; DiMaggio and Powell, 1983), and of internal forces initiating adaptation (Child, 1972). As our review indicates, each of these approaches can be applied to adaptation by universities.

We think it is essential to examine the implicit role of administration in these literatures for several reasons. First, over the past several decades, administrative positions and expenditures have become prominent features of higher education organizations (Leslie, 1995; Leslie and Rhoades, 1995; Tolbert, 1985; Gumport and Pusser, 1995). Second, within management reform prescriptions, administrators are increasingly the key actors who mediate and even manage the relationships between the organization and its environments (Neave, 1997; Clark, 1996b; Peterson, 1997). Research on higher education organizations has neglected this topic, in spite of the widespread use of open systems perspectives in organizational theory over the past two decades. We believe that, as adaptation has become a major concern for higher education, it is increasingly essential to ask who is positioned to do it and with what consequences for the organization.

Based on this background of acknowledging changing environments and the role of administration in calls for management reform, this chapter is organized as follows. In part one, we describe the dynamics of the changing environment for higher education in the 1990s, concentrating on trends in Europe and the United States. Given the comprehensive nature of these environmental changes, some trends might be applicable to

other national settings as well. Our review addresses features of the broader society (i.e., technology, politics, economy) and specific demands on institutions (i.e., cost, quality, effectiveness, access). In the second part, we review several approaches to adaptation within the relevant literatures on organizations and specifically on universities. We focus on open system perspectives that conceptualize environments and organizations as inextricably linked, in order to make analytical distinctions between the environment, the organization, and the role of administration in managing that relationship. In the third part, we draw together three theoretical perspectives to account for the increased centrality of administration in responding to environmental demands, and we examine implications for the changing organization of academic work. The last section of the chapter offers suggestions for further research.

THE ENVIRONMENTAL CHANGES FOR UNIVERSITIES

Observers from different vantage points concur on a profound shift: environmental forces have become so dynamic as to lead to a basic shift in the structure of higher education as an industry (Cameron and Tschirhart, 1992); the present era may be characterized as a point of revolutionary, rather than evolutionary, change (Kerr, 1987); and the demands of global capitalism hinder the university's ability to fulfill its cultural mission (Readings, 1996). The cumulative pressure amounts to a new environment for universities. Europe and the United States show several converging patterns (Dill and Sporn, 1995a):

- Financial crisis caused by decreased government support for students

- Devolution or decentralization of responsibility to the institutional level

- International competition for funds, faculty, and students

- Governmental regulations to improve quality in teaching and learning

- Changing student demographics

- New technologies

This new environment calls for increased accountability of universities. Pushed by economic, political, and technological forces of the wider societal environment, higher education institutions are increasingly held accountable for the resources they use and the outcomes they produce. Environmental pressures are translated into demands to

solve problems of cost, quality, effectiveness, and access. The emerging discussion of possible solutions encompasses institutional management, restructuring, resource development and reallocation, quality assurance, and strategic planning. All of these prescriptions either implicitly or explicitly call for an expanded role for university administration. In this scenario, we argue, the domain of faculty authority is narrowed, as administrators are provided the resources to orchestrate various management reforms. Figure 1 depicts our approach visually.
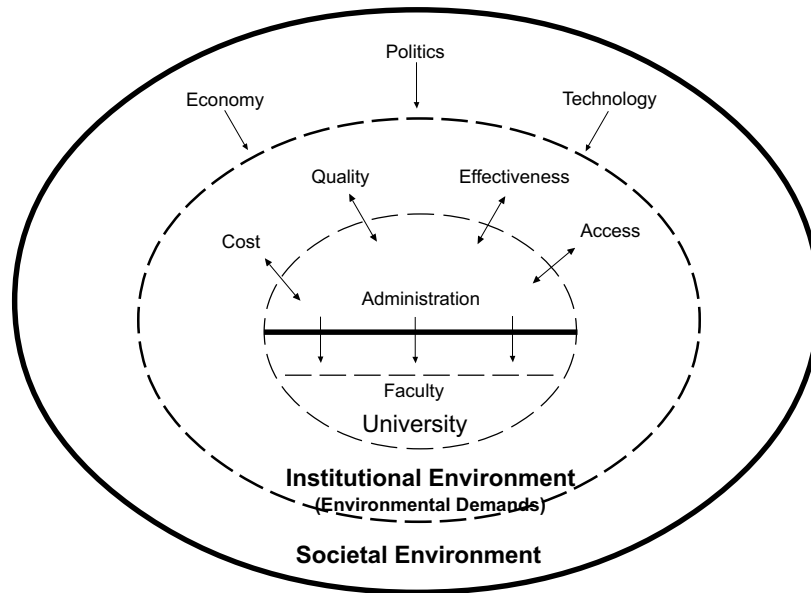
Figure 1. The role of university administration in adaptation.

The Societal Environment

Across national systems, the principal features of the societal environments impacting higher education are the economy, politics, and technology (Cameron and Tschirhart, 1992; Dill and Sporn, 1995a; Gumport and Pusser, 1995; Gumport and Pusser, 1997; Massy, 1996; Peterson and Dill, 1997). Economic issues include shortfalls in projected state appropriations alongside increased expectations for productivity and global competitiveness. Political parties and public decision-making bodies determine higher education policies including the role of the state or the diversity of faculty and students. New technologies such as the Internet and telecommunications profoundly change the delivery of services by universities. Each set of forces warrants separate consideration.

Economy

Research universities in the United States have been challenged by changing economic conditions which shaped four major stages of development—from their origins in the late 1880s, to a period of slow growth until 1940, to dramatic expansion between 1940 and 1990 based on federal funding, and most recently to a period of constrained resources. Revenue from state appropriations has been an uncertain funding source during the 1990s (Williams, 1995; Leslie, 1995). The likelihood for stability in funding from government sources is not assured in the United States, even for flagship public universities, prompting them to diversify their revenue sources (Kerr, 1994; Gumport and Pusser, 1997).

In Europe state budgets for higher education are also under scrutiny. Regulations for introducing the common currency "Euro" by the European Union have contributed to a stagnating economy in many European countries. Pressure lies on state budgets, and cuts in the share for higher education are the consequence. In countries like France, Germany, Great Britain, and Austria, public expenditure per student has declined over the last decade (Dill and Sporn, 1995a). At the same time, the share of higher education funds from nonpublic sources is growing; as evidenced by an increased percentage of revenue from private sources for example in France, Germany, the Netherlands, and the UK (Williams, 1995). Generally, the pressure to diversify the funding base has led to the introduction of competitive markets within the higher education systems of many European countries (Clark, 1996b; Clark, 1996c; Dill and Sporn, 1995a; Gellert, 1993b; Teichler, 1993; Wasser, 1990). Reform processes aim at making institutions more independent from the state in order for them to raise additional funds through student fees and the private sector. At the same time, the need for efficient management structures and skills for fundraising and development become critical.

As observers have studied this financial vulnerability particularly for public universities around the world, they expect to see several trends for the future of higher education institutions: privatization, decentralization of authority, alternatives financial resources, greater attention to effective use of resources, leadership on all levels, continued discussion of planning and restructuring alternatives. (Dill and Sporn, 1995a; Gumport and Pusser, 1997; Kerr, 1994; Nowotny, 1995; Peterson, 1995). Whether explicitly or implicitly, within such predictions, administration is called upon to implement these changes as well as to buffer their higher education institutions from selected environmental demands.

Another dimension of economic pressure is the expectation for higher education to contribute to a country's national productivity. Through academic research, universities are expected to innovate new products and services, as well as to collaborate in product development with industry. New trends show an increased need for technology trans-

fer, for a combination of basic and applied research, and for professors contributing to spin-off or start-up companies (Goldstein and Luger, 1997). This environment can create a major revenue stream for universities as it simultaneously stimulates the economy (Goldstein, Maier, and Luger, 1995).

Higher education also contributes to national productivity through the production of a well-educated workforce (Peterson and Dill, 1997). With the emergence of the information age and a knowledge-based economy, qualified professionals increase the country's productivity and economic well-being. Aside from producing knowledge workers, colleges and universities also provide programs and training services to meet societal needs in other sectors.

Closely related to these expectations is the contribution of higher education to re-education (retraining) and continuing education (Peterson and Dill, 1997). New types of universities as well as new institutional forms (e.g. Fachhochschule in Germany specialized in vocational training) of advanced learning have been set up in several European countries (Gellert, 1993a). On the one hand, students need "hands-on" programs to increase their chances of finding a job, and companies need to update their knowledge through hiring university graduates on a regular basis. On the other hand, universities use re-education programs to raise additional revenue. Especially in the United States, the growing market for retraining has led to a shift in emphasis from undergraduate to professional education, and from liberal arts to vocational training in the community colleges. Even in Europe the trend is toward "professionalization" of general education (Teichler, 1993; Gellert, 1993a).

Politics

Budgetary pressures and conservative political trends in many countries have led to a movement of different political parties towards "middle of the road" policies. As a consequence, well-established concepts like "free" and "open" higher education are being questioned by politicians. In Austria, for example, the 20-year tradition of open access and no tuition is increasingly discussed by ministers and policy makers. Generally in Europe, the role of the state has been changing from a control to a supervising model (Van Vught, 1994). The implications are more decentralization of responsibilities to the institutional level, stricter reporting systems and quality measures, as well as a need for better management and leadership skills at the institutional level.

An additional political factor of the higher education environment is the changing demographics of student populations towards greater diversity of society. New populations from different age groups and ethnic backgrounds are entering universities as

students, faculty, or administrators (Hurtado and Dey, 1997). The challenge is to accommodate these different cultures. For example, California has been planning under the heading of "tidal wave II" to address the needs of a dramatic increase in the Hispanic student population. In Europe, countries are facing rising migration from Africa and Eastern Europe. From an institutional perspective, new programs for access and retention, new research agendas, and new hiring and promotion systems have to be created (Peterson and Dill, 1997). As these minorities become majorities, institutional challenges will be pervasive.

Globalization trends are influencing the political environment as well. As one example, networks of scholars, policymakers, and private sector experts have formed around major social and political problems, such as human rights and AIDS. Such groups often have an interdisciplinary, cross national, and cross industry character. Another example are multinational universities with campuses in different countries and in some cases alliances with international firms and several academic institutions.[1] Such new ventures call for new management policies and practices, including expanded negotiation skills by those in the university (Peterson and Dill, 1997).

Technology

The technological revolution underway in all countries potentially entails significant changes for several institutions in modern society, particularly for higher education. The expansion of interactive telecommunications and the availability of relatively inexpensive computers and software have led to the widespread use of technology (Peterson and Dill, 1997; Sporn, 1996). The potential impact for how students learn, how professors teach and conduct research, and how administrators manage the institution is complex and not easily forecast (Gumport and Chun, 1999). New programs such as the virtual university, research collaboration between international scholars transcending the obstacles of time and location, and design of new administrative information systems are only a few examples.

Teaching improvements may be achieved through modern technologies. New forms of communication and collaboration between teachers and students become possible through online services like electronic mail. The creation of distance education programs or virtual universities[2] expands access to students in geographically remote regions. Academic programs can be customized to individual learning needs. Research activities can also be influenced by new technologies. A new form of international collaboration links industry, universities, and government agencies around the world to solve modern problems such as coping with global warming or enhancing social mobility (Gibbons, 1995; Nowotny, 1995; Peterson and Dill, 1997). Additionally, access to

information is improved through CD-ROM and library servers with benefits to literature searches and analyses. The emergence of electronic publishing provokes controversy as an innovation in the distribution of research, with implications for the changing roles of university libraries and university publishers.

From an institutional perspective, technological changes have the potential to raise the organizational intelligence of universities (Senge, 1990). Sophisticated information systems enable academic organizations to learn about internal processes, markets, or customers and present a more comprehensive picture to the outside world. The feedback can be used for program development, marketing, and decision making. A new form of "management by information" may make structures and processes more transparent [3] with possible increases in efficiency and effectiveness for the university (Green and Gilbert, 1995).

The Institutional Environment

Societal changes in technology, politics, and economy get translated into environmental demands for universities and, taken together, form an immediate institutional environment (see again Figure 1). Expectations on higher education abound, due not only to the significant contributions of higher education to society but also to the ambiguities of academic organizations (i.e., unclear mission and technology, gap between administrative and academic values) (Baldridge, 1983; Birnbaum, 1989; Clark, 1983; Weick, 1976). Increasingly higher education institutions are asked "to justify activities by demonstrating their contribution to objectives, and defend the cost of the enterprise" (Berdahl and McConnell, 1994, p. 70). In an effort to meet these demands for accountability, universities have developed strategies to achieve cost containment in addition to improvements in quality, effectiveness, and access.

Cost

The explosion of institutional costs and the dramatic increase in overall expenditures in higher education have been widely discussed during the last decade (Leslie and Rhoades, 1995; Zemsky and Massy, 1990). It is not clear, though, if the cost escalation is due to the administrative or the academic domain (Gumport and Pusser, 1995; Leslie and Rhoades, 1995). In any case, accountability expectations have triggered numerous attempts to achieve cost containment through restructuring (Zemsky and Massy, 1990).

Generally, we can see a decline in government support for higher education in all OECD countries; advocates for a "market model" offer the American system as exemplary (Leslie, 1995; Williams, 1995): "The decline means that institutions are expected to

raise more and more of their own revenues through such means as new or higher charges to students, research grants and contracts with business and industry, and special training programs for discrete groups" (Leslie, 1995, p. 6). Such trends can be observed in many European countries with the introduction of student fees, expensive postgraduate programs, and applied research projects with industry. In the United States, the recent trend points to tuition increases, corporate partnerships, and expanded continuing education programs.

These efforts to generate revenue have been accompanied by changes in operating functions and management structures, principally an increasing scale of administration (Bergmann, 1991; Gumport and Pusser, 1995; Guskin, 1994a; Leslie, 1995). Administrators have tended to respond to fiscal constraints in higher education differently in the 1990s, moving away from short-term crisis management to strategic planning for prolonged challenges (Barrow, 1993). And administration itself has been asked to change— to become leaner and more professional, through more vigilant leadership and more efficient uses of technologies (Guskin, 1994a).

Research shows that, with the necessity to cultivate funds from new sources, new organizational structures (including administrative ones) are created (Tolbert, 1985). Internal resource allocation is based on the centrality to mission and closeness to the market of the respective academic or administrative units (Hackman, 1985). Budgeting at the state or government level shifts from line-based budgets to block grants and will increasingly include target-based budgets for universities (Williams, 1995). Additionally, the quality and effectiveness goal favors cost containment through process analyses and a redefinition of core competencies (Prahalad and Hamel, 1990). It could follow that the turbulence in higher education finance explains the disproportionate increase in administrative expenditure over recent years and the decline in expenditure shares devoted to instruction (Gumport and Pusser, 1995; Leslie and Rhoades, 1995). This type of restructuring causes difficulties for academic areas with less market potential and for faculty within those fields or within the institution who resist such resource shifts.

Quality

The 1990s can be characterized as a quest for quality in higher education (Ewell, 1991). The notion of quality applied to higher education has over the years become more inclusive to encompass caring for clients, coherence in teaching and learning processes, and responsiveness to changing client needs. In universities, quality expectations focus on public accountability, student learning, faculty productivity and performance, program effectiveness, and institutional evaluation (Peterson and Dill, 1997). The demand for quality of academic products and services is seen to change the educational value of

universities (Lozier and Teeter, 1993; Van Vught, 1995): "Management for quality in higher education institutions should consist of a deep caring for the fundamental values of the search for truth and the pursuit of knowledge, and of a sincere attempt to respond to the needs of present-day-societies" (Van Vught, 1995, p. 209).

The development of the quality movement led to the introduction of comprehensive concepts and tools of TQM (Total Quality Management) and CQI (Continuous Quality Improvement) on campus. As opposed to the educational quality movement, TQM or CQI concentrate on administrative structures and processes but might eventually reach the academic side of the institution as well. The main principles emphasize a culture of continuous improvement, a customer and client focus, a rational approach to decision making through performance indicators and benchmarking, more process design, teamwork, and individual empowerment (Cameron and Whetten, 1996; Lozier and Teeter, 1993; Peterson and Dill, 1997; Seymour, 1992).

Given the deteriorating public image of universities in many countries, TQM and CQI strategies may be seen as mechanisms to both increase accountability and provoke structural improvements and redesign (Ewell, 1997). Some examples are evidence of this trend. With the restructuring of the higher education market in the UK, a new unit "Quality Support Centre"[4] was founded, mainly concentrating its work on developing and disseminating concepts and tools for quality in higher education. In Austria and Germany[5], the ministries of science and research have created evaluation standards that have to be met by all public universities in order to secure quality of outputs. In the United States, the Baldrige Award[6] designed for excellent corporations was extended to institutions of higher education, signaling the increased call to use TQM and CQI in university administration (Peterson and Dill, 1997).

Effectiveness

Concerns over effectiveness have become prominent in discussions of higher education institutions and systems. While efficiency is an internal measure of goal achievement and resource usage that concentrates on "doing things right," effectiveness is an external measure focusing on "doing the right things" through establishing appropriate goals based on environmental needs and demands (Cameron and Whetten, 1996; Pfeffer and Salancik, 1978). The increased demand for accountability on universities expanded the focus from efficiency to effectiveness (Gumport and Pusser, 1997). The shift to effectiveness has some components of quality concerns, including emphasis on a client or customer perspective, prescriptions for management strategies to bring about organizational change, and reconsideration of adaptive structures, processes, and outcomes (Cameron and Whetten, 1996).

In some cases, the shift to questions of effectiveness has led to reorganization or restructuring of the institution. One typology of such initiatives has characterized them as of three types—reengineering, privatization, or reconfiguring (Gumport and Pusser, 1997). Generally, the goals are far reaching—to cut costs through reduced bureaucracy, to improve quality and enhance effectiveness, and in some cases to increase access. As new processes and services are created to serve ever more extensive outside needs, administration plays a critical role as mediator and change agent. Ironically, the increased centrality of administration to restructuring has occurred alongside demands to reduce administrative costs.

One study specifically analyzed the relationship between postindustrial environments and organizational effectiveness of United States universities (Cameron and Tschirhart, 1992). The results showed that certain environmental attributes (i.e., scarcity, competition, turbulence) have negative effects on organizational effectiveness. However, the study also showed that administration can mitigate these negative effects through participative bureaucratic systems of decision making, i.e., integration of all groups within the university in the decision process and communication of results through transparent channels. In general, the results of the study show that information sharing and the establishment of a learning culture are successful strategies to deal with the pressures of a postindustrial environment (Whetten and Cameron, 1985).

Access

In the United States, the expectation for universal access to higher education was initiated after World War II with the GI Bill. Universal access meant moving from mostly middle-income students to students of all income levels as well as expanding access to students in all geographic locations and later through affirmative action to previously underrepresented ethnic groups (Kerr, 1994). More recently, through the emphasis on lifelong learning, the expansion of access can be further achieved as increased numbers of adult learners expect access to higher education programs through technology-based services that can overcome the obstacles of location and time (Gumport and Chun, 1999; Mingle and Epper, 1997).

The financial pressures on higher education also have consequences for student access. In the United States, the shift from grants to loans for students in the contemporary period undermines the aim to expand access to more diverse populations of lower income students. "Given the reluctance of some ethnic groups to borrow large sums of money, a movement away from grants will reduce access to college for the groups that need it the most" (Hartle and Galloway, 1997, p. 35).

Access is only a first step, for once students arrive on campus they need to find a campus climate that will facilitate their retention and degree completion. The challenge for campuses to deal with multiculturalism and diversity will continue to increase (especially in Europe) and needs to be accommodated by universities (Hurtado and Dey, 1997). Public policies and governmental regulations may help retain a diverse student body (Peterson and Dill, 1997). Well-balanced systems of merit or need-based student support are commonly found mechanisms to achieve these goals. Unfortunately, recent votes against affirmative action policies in California and Texas signal increased difficulty in removing ethnic and class barriers to higher education.

Geographic barriers are easier for universities to overcome because of the new developments of technology. Strategies are designed to enhance the delivery of educational programs to students in remote locations. Referred to as distance education, distance learning programs or "virtual university" initiatives in the United States, the discussion in Europe focuses on international joint academic programs and voucher systems that enable students to change universities and move between countries easily and freely. The aim is to make geographic as well as cultural boundaries obsolete, so that students can choose programs and universities that are best suited to their needs.

Environmental Changes, University Responses, and Managerial Imperatives

In the previous paragraphs we showed how environmental demands for cost containment, quality, effectiveness, and access constitute the contemporary pressures for institutional accountability. As universities seek to respond to these pressures, we see attempts not only for organizational survival but also for organizational legitimacy. Their adaptation processes encompass strategies such as reorganization and restructuring, diversification of revenue sources, revised mission statements, a redefined role of the state between supervision and control, redesign of programs, evaluation and assessment of faculty, or total quality management. With the environment gaining more influence on the functioning of universities (Cameron, 1984; Dill and Sporn, 1995a; Gumport and Pusser, 1997; Kerr, 1987; Peterson, 1995) and the widespread directives for management reform, a major consequence is that more authority is given to administration to decide upon changes, distribute resources and implement decisions (Kogan, forthcoming; Trow, 1994). A comparative study of European countries confirms that while academic expertise remains dominant on the primary processes of teaching and research, "the role of the central institutional administration is an important component in higher education governance and management, especially for the non-primary processes issues such as financial management" (De Boer and Goedegebuure, 1995, p. 4).

Thus, we think it essential to examine how, within institutional adaptation prescriptions, there is an implicit mandate for administration to play a central role as mediator and change agent. We believe this mandate entails concomitant shifts in the authority structure within universities that narrows the domain of professional expertise of faculty.

Following this argument, the first response to the new environment then is to strengthen hierarchical administrative structures (Kogan, forthcoming). We would suggest though that eventually the whole institution (and not one part being either administration or faculty) needs to be included in an analysis of observable weaknesses in existing collegial, professional, and administrative structures. Consequently, this would facilitate successful institutional adaptation.

We want to briefly describe how, from a historical and a comparative perspective, the division of labor between faculty and administration has looked quite different across time periods and national systems.

THE UNIVERSITY AND THE ROLE OF ADMINISTRATION

In the context of this chapter, we focus on institutional adaptation to changing environments and the implications for the role of administration. Accordingly, we broadly define administration as the structure and processes within universities for implementing and executing decisions made by academic governance (Peterson and Mets, 1987). Additionally, we include functions and positions within a university which deal with mediating environmental demands. In our view, administration is inclusive of upper- as well as middle-management; i.e., we incorporate leadership in our definition of administration. This would include faculty who have become deans, provosts, and presidents. We believe that this comprehensive definition—through the inclusion of all administrative tiers—permits a more comprehensive perspective on the role of administration.

According to Peterson, ten years ago, "the management of many institutions today involves modifying existing structures and processes or developing new ones to deal with problems of institutional change and innovation, quality and effectiveness, and decline and equity" (Peterson and Mets, 1987). We believe that this responsibility for adaptation has become even more prominent in management reform prescriptions for higher education throughout the late 1980s and into the 1990s, with the consequence of expanding the authority of administration. In order to examine this shift, we first provide a brief sketch of the historical development of university organization and administration (Burns, 1962; Duryea, 1962; Tyack, 1990).

Classic studies of university organization occurring in the 1970s provided the basics of organizational analysis in higher education (Baldridge, Curtis, Ecker, and Riley, 1977; Birnbaum, 1989; Blau, 1994; Cohen and March, 1974; Weick, 1976). Changes from elite to mass higher education produced two waves of changes in university organization and administration based on integration and differentiation (Clark, 1995; Dill, 1992b; Lawrence and Lorsch, 1986). Differentiation refers to the process of forming highly specialized units (i.e., basic academic units, departments) to address uncertain and dynamic environmental demands. Integration of differentiated units aims at coherence and effectiveness by investing time and resources in horizontal mechanisms of coordination (Lawrence and Lorsch, 1986). Integrating mechanisms emphasize lateral and reciprocal forms of communication such as face to face meetings, liaison roles, task forces, teams, and even integrating managers and departments (Dill, 1995b; Galbraith, 1977).

With the expansion of higher education in the 1960s, authority increased for professors on the continent (i.e., establishment of chair system) and nonfaculty in the United States (i.e., influence in decision making of nonacademic staff and students). "Ironically, this has also been accompanied by an increase in the number of academic administrators required to manage institutions of increased size and complexity. The transition from mainly oligarchic to mainly democratic structures created a need for administrators who can attend to conflicting interests" (Dill, 1992a, pp. 15/16)

The second wave of changes starting in the 1980s has influenced the organization of universities and their administrative structures through institutional competition, differentiation, and social responsiveness (Dill, 1992a). Adaptations include hierarchical integrating mechanisms of lateral groups consisting of administrators and faculty sharing information. Examples are task forces or strategy development teams. To be effective in a competitive environment, these mechanisms must be combined with market and collegial mechanisms. This means that environmental scanning and governance based on democratic representation are critical. Conflicting pressures of diminishing resources and expanding knowledge call for the articulation of collective professional values and priorities as a basis for decisions. "As specialization and differentiation are the universal characteristics of academic organization, so integration is the universal challenge of academic administration" (Dill, 1992a, p.16).

Since most management reform processes aim at securing financial support, legitimacy, and thus organizational survival, the "external push" for adaptation draws our attention to the organization/environment interface. Internally, actions concentrate on institutional finance, mission statements, and improved decision-making processes. The responsibility mainly falls in the realm of administration and, we argue, entails a shift-

ing authority structure within universities. In the next section we review theories of adaptation that depict alternative approaches to understanding the organization/environment relationship and their inherent prescriptions for administration's role.

REVIEW OF RELEVANT THEORY OF ADAPTATION

The study of adaptation has a long tradition in organizational analysis. Under the headings of organizational change (Goodman and Kurke, 1982; Huber and Glick, 1993), organizational development (Cameron and Quinn, 1983), organizational design (Galbraith, 1977), or organizational learning (Argyris and Schön, 1974; Argyris, 1982; Levitt and March, 1988) lies the concept that organizations need to adapt to their environment in order to succeed (Burns and Stalker, 1961; Hannan and Freeman, 1977; Lawrence and Lorsch, 1986; Pfeffer and Salancik, 1978). In general, most conceptual and empirical contributions to the theory of adaptation derive from research published in the business, economics, and sociology literature (Aldrich, 1979; Argyris, 1982; Child, 1972; Hannan and Freeman, 1977; Hrebiniak and Joyce, 1985; Lawler and Mohrman, 1996; Lawrence and Lorsch, 1986; March, 1991; March, 1994; March, 1996; Meyer and Rowan, 1992a; Meyer and Scott, 1992; Miles and Snow, 1978; Miller and Friesen, 1980; Perkins, 1973; Pfeffer and Salancik, 1978; Powell, 1990; Powell and Friedkin, 1987; Scott, 1992a; Thompson, 1967).

Adaptation research has been focused on an analysis of environments and their resulting management challenges. Approaches range from an emphasis on total external to total internal control of adaptation; and they concentrate on either environmental (i.e., population ecology), organizational (i.e., resource dependence, contingency theory, institutional isomorphism), or internal forces (i.e., strategic choice) (Cameron, 1984; Hrebiniak and Joyce, 1985). These approaches share a commonality: they are based on an open system perspective (Scott, 1992b).

The concept of adaptation has been applied to higher education occasionally and not systematically. We identified authors in the field of higher education who have been interested in higher education adaptation as well as topics closely related to it like strategic planning, restructuring, resource allocation, innovation, or entrepreneurial universities (Balderston, 1995; Baldridge and Deal, 1983; Becher and Kogan, 1992; Blau, 1994; Cameron, 1984; Clark, 1983; Clark, forthcoming; Conrad, 1978; Dill and Friedman, 1979; Dill and Sporn, 1995b; Gumport and Pusser, 1995; Gumport and Pusser, 1997; Hardy, 1990; Hearn, 1988; Keller, 1983; Leslie, 1995; Levine, 1980; Massy, 1996; Peterson, 1995; Rhoades, 1995; Rubin, 1979; Salancik and Pfeffer, 1974; Slaughter, 1995; Slaughter and Leslie, 1997; Sporn, 1995a; Tolbert, 1985; Trow, 1983). Our chapter is mostly based on their work.

When studying adaptation to changing environments and the role of university administration, we need to analyze the societal and institutional environments, the relevant theories of adaptation, and the consequences for the organization. For this purpose, we use the following definition of adaptation:

> Organizational adaptation refers to modifications and alterations in the organization or its components in order to adjust to changes in the external environment. Its purpose is to restore equilibrium to an unbalanced condition. Adaptation generally refers to a process, not an event, whereby changes are instituted in organizations. Adaptation does not necessarily imply reactivity on the part of an organization because proactive or anticipatory adaptation is possible as well. But the emphasis is definitely on responding to some discontinuity or lack of fit that arises between the organization and its environment (Cameron, 1984, p. 123).

Accordingly, our emphasis lies on a process view of adaptation that aims at establishing a balance between environmental demands and internal structures. Organizational alterations may include strategies or positions to manage the relationship between the organization and the environment. Administration may function as a bridge as well as a buffer.

In the first part of this chapter we described how environmental changes have become more complex, turbulent, uncertain, and interconnected for higher education institutions (Cameron and Tschirhart, 1992). As a result, environmental demands for accountability cause major management challenges for universities (i.e., lower costs, higher quality, more effectiveness, open access). These demands get mitigated by administration in order to secure survival and legitimacy. Hence, the administration voices the reaction of the organization to the environment, guides the courses of adaptation, and thereby expands its scope of authority within the institution. Conflicts with faculty who see themselves as the professionals in charge of the institution are a consequence. One indicator of the potential for increased conflict is the rise in the number of administrators compared to faculty. In Europe, the ratio is starting to favor administration based on major "management reforms" and in the United States administration has a long history of being twice as large as faculty (Chronicle, 1997; Sporn, 1995b).

After a review of the major models of adaptation and their application to higher education, we provide an analysis of the changing role of professionals (faculty and administrators) based on the theory of the sociology of professions. For this purpose, we adopt a synergy of perspectives, i.e., an eclectic mix of approaches to account for the expansion of administration as an inherent part of university adaptation. Given the goal of this chapter, we selected approaches concentrating on the management of the organization/

environment relationship and the role of administration. Generally all these approaches assume organizations to be open systems that confront and respond to various challenges, demands, and opportunities in their environment. Hence, we first give an overview of open systems theory and then describe specific approaches relevant to higher education as shown in Figure 2 (i.e., contingency theory, population ecology, institutional isomorphism, strategic choice, resource dependence, network organization).

Environment

Population Ecology

Institutional Isomorphism

Contingency Theory

Resource Dependence

Strategic Choice

Organization (University)

Network Organization
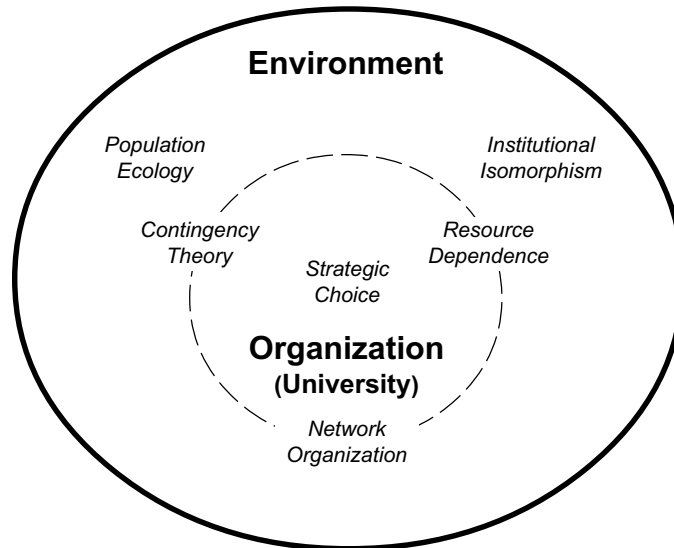
Figure 2. Major approaches to organizational adaptation based on open systems theory

Open Systems Theory

Generally, systems are characterized by an assemblage or combination of interdependent parts. "That a system is open means, not simply that it engages in interchanges with the environment, but that this interchange is an essential factor underlying the system's viability." (Scott, 1992b, p. 83.) In open social systems like organizations the connections among the interacting parts become relatively loose. This means that less constraint is placed on the behavior of one element by the condition of the others. Through the importance of the environment and the relative freedom of elements, these systems are predicted to be more adaptive (Scott, 1992b). Loosely coupled systems persist due to environmental scanning and local adaptation of individual units. Actors are self-determined in their activities and coordination is kept to a minimum (Weick, 1976). Internally, organizations consist of participants not organized as a unitary hierarchy or as an organic entity, but as a loosely linked coalition of shifting interest groups (Cyert and March, 1992; Pfeffer and Salancik, 1978; Weick, 1976). Applied to higher education, universities have often been defined as loosely coupled systems (Weick, 1976) or organized anarchies (Cohen and March, 1974).

The environment is characterized by diversity and variety that causes uncertainty for organizations. Adaptation is defined as the process by which systems seek a dynamic equilibrium or "fit" with their relevant environment (Cameron, 1984; Lawrence and Lorsch, 1986; Weick, 1979). Systems are seen as self-maintaining; i.e., in order to strive they will find strategies of survival in accordance with their environment (Pfeffer and Salancik, 1978; Tolbert, 1985). In summary, loosely coupled systems (like universities) are likely to persist through external sensing mechanisms, fast localized adaptation, and the possibility to retain innovation on a subunit level. They have the advantage of isolating problematic areas and of minimal costs of coordination. But with increasing need for integration the independence of actors and only local innovations can impede an overall change process.

After more than ten years, Orton and Weick (1990) reconceptualized the theory of loosely coupled systems and argue for a dialectical application of the concept. Loose coupling theory should be used from two different and opposing perspectives. On the one hand, loose coupling helps the organization to create a potential for survival through innovations of independent and highly skilled units. On the other hand, the dysfunctions of loose coupling, such as lack of integration and identity, can be compensated for by activities in the "management arena" like enhanced leadership, focused attention, or shared values (Weick, 1976).

Orton and Weick (1990) found three types of adaptability in their study of the literature on loose coupling: experimentation, collective judgment, and dissent. Experimentation refers to problem solving by curiosity, learning, and exploration (Orton and Weick, 1990). Collective judgment is translated into a structure of self-governing voluntary groups (or collegium) which promote "wise choices" (Rubin, 1979; Thompson, 1967). The preservation of dissent focuses on the concept of "unified diversity" as a powerful source of adaptation (Weick, 1976).

We adopt this open and loosely coupled system perspective and focus our attention on the role of administration. As we argue, universities as open systems adapt to their environment in order to reduce uncertainty and increase legitimacy. Given the nature of the environment, one form of this adaptation is the expansion of administration and the shift of authority structure within the institution. In order to provide a more detailed analysis of this proposition we need to review the relevant theories of adaptation. As some authors before (Cameron, 1984; Goodman and Kurke, 1982; Hrebiniak and Joyce, 1985; Scott, 1992b), we selected the following approaches because of their emphasis on the role of the environment and management.

Contingency Theory

Contingency theory claims that effective organizational structure and management are dependent upon the core technology and nature of the competition in the relevant industry (Lawrence and Lorsch, 1986). This implies that there is no one best way to organize (Scott, 1992b; Van de Ven and Drazin, 1985). In stable and certain environments, organizations develop "mechanistic" structures with centralized hierarchies and fixed procedures. Rapidly changing environments and uncertain technologies require "organic" structures characterized by horizontal and vertical communication, autonomous actors, and higher flexibility and adaptability (Burns and Stalker, 1961; Lawrence and Lorsch, 1986).

Actually, contingency theory is a branch of system design (Galbraith, 1977) emphasizing the contingent nature of organizations depending on environmental conditions. In their work, Lawrence and Lorsch (1986) concentrate on integration and differentiation as adaptation mechanisms. They argue that adaptation takes place on two levels: the structure of the subunit to fit its environment and the organizational mode of integration and differentiation to meet the broader demands of the environment (Lawrence and Lorsch, 1986).

In a university setting differentiation and integration can help to understand university behavior (Clark, 1995; Dill, 1997a). With increased complexity of tasks like interdisciplinary teaching and research or diverse student bodies, institutions of higher education diversify their services (Dill, 1997b). As the production of new knowledge has become difficult, academic departments need to specialize even further (Clark, 1995; Clark, 1996c). The importance of integration through collaboration and cooperation among units and members intensifies as a competitive environment forces universities to increase quality, improve effectiveness, lower costs, and provide access to a diverse student body.

Contingency theory is useful if we want to explain the increased need of integration at universities caused by complex and rapidly changing environments (Clark, 1993; Clark, 1995; Dill and Sporn, 1995b). Administration has to play two roles. On the one hand, administrators and units serve as a buffer between the environment and the core activities of the institution. On the other hand, administration tries to integrate the differentiated units through mechanisms of communication like personal meetings, liaison offices, task forces, teams and committees (Dill, 1997b; Dill and Sporn, 1995b; Galbraith, 1977). For example, we found line administrators (i.e. vice president for planning) and offices of "professional liaison" to serve as a connection between central administration, schools and colleges, and trustees (Sporn, 1995b).

Population Ecology

Organizational adaptation according to the population ecology tradition (Aldrich, 1979; Hannan and Freeman, 1977; Hannan and Freeman, 1989) happens through natural selection by environmental demands. The population ecology approach only considers populations of organizations as the unit of analysis and views changes of individual organizations as rather arbitrary and irrelevant. The environment is viewed as a powerful force selecting those forms that have a chance of survival and other organizational forms vanish. Generally, Hannan and Freeman (1997, p. 946) suggest that "we ought to find specialized organizations in stable and certain environments and generalist organizations in unstable and uncertain environments."

This natural selection process derives from biology where the fittest survive because of their matching characteristics with the environment (Aldrich, 1979). "Most organizations adapt, therefore, not because of intelligent or creative managerial action but by the random or evolutionary development of characteristics that are compatible with the environment. Managerial discretion and influence is neither present nor relevant." (Cameron, 1984, p. 126.) Hence, "the ability to perpetuate one's form is the hallmark of successful adaptation" (Scott, 1992b, p. 22).

In summary, population ecology approaches aggregate organizations into populations, downplay the importance of managerial choice, and view the source of adaptation as an inconsequential artifact of evolution. It is meant to explain why certain types of organizations survive, e.g., the decline in teacher's colleges and the growth in the number of community colleges in the United States (Scott, 1992b).

In this chapter, population ecology has less importance since we concentrate on the role of administration (i.e., management). But it could be used to provide a critical discussion of the role of management vis-à-vis a dynamic environment focusing on the tendency of managers to overestimate their influence (Birnbaum, 1992; Cohen and March, 1974). Another application would be to analyze how much of the environmental demands are manageable or inescapable.

Institutional Isomorphism

Institutional theory, like population ecology, focuses on whole sets of organizations acting in relevant organizational fields (Meyer and Rowan, 1977; Meyer and Scott, 1992; Powell and DiMaggio, 1991). Adaptation is defined as isomorphism or the homogenization of organizational form in the same field of organizations (DiMaggio and Powell, 1983). In general, institutional isomorphism states that adaptation stems either from

concerns about political power and legitimacy (i.e. coercive isomorphism), from imitating other organizations (i.e. mimetic isomorphism), or from the homogenization of management (i.e. normative isomorphism) (DiMaggio and Powell, 1983). Hence, this approach explains adaptation mainly in terms of values and politics.

The model of institutional isomorphism looks at organizations as a dynamic mix of participants, interests, and resources. Accordingly, organizations are dominated by coalitions of shifting interest groups which must adapt to their environment. The model focuses on an ecological level of analysis, i.e., relating organizational functioning to the larger society. Consequently, social and cultural values and policies are relevant factors for internal decision making (DiMaggio and Powell, 1983; Meyer and Rowan, 1992a; Meyer and Rowan, 1992b). In other words, "organizations experience pressure to adapt their structure and behavior to be consistent with the institutional environment in order to ensure their legitimacy and, hence, their chances of survival" (DiMaggio and Powell, 1983, p. 150).

As a result, organizations are increasingly homogeneous within given domains and increasingly organized around rituals of conformity to wider institutions. Accordingly the environment is interpreted as organizational fields and consists of technical and social/cultural elements. Technical environments include resources, information and know-how, and markets. Social and cultural environments encompass values, norms and politics of the larger society (Scott, 1992a).

We are especially interested in the role of professionals according to the institutional isomorphism model. Professionalization is interpreted as "the collective struggle of members of an occupation to define their working conditions and to establish a cognitive base and legitimization for their occupational autonomy" (DiMaggio and Powell, 1983, p. 152). Isomorphic processes are enhanced through two aspects: the cognitive base produced by university specialists and the growth and elaboration of professional networks (DiMaggio and Powell, 1983). Both aspects have relevance for universities (Cameron, 1984; Dooris, 1989; Hrebiniak and Joyce, 1985; Rhoades, 1995; Simsek and Louis, 1994; Tolbert, 1985).

If we focus again on the role of administration in adaptation, we can see that administrators are key players in mimetic as well as normative isomorphic processes. Given the complex and competitive environment for universities, business-like strategies for managing universities become more common. Administrators are responsible for developing and implementing these strategies. Through their professional networks and associations the principles of "successful" universities are exchanged and strategies of imitation follow. This shows that through mimetic and normative isomorphism in today's higher education, the importance of administration perpetuates.

Strategic Choice

Strategic choice models of adaptation recognize the importance of environmental demands and the need to find a balance or fit between the environment and the organizational structure and processes (as in contingency theory). Here the major focus lies on the selection of strategies for managers that can modify the environment and determine the success or failure of adaptation.

One of the first proponents of this approach, John Child (1972), based his work on the definition of organizations as a dominant coalition of interest groups (Cyert and March, 1992; Thompson, 1967) and on the important role of management. He argues that strategic choice made by decision makers in the dominant coalition is essential for understanding how organizations adapt to their environments. The dominant coalition can adapt proactively rather than merely to accommodate to uncontrollable changes. For example, organizations can choose which environment or market to operate in, manipulate and control their environment, choose technologies that grant them subsequent control, employ control systems to deal with large size, and perceive and reevaluate their environments in ways that enable them to adapt creatively to contingencies (Child, 1972).

According to strategic choice approaches, adaptation is an active management responsibility. This has led to extensive applications in higher education starting in the 1970s (Hearn, 1988; Peterson, 1981; Schmidtlein, 1990). Hence, adaptation is defined as strategic planning (Chaffee, 1985) whereby organizational structure follows a strategy (Hardy et al., 1983) and the environment has a technical/task character (Kotler and Murphy, 1981). The role of administration lies in managing and implementing strategies and plans (Cameron, 1983; Chaffee, 1983; Sporn, 1996).

Universities have been subject to strategy formation and planning for more than two decades. A major goal has been to apply business approaches to higher education and advertise the development of skills of strategic management that help universities to become more effective and efficient. The book by George Keller, *Academic Strategy*, is an excellent example of this approach (Keller, 1983). Later authors started to work on organizational characteristics of universities and how these influence strategic planning (Chaffee, 1985; Chaffee, 1989; Dill, 1993a; Dill, 1994; Hearn, Clugston, and Heydinger, 1993; Keller, 1995; Peterson, 1997).

Another example of strategic choice approaches applied to higher education is Cameron's study of different forms of strategies of adaptation (i.e., domain defense, domain offense, domain creation) under conditions of decline (Cameron, 1983). Given the dynamic environment of higher education, the results may still be valid. "Although

administrators may be required to be conservative and efficiency oriented, alternative strategies emphasizing effectiveness and innovation must also be considered" (Cameron, 1983, p. 377).

Recent developments in the 1990s concentrate on comprehensive "contextual" planning models which link policy and institutional environments with planning and process elements inside the institution to result in institutional transformation (Dill, 1997b; Keller, 1997; Peterson, 1997; Van Vught, 1997). During this process the industry, the institutional role, and its mission, as well as external relationships, are redefined. Academic and administrative structure and processes, and institutional culture are part of the assessment (Peterson, 1997). We can see that with these challenges mainly administration will be in the position to create adaptive institutions.

Resource Dependence

As in strategic choice approaches, resource dependence theory assumes an active role of individual organizations in their struggle for survival. Again this perspective is characterized by an open system framework, i.e., we cannot understand organizational structure or behavior without understanding the context within which it operates (Aldrich, 1979; Pfeffer and Salancik, 1978; Scott, 1992b). For their survival, organizations must engage in an exchange with the environment. The need to acquire resources creates dependencies between organizations and external units and the scarcity of resources determines the degree of dependency. These economic dependencies can lead to political problems followed by political solutions (Scott, 1992b).

Resource dependence defines adaptation as strategies to reach compliance with external constraints. Successful organizations are called effective (Pfeffer and Salancik, 1978). Pfeffer and Salancik suggest two adaptive responses to compensate for dependence. On the one hand, organizations can adapt and change to fit environmental requirements. On the other hand, organizations can attempt to alter the environment so that it fits the organization's capabilities. The main contribution of resource dependence theory is the detailed analysis of adaptation strategies. These include merging with other organizations, diversifying, coopting important others through interlocking directorates, or engaging in political activities to influence matters such as regulations (Pfeffer and Salancik, 1978).

Accordingly, organizations are viewed as active. Organizational participants— especially managers—scan the relevant environment, searching for threats and opportunities with the goal to find the most favorable and profitable solution. The selection of customers and the terms of exchange are partly determined by the organization. Effec-

tive managers acquire sufficient resources without creating too much dependence (Scott, 1992b). Pfeffer and Salancik promote a form of management that includes symbolic, responsive, and discretionary features (Aldrich, 1979; Pfeffer and Salancik, 1978). In general, resource dependency theory interprets organizations as "capable of changing, as well as responding to, the environment" (Pfeffer and Salancik, 1978, p. 83).

The environment plays a major role in resource dependence because of its effect on the organization. As with institutional isomorphism, it is defined as the major reason for dependence and includes a technical or task environment (e.g., resources, markets) and an environment of interest groups and political actors (e.g., policies, values).

External funds are becoming the most critical resource for universities. An important indicator is that most adaptation is based on a shift in the financial structure of universities. Based on resource dependence theory, authors have shown (Gumport and Pusser, 1995; Hackman, 1985; Leslie, 1995; Pfeffer and Salancik, 1978; Rhoades, 1995; Slaughter, 1995; Tolbert, 1985) that "structure follows resources" at universities; i.e., new sources of income make new structures to manage these dependencies necessary. As we are proposing, the current environment for higher education and the restructuring initiatives based on budget cuts in many Western countries have led to a shift in authority structure at the institutional level. Administrators become more important because they are mainly responsible for the development and implementation of strategies that help to reduce dependency relationships with the environment.

Network Organization

One of the more recent theories applied to organizations is the network approach (Gerstein, 1992; Nadler, Gerstein, and Shaw, 1992; Nohria, 1992, Nohria and Eccles, 1992; Powell, 1990; Scott, 1992a). This approach helps to understand power and influence in organizations, new organizing efforts, strategic alliances, and new competitive forces (Nohria, 1992). It mainly focuses on internal and external boundary spanning relationships that characterize organizational functioning. Organizations are defined as social networks and their environment consists of other organizations and relevant groupings. Actions, attitudes, and behaviors have to be analyzed as contingent upon the position in the network of relationships (Nohria, 1992).

Adaptation is influenced and shaped by linkages established inside and among institutions. Network organizations are committed to their network partners through trust and information sharing. Management is constrained to adapt quickly to purely economical pressures. But with increasing environmental complexity networks can be advantageous for adaptation (Dill, 1997a). The role of management is shaped by the position in

the network and includes the establishment and maintenance of linkages or the production and distribution of information. We can differentiate between networks among organizations and networks within organizations.

Networks among organizations provide a structure of lateral exchange with reciprocal lines of communication. Organizations conduct resource allocation through networks of individuals engaged in mutually supportive actions. Because one organization is dependent on the resource of another, advantages can be gained by pooling resources. These relationships need time to be established and sustained. Networks are good for circumstances where there is a need for efficient reliable information and they permit the exchange of "thick" descriptions (Powell, 1990). In conditions of uncertainty, network structures that encourage reciprocity, trust, and long-term commitments offer the best potential for adaptability and innovation.

Internally, network organizations differ in architecture from hierarchically designed structures (Gerstein, 1992; Nohria and Ghoshal, 1994). Resources are not concentrated in the center nor disbursed to basic units. Assets, knowledge, and competence are distributed throughout the institution, residing in multiple locations. Not all operating units interact with a comparable environment nor possess the same relative resources; they may play different roles within the organization. In developing new services or strategies, some units lead while others play a supportive role. Integration is facilitated through shared values, common standards, extensive horizontal communication, and socialization. Some structures, such as project groups and teams are only temporary. Network organizations depend on strong but flexible planning and budgeting systems, and common incentives (Dill and Sporn, 1995b).

Academic institutions can experiment with network organizational structures to solve the problem of dynamically changing environments (Dill, 1997a; Dill and Sporn, 1995b). Traditionally, the university's capacity to innovate and adapt was built upon the formal network structure of the disciplines and professions, as well as the informal networks of academic work. Complex environmental demands upon the university at the end of the century require structural innovation at the overall university level. Here the traditional forms of academic networks need to be integrated and used as a comparative advantage for adaptation. To achieve this goal administration has to coordinate highly differentiated academic institutions, information technology, organizational structure, and management through, e.g., mission statements.

 Based on this line of reasoning, we would expect network forms of academic institutions to proliferate. As cases have shown, the major motivation can be seen in the increased need of know-how, and the demand for speed and trust. Powell (1990) found the following comparative advantages of networks in his case studies:

- Cooperation can be sustained over the long run as an effective arrangement.

- Networks create incentives for learning and the dissemination of information, thus allowing ideas to be translated into action quickly.

- The open-ended quality of networks is useful when resources are variable and the environment uncertain.

- Networks offer a highly feasible means of utilizing and enhancing tacit knowledge and technological innovation.

We can use the network approach to analyze how universities can make more use of their qualities as professional or collegial networks. Additionally, the approach explains how management plays a critical role in mediating lateral and horizontal communication patterns. Since overall university integration and management instruments are becoming more important, administrators rise to the new key players in the network. Through their internal and external linkages with essential constituencies, the power of their position increases.

THE EXPANDING ROLE OF ADMINISTRATION

Based on this review of relevant theoretical models of adaptation, we turn now to the discussion of the expanded role of administration. At the close of this century, there is an increased awareness and urgency about managing the environmental demands for higher education. At the same time, a prominent part of this discourse is a demand for the management of higher education to become leaner, more efficient, and more accountable. This creates an apparent paradox: essentially a demand to do more with less. Our interpretation is that this paradox is reconciled by changing the role of administration, by expanding the domain of administrative authority.

As prescriptions for management reform abound, both implicitly and explicitly in the relevant organizational approaches reviewed above, we think the expanded role for administration may be understood as a consequence of three distinct yet interdependent dynamics. They are as follows: (1) resource dependence that is primarily motivated by organizational survival, (2) institutional isomorphism that is motivated by legitimacy concerns, and (3) professional authority that is motivated by a struggle for control of the institutional enterprise. These three dynamics form imperatives to manage resources, sustain legitimacy, and ensure their own professional authority.

We identify these three converging dynamics as a conceptual scaffolding that generates propositions which may be examined in future research. It is interesting to note that data on change and expansion of higher education administration are scarce, even for something as basic as documenting the growth of administration in size and role across national settings. It is our hope that this thesis will break new ground for prompting empirical studies of how contemporary demands for management reform may have far reaching consequences for the changing organization of academic work.

Managing Resource Relationships

Building on our review of resource dependence theory in higher education, the administration may be seen as an active agent positioning the university in a struggle for survival. Focusing on an uncertain and turbulent environmental context, on which the organization is necessarily dependent for resources, the administration could spend all of its resources in the service of scanning, forecasting, and repositioning itself within a changing environment. The primary motivation is for the organization to survive.

From this perspective, three challenges are most prominent: staying attuned to changes in resource dependencies; meeting expectations for compliance with environmental demands; and cultivating alternative resources to reduce existing dependencies. The imperative to manage these challenges provides a compelling rationale for expanded administrative roles. For survival, organizations and the agents who act on their behalf must attend to all three dimensions.

First, administrators in universities are prepared to elaborate their structures to stay attuned to changes in their resources. As primary examples of this focus of attention, public university officials give ongoing attention to forecasting enrollment changes, shifts in state appropriations, and how such changes are handled by their peer institutions that are competitors. It is essential to note that administrators must stay attuned to multiple environments, with primary attention paid to those resources on which the organization has had the greatest dependence.

Second, a key ongoing function of the administration is to ensure compliance with demands. There are various mechanisms in place for ensuring and then demonstrating that an academic organization is in compliance, some of which are expensive for the organization. Health and safety regulations abound, for example, as both public and private universities often attest. As new layers of expectations for reporting are relevant for universities, satisfactory compliance with these requirements is often tied to state and national funding (e.g., national funds for student financial aid, state general fund appropriations for institutions, etc.). And increasingly, additional layers of expectations

have been identified for public higher education and tied to funding that is essential to organizational survival. These initiatives range from demonstrating faculty workload to assessment of student learning outcomes.

Third, and extremely visible in the contemporary era, is the cultivation of new resources to reduce existing dependencies. For public colleges and universities, this takes the primary form of devising strategies that will generate revenue for the organization—whether it be seeking out new student markets, new sources for research funding, or cultivating new sources of private gifts. (The latter used to be called "development" activities, and is now commonly known as "institutional advancement.") The cultivation of a plurality of resources to reduce existing dependencies has long been seen a prudent cost for organizations, but has gained greater currency for public higher education in the contemporary era where primary dependence on funding from the state seems imprudent given fluctuations.

Across these dimensions, the common thread is that administrators and their staff of subordinates are responsible for maintaining the organization's exchange relationships and the ongoing transactions with its environments. Whether the administration functions as a bridge or a buffer, the main role is to manage these dependencies for the organization's very survival. From this perspective, in the best of all possible worlds, this role for administration would be welcomed by faculty, who would see their own functions primarily at the core of the organization—to teach and do research. In this way, the administration buffers the faculty by themselves performing key adaptive responses to threats and opportunities.

However, the management of resource dependencies in practice is more complex, as resource strategies ripple through the organization rather than being contained at one level or in one part of the organization. For example, the cultivation of revenue-generating strategies may involve programmatic changes that faculty may not support due to commitments that lie in educational criteria or values that run contrary to cost-effectiveness principles. Potential strain may also emerge within the organization, if faculty suggest the administration has cast environmental factors in an overly deterministic and disproportionately influential role. In the United States in the contemporary era, we see examples of this in Virginia where a legislative restructuring mandate tied to state funding was initially met with faculty resistance; it is important to note that adequate campus responses to the mandated change ultimately did occur in the requisite time frame (Gumport and Pusser, 1999, this volume). These examples point to a key premise in the resource dependence perspective—that administrators can speak for and act for the organization as a whole in repositioning it within resource dependencies. If administrators have the responsibility to manage according to this premise, the path to organi-

zational survival becomes more assured if administrators have ongoing access to information about the changing resources and have the ability to alter the strategies of the organization to respond to those changes.

Sustaining Institutional Legitimacy

Adaptation to environmental demands becomes even more complex when we focus on the organization's principle nonfinancial resource—its legitimacy. The key concern raised from the above section on resource dependence is twofold: Can the organization respond to whatever is demanded in order to survive? And how to reconcile conflicting demands. Implicit in this approach is a significant question: not only whether or not the organization *can* respond, but also whether it even *should* respond to demands.

Drawing on institutional isomorphism theory, we see university administrators as key players in mimetic as well as normative isomorphic processes. In the current climate, university administrators develop and implement business-like strategies in order to show that they are responsive to demands for management reform. Even a symbolic act can be sufficient to signal the organization's responsiveness and thus to accrue legitimacy. From this perspective, the primary motivation is to act for the organization to ensure that it will be seen as legitimate. Failure to do so may leave the organization vulnerable to judgments that it is not legitimate thus threatening its niche and its very survival.

At the core of this dynamic is a concern with organizational purpose. For universities this translates into mission, a broad notion of organizational goals that has proven to be exceedingly malleable over time. As Gumport and Pusser (1995) have suggested, in times of expansion, administrators have used mission as a stand-in for policy; while in times of contraction mission is less effective for helping administrators determine among the array of possible priorities (Dill, 1997b).

In the current climate, it is critical to ask not only whether the organization *can* adapt to whatever is demanded, but whether it *should* respond to what is demanded—for it is not clear if an entirely different kind of organization may result.

For example, consider a situation in which both a local community college and a liberal arts college are facing demands to offer more vocationally oriented programs, including electronic access through expanded distance learning programs. It is prudent for the community college to do so, given that those community colleges nationwide which are perceived to be cutting edge are doing precisely that and advertising through relevant media that can enthusiastically accommodate these demands. For the selective liberal arts college, however, the path is not clear. While some liberal arts colleges may come to

add some vocationally oriented programs, the bulk of the academic program cannot shift too far afield from its liberal education mission. In fact, the institutional unwillingness to offer such programs may earn it greater legitimacy within a smaller elite niche for holding steadfast to its commitment to distinctive values in its mission. In this situation, it would be prudent to see what its peer institutions are doing, and even better if it can determine what the most successful liberal arts colleges are doing to respond to such demands[7].

Giving the primary attention to garnering and sustaining organizational legitimacy, this perspective sheds light on the possibility that changing environments may be constituted of conflicting demands. It is not that demands are inherently in conflict, but that the pursuit of them at the same time would call for strategies that are contradictory, or at cross-purposes. A classic illustration of contradictory demands is the demand on public universities to simultaneously reduce or contain costs, improve teaching and learning, become technologically current, and expand access. The demand to reduce or cut costs can be achieved in several ways, for example streamlining, budget discipline, elimination of programs that are not cost-effective, not investing in risky or expensive ventures, and trying to achieve economies of scale. Improvement of teaching and learning may be achieved by reducing the class size or providing more faculty attention to individual students, obtaining better state of the art equipment, and enhancing the learning environments to overcome various barriers. Similarly, upgrading technology may entail major overhauls of the institutional infrastructure and access to information systems in addition to providing students and faculty with state of the art equipment and training to use it. Finally, expanding access may involve admitting students who are under-prepared academically and thus would require expansion of extensive remedial programs across subject matters. Accomplishing any one of these four would be an outstanding feat, and any two in a resource-constrained environment unlikely. The planning dilemma for the organization is to determine which demands are the highest priority.

A compelling rationale for the management of these challenges positions the administrators in the central mediating role of determining the potential costs and benefits of any course of action (or nonaction) for the organization's legitimacy. In the absence of faculty involvement, administrators who occupy the most visible leadership roles in the university function as interpreters for the rest of the organization. In this capacity, they address such key concerns as: Who are the constituencies from whom the organization is seeking legitimacy? What are successful peer institutions doing to manage contradictory demands? Can some demands be responded to symbolically and superficially or minimally, as in a "satisficing" mode? What are the consequences for how the organization will be viewed vis-à-vis mission? Attending to these concerns, administrators can both symbolically manage the image of the organization to those in the environment and internally to

organizational members as well as to the governing board. While it is unlikely that administrators can create a dissonance-free organization, their efforts on these dimensions can have powerful results for securing a sense of organizational identity as the organization navigates through times of environ-mental uncertainty and turbulence.

Expanding Professional Authority

While the management of resource relationships and sustaining legitimacy illuminates some of the dynamics underlying the major role of administration in the organization's response to changing environments, the two perspectives have a key premise that warrants careful scrutiny—that administrators are appropriately and effectively positioned to act for the organization. This premise is of course questionable: whether administrators should not only be acting as spokespersons for the institution, but whether they should—and even can—reposition the organization amidst changing environments. While the management of resource dependence and legitimacy provides a compelling post-hoc rationale for expanded administrative activities, an additional governance[8] dynamic is undergoing transformation within the organization. Administrators position themselves in an expanded role as managers having authority over a broader domain of organizational decision making as well as in representing the organization's purposes and priorities to the environment. Drawing on literature from the sociology of professions and selected higher education scholars, we interpret this dynamic as a shift in the authority structure within academic organizations, that entails a narrowing of the domain of faculty's professional authority. Even though prescriptions for management reform entail such an expanded authority of the administrative domain, we suggest that this transformation is problematic in terms of appropriateness and effectiveness.

Within academic organizations, the basic structure of authority has been characterized as a combination of administrative and professional authority (Etzioni, 1964). Administrative authority is based in the responsibilities of the position that resides in a bureaucratic hierarchy, while professional authority is based in expert knowledge of individuals with accountability assured through self-regulation (Larson, 1977; Freidson, 1970, 1986, 1994). According to Etzioni (1964), in academic organizations, administrators are to offer advice about economic and organizational implications of various activities undertaken by professionals, but the professionals themselves and their decision-making bodies have the responsibility for the academic domain, on matters related to the core activities of teaching and research. Stated somewhat more as an admonishment to administrators' awareness of limits on their authority, Duryea (1962, p. 43) explained the ideal as follows: "In exercising authority, the administrator should stress collaborative effort, especially in his relations with professional personnel. He serves as a leader among scholars rather than an executive over employees." Thus, the ensuing locus of

authority in academic organizations has been characterized as diffuse, with decisions made at several levels with little central steering, oversight and sanctions (Hearn, 1988). A domain of shared authority has long been acknowledged, stressing the mutual inter-dependence of faculty and administration and the ideal of working on a joint endeavor in matters of that entail an intermingling of academic and fiscal concerns (Mortimer and McConnell, 1978). However, as Abbott (1988) notes, disputes over claims of jurisdiction are significant aspects of the social relations of professionals, both for the dynamics internal to the organization and for relations with external audiences.

Work on governance and strategy formation in higher education institutions (Cameron, 1984; Chaffee, 1985; Chaffee, 1989; Hardy et al, 1983; Peterson, 1981) shows how decisions at colleges and universities can be distinguished between administrative fiat, professional judgment, and collective choice (Hardy et al, 1983). While administrators and professionals only dominate certain areas (e.g. teaching and research; support services) of decision making, decisions based on collective choice often pertain to issues of the overall institution. These situations of collective choice are characterized by interactive processes which have the potential of creating consistencies through formal procedure and implicit habit, leading to (more or less) planned strategies based on consensus (Hardy et al, 1983). Ideally, decision making through collective choice would even compensate for shifting authority structures within academic institutions.

Over time, as academic organizations have become larger, with more complex and elaborated structures, there has been a growth of administrative expenditures and positions (Blau, 1994; Clark, 1993; Gumport and Pusser, 1995). With the increased visibility of administrators on campuses, they have developed their own specialized knowledge for running the organization. At the same time, administrators at several levels of the organization have also established professional identities through formal associations (e.g., AAU, SCUP, AIR, NASPA, NACAC—some of which have their own statements of "professional standards" for planners, institutional researchers, student personnel administrators, and college admissions counselors) and informal groups (e.g. ad hoc meetings of provosts from peer institutions). Observers of contemporary higher education have also acknowledged that there are different authority patterns by institutional type, with elite institutions retaining a larger domain of faculty authority than community colleges (Clark, 1983; Ruscio, 1987; Dill and Helm, 1988).

Based on Freidson (1986), the emergence of the administrative class could be seen as a new professional category. From this perspective, administrators and faculty compete for control over the enterprise and for resources within it. Evidence that substantiates the plausibility of this hypothesis can be found in Rhoades (1998), which identifies a new class of managerial professionals, middle management administrators who have expanded control over faculty.

In practice, the combination of shared authority principles has not been without strain, especially given the politics of scarce resources (Hearn, 1988; Gumport, 1993). Even since the 1960s, when division of academic labor in universities gave faculty increased jurisdiction over academic matters and administrators the responsibility to coordinate the means of the major activities carried out by the professionals, over the past several decades there has been a move away from democratic faculty participation to strategic policymaking (Keller, 1983; Dill and Helm, 1988). Managerial prescriptions have positioned administrators as experts wielding tools of forecasting, cost-benefit analyses, and modeling techniques facilitated by access to technology that enables careful scrutiny of centralized data. The expansion of administrative authority has been facilitated by declaration of a crisis, in which longer range academic governance procedures could be bypassed in favor of swift centralized decision making (Hearn, 1988; Gumport, 1993).

Observers of academic organizations have also noted the emergence of a new type of decision-making body constituted by ad hoc committees (Keller, 1983; Schuster et al, 1994). Harkening back to the ideal of joint endeavor, such a big decision committee can engage in deliberations about long range planning. Constituted by representatives from administration, faculty, and students, this type of committee has been proposed as a structural and process solution that is capable of reconciling inherent tensions within planning and governance (Schuster et al, 1994).

However, in spite of the emergence of such ad hoc committees, there is also an emerging concern about an underlying shift in the organization of academic work. This critical concern falls under the general category of "the politics of professional work" (Rhoades, 1998). It is compatible with related critical analyses of "managerialism" (Enteman, 1993) and "the emergence of technocracy," a term that is intended to replace the simple bureaucracy-professionalism dualism that has been used to characterize academic organizations (Heydebrand, 1990). Building on the historical argument that universities have become more entrepreneurial through increased academic capitalism, scholars have proposed that so too universities have become more managerial in their governance and the division of labor (Rhoades and Slaughter, 1997). In particular, Rhoades (1998) has proposed that faculty have become "managed professionals," while middle-level administrators have become "managerial professionals."

A key rationale for this shift in authority has been the need for managerial flexibility and a concomitant need for discretion to make centralized resource allocation decisions. The consequences for the organization are all-important, as such decisions determine where and how the organization will invest its resources. The reach of such expanded administrative authority ranges from selecting among organizational priorities to deter-

mining the academic workforce and its characteristics (i.e., full-time vs. part-time, courseload, etc.). Central to this argument is the proposition that such authority shifts and ensuing structural consequences should not necessarily be predetermined by environmental conditions. As Rhoades and Slaughter (1997, p. 33) argue: "The structural patterns we describe are not just inexorable external developments to which colleges and universities are subject and doomed.…The academy itself daily enacts and expresses social relations of capitalism and heightened managerial control grounded in a neo-conservative discourse."

Implicit in these accounts is a contest over control over the enterprise and calling into question the presumption that managerialism is a natural academic adaptation. The main issues with regard to administrators acting for the organization are appropriateness and effectiveness. Who should appropriately determine organizational priorities and purposes? Administrators, faculty, or governing boards chartered with the overall responsibility for the institution? Should participative forms of decision making be preserved in spite of their inefficiency? Moreover, in an era where there is already an increased proportion of part-time faculty (Rhoades, 1996 and forthcoming), there is critical concern that traditional forms of faculty governance are de facto rendered ineffective. Are administrators effective at making decisions as to which academic programs and positions should be privileged in the name of selective excellence? As far as management of academic work, there are similar questions as to whether administrators should and can effectively manage faculty. While there has been considerable discussion of the potential for administrative incentives and sanctions to increase faculty productivity (Massy, 1996; Massy and Zemsky, 1994), there has been little discussion of whether such incentives and sanctions are appropriate. Recently, there has been emerging concern over the effect on faculty morale of performance-based initiatives (Gumport, 1997) as well as no-tenure contracts (Bess, 1998), that such institutional initiatives may be detrimental to the academic workplace.

Nonetheless, the climate of accountability is an ongoing pressure wherein administrators are asked to speak for their institutions and to respond to their governing boards and external constituencies. In this context, we find it revealing that the accountability discourse at the state level scapegoats faculty and asks for scrutiny of faculty workload and productivity more often than it does for administrators themselves. However, before concluding that administrators have become well-established as their own self-regulating professional interest group, it is essential to note a critical undercurrent that ranges from allegations of excessive expenditures to administrative incompetence (Gilley, 1997). Perhaps the lesson to be taken from the current climate is that no professional group—whether aspiring or long-established—is immune to criticism.

When examining the domain of professional authority, these concepts warrant further attention as well as empirical study. There are few empirical studies that have begun to document how contemporary demands for management reform may have far reaching consequences for the organization of academic work (the primary exception being Rhoades, 1998). Work that examines shifts in the structure of authority for academic organizations will be important for all stakeholders in the enterprise. For in all likelihood, the social division of labor in academic organizations will continue to be differentiated, elaborated, and contested. A number of unexplored themes need attention, including examining changes in the labor process (skilling and deskilling of academic workers), the ownership of academic work (the products of teaching as well as research), the role of gender, race and class, as well as concomitant changes in the distribution of power and autonomy.

Obviously, the contemporary academic organization is more complex than the characterization of a blend of professional and bureaucratic authority. It is essential to note that there is a long history of exhortations of the evils of bureaucracy in academic organizations and the potential for administrative mentalities to be detrimental to scholarship (Blau, 1994). In the context of the research for this chapter, we think it essential to note that administrators play a vital role in mediating a wide range of changing environmental demands. These are difficult positions that many academics would find unattractive, even distasteful. At the same time, however, we think the *de facto* expansion of the jurisdiction of administrative authority may have devastating educational consequences. While we are not arguing for decentralization of all decisions related to academic affairs, we are advocates of the valuable substantive role faculty must play in determining how to reposition the present and future course of academic organizations. Our sense is that the competing interests in these decisions need to be made more explicit, so that they can be carefully weighed, negotiated, and then implemented by the organization. As it stands, without acknowledging that there are competing interests alongside a struggle for control of the enterprise, attempts at wholesale management reform may further polarize the members of the organization and result in professional discord that is detrimental to the university's viability in the next century.

Conclusion

In this chapter, we have suggested that prescriptions for institutional adaptation to changing environments, either implicitly or explicitly, call for an expanded role of administration. Whether administrators are viewed as managers of the organization's resource dependencies, interpreters and promoters of the organization's actions as legitimate, the domain for administrative authority has expanded. Of course, this is not

a *fait accompli*. And prescriptions for expanded administrative authority are not to be equated with actual expansion of administrative control. Furthermore, expanded administrative control of the institutional enterprise does not necessarily entail appropriate or effective control of the academic enterprise. Thus, we advocate proceeding with caution and identifying the conceptual possibilities and propositions that may or may not be borne out in data.

Based on our analysis, we would argue that successful processes and structures for adaptation can only be implemented through joint activities of administration and faculty. As we see it now, danger emerges that the expansion of administration leads to counterproductive forces, i.e., splitting the academy and impeding adaptation. Through more involvement, decentralization, and networks which give back power and respect to professionals, the desired outcomes of organizational effectiveness and efficiency of the university would follow. We suggest further research on these structures and processes, as no detailed data exist and the results would aid university practice. In our chapter we concentrated on the dynamics of administrative expansion as adaptation, but further conceptual and empirical work on this topic is needed.

Much empirical work is yet to be done. We would like to see studies that document the growth of administration and administrative expenditures across types of institutions and across national settings. We would also like to see research that examines the emergence and the changing role of administration, including differences in types of administrative positions vertically in the hierarchy (provost, finance offices, deans) and horizontally with respect to different functions (student affairs, faculty affairs, government affairs). It is our hope that this thesis will break new ground for prompting empirical studies of how contemporary demands for management reform have far reaching consequences for the organization of academic work and ultimately for the organization itself.

Endnotes

1. Examples of corporate partnerships and strategic alliances on the Internet:
    Corporate relations at the University of Michigan: http://www.corporaterelations.umich.edu/
    Worldwide locations of Webster University: http://www.webster.edu/worldwide_locations.html
    International MBA at Vienna University of Economics and Business Administration:
        http://www.wu-wien.ac.at/inst/imba/
    International Management Institute of Universita Bocconi, Italy, in St. Petersburg, Russia:
        http://www.sda.uni-bocconi.it/pi/imisp.html

2. Examples of distance education and virtual universities on the Internet:
    The Open University, UK: http://www.open.ac.uk/
    The Virtual University, European Union: http://136.201.8.7/vuniv/ERAShome.htm
    The Western Governor's University: http://www.westgov.org/smart/vu/vu.html

3. Examples of an open information policy on the Internet:
    Reengineering at MIT: http://web.mit.edu/reeng/www/
    Committee structure and decisions at Vienna University of Economics and Business Administration:
    http://www.wu-wien.ac.at:/englhome.html

4. Quality Support Centre at the Open University, UK: http://www.open.ac.uk/OU/Admin.html

5. Ministry of Science and Research, Austria: http://www.bmwf.gv.at/3unisys/12evalu.htm
    Ministry of Science and Research, Germany: http://www.bmbf.de/inhalt.htm

6. The Baldrige Award: http://www.quality.nist.gov/docs/97_crit/award.htm

7. Research by Zammuto (1984) revealed that the proportion of professional/vocational majors graduat-
    ing from nonselective liberal arts colleges had skyrocketed. As a result the Carnegie Classification has
    changed their category of "Liberal Arts Colleges" to "Baccalaureate Colleges." Also, Cameron's (1983)
    framework of alternative strategies of adaptation, i.e., domain defense, domain offense, domain
    creation, can help to explain different strategic choices.

8. As defined by Balderston (1995, p. 55), governance "refers to the distribution of authority and functions
    among the units within a larger entity, the modes of communication and control among them, and the
    conduct of relationships between the entity and the surrounding environment."

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