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CHAPTER I

ENTREPRENEURIAL PATHWAYS OF UNIVERSITY TRANSFORMATION

Explanation of how five universities in five different European settings went about changing their character to become more adaptive institutions requires that we acknowledge the individuality of institutional development. Accordingly, the five central chapters organize descriptive materials as case studies in which an understanding of each institution's setting and historic character is seen as necessary for understanding whatever transformation has taken place or is in process. Each account includes what is significantly unique and peculiar and the role-played by particular individuals. The integrated case reports assert the special character of each of the universities that compose the empirical base of the study. They portray singular local flavor.

But, as stressed in the introduction, the separate stories are not the commanding interest. Common elements found in the case studies allow us to push beyond unique histories. Together they strongly suggest how universities that have willed- themselves to change differ systematically from those that remain entirely encapsulated in a traditional mode. This chapter briefly sets forth these major features.

The Concept of Entrepreneurial University

"Entrepreneurial" is taken in this study as a characteristic of social systems; that is, of entire universities and their internal departments, research centers, faculties, and schools. The concept carries the overtones of "enterprise" - a willful effort in institution building that requires much special activity and energy. Taking risks when initiating new practices whose outcome is in doubt is, a major factor. An entrepreneurial university, on its own, actively seeks to innovate in how it goes about its business. It seeks to work out a substantial shift in organizational character so as to arrive at a more promising posture for the future. Entrepreneurial universities seek to become "stand-up" universities that are significant actors on their own terms. Institutional entrepreneurship can be seen as both process and outcome.

Throughout much of the two years and more of the research, the two terms "entrepreneurial" and "innovative" were used as loosely synonymous. The concept of "innovative university" has much appeal. Gentler in overtone, it also casts a wider net. It avoids the negative connotations that many academics attach to individual entrepreneurs as aggressive business-oriented people seeking to maximize profit. When the institutions in this study, together with a few other universities, established a new all-Europe voluntary association of highly limited membership in 1996, they had good reason to name it "The European Consortium of Innovative Universities". But I have chosen "entrepreneurial" over "innovative" as the organizing conception for this book because it points more powerfully to deliberate local effort, to actions that lead to change in organizational posture. Under its banner I can more appropriately group some' processes by which modern universities measurably change themselves.

University transformation, for the most part, is not accidental or incidental. It does not happen because several innovative programs are established here and there within a university: the new approaches can be readily sealed off as minor enclaves. It does not happen because a solitary entrepreneur captures power and runs everything from the top-down: such cases are exceptions to the rule. Universities are too bottom- heavy, too resistant from the bottom-up, for tycoons to dominate very long. Rather, transformation occurs when a number of individuals come together in university basic units and across a university over a number of years to change, by means of organized initiative, how the institution is structured and oriented. *Collective* entrepreneurial action at these levels is at the heart of the transformation phenomenon. Acting from on high, national and state systems of higher education are blunt instruments of significant change; acting from below, individual faculty members or administrators are limited in what they can do. But groups, large and small - central and departmental - of faculty and administrators (and sometimes students!) can fashion new structures, processes, and orientations whereby a university becomes biased toward adaptive change. Academic groups can also help insure that *academic values* will guide transformation, a point that will appear repeatedly in the institutional narratives. Effective collective entrepreneurship does not carry a university beyond the boundaries of academic legitimacy, setting off a down-market cycle of reputation, resources, and development. Rather, it can provide resources and infrastructures that build capability beyond what a university would otherwise have, thereby allowing it to subsidize and enact an up-market climb in quality and reputation.

A formal grant of autonomy from patron to institution does not guarantee active self-determination; autonomous universities may be passive institutions. They may live for the past rather than look to the future. They may be satisfied with what they have become and do not wish for more. By informal agreement they may have decided to move in lockstep with counterpart institutions in their region or country, together to sink or swim. They are then biased toward standing still. Autonomous universities become active institutions when they decide they must explore and experiment with changes in how they are composed and how they react to internal and external demands. They sense that in fast-moving times the prudent course of action is to be out in front, shaping the impact of demands made upon them, steering instead of drifting. It is then that they need new organizational elements that together characterize the entrepreneurial university.

Pathways of Transformation

How do universities, by means of entrepreneurial action, go about transforming themselves? Five elements constitute an irreducible -minimum: a strengthened steering core; an expanded developmental periphery; a diversified funding base; a stimulated academic heartland; and an integrated entrepreneurial culture.

The strengthened steering core

Traditional European universities. have long exhibited a notoriously weak capacity to steer themselves. As their complexity has increased and the pace of change accelerated, that weakness has become more debilitating, deepening the need for a greater managerial capacity. Unambitious universities can ignore this need and drift with the tides of traditional patronage. Universities that serve as flagships or elite institutions in their own national or state systems of higher education can ignore the lack of steering capacity longer than others and can continue to depend upon their outstanding reputation and political clout for guaranteed resources and competitive status. But ambitious universities, and universities concerned about their marginality, and even their survivability, cannot depend on old habits of weak steering. They need to become quicker, more flexible, and especially more focused in reactions to expanding and changing demands. They need a more organized way to refashion their programmatic capabilities. A strengthened' steering core becomes a necessity. As we shall see, that core can take quite different shapes. But it must embrace central managerial groups and academic departments. It must operationally reconcile new managerial values with traditional academic ones.

The expanded developmental periphery

Enterprising universities exhibit a growth of units that, more readily than traditional academic departments, reach across old university boundaries to link up with outside organizations and groups. In one form these units are professionalized outreach offices that work on knowledge transfer, industrial contact, intellectual property development, continuing education, fundraising, and even alumni affairs. In another larger, and more basic, form they are interdisciplinary project-oriented research centers that grow up alongside departments as a second major way to group academic work. Academic departments based on disciplinary fields of knowledge will go on being important: their disciplinary competence is essential, too valuable to throw away, and they have much power with which to protect their own domains. But the departments alone cannot do all the things that universities now need to do. Outward-reaching research centers express nondisciplinary definitions of problems. They bring into the university the project orientation of outsiders who are attempting to solve serious practical problems critical in economic and social development. They have a certain flexibility in that they are relatively easy to initiate and to disband. Constructed to cross old boundaries, the centers mediate between departments and the outside world.

If a university's trade with external groups is to continue to evolve, its infrastructure must keep pace. Anxious to find better tools for coping with societal demands, entrepreneurial universities take the risk of promoting an entire new periphery of nontraditional units. As we shall see, substantial organizational creativity is involved. ,

The diversified funding base

To fashion a new change-oriented character, a university generally requires greater financial resources: it particularly needs discretionary funds. Widening the financial base becomes essential, since virtually everywhere mainline institutional support from government, as a share of total budget, is on the wane. Enterprising universities recognize this trend and turn it to advantage. They step up their efforts to raise money from a second major source, research councils, by more vigorously competing for grants and contracts. They set out to construct a widening and deepening portfolio of third-stream income sources that stretch from industrial firms, local governments, and philanthropic -foundations, to royalty income from intellectual property, earned income from campus services, student fees, and alumni fundraising. Third- stream sources represent true financial diversification. They are especially valuable in providing discretionary money, beyond overhead charges and top-sliced sums extracted from research grants.

In the process of increasing income from the second and third streams, entrepreneurial universities learn faster than nonentrepreneurial counterparts that money from many sources enhances the opportunity to make significant moves without waiting for system wide enactments that come slowly, with standardizing rules attached. They accept and promote the maxim offered by two American observers as long ago as the early 1960s: “a workable twentieth century definition of institutional autonomy [is] the absence of dependence upon a single or narrow base of support” (Babbidge and Rosenzweig, 1962, p. 158).

The stimulated academic heartland

When an enterprising university evolves a stronger steering core, and develops an outreach structure, *and* diversifies its income streams, its heartland is still found in the traditional academic departments formed around disciplines, new and old, and some interdisciplinary fields of study. Spread across the operating base of the university as sites of research and particularly of teaching, the basic units, and their more encompassing multidepartment faculties, continue to be the places where most academic work is done. Whether they accept or oppose a significant transformation is critical. It is here in the many units of the heartland that promoted changes and innovative steps are most likely to fail. If the basic units oppose or ignore would-be innovations, the life of the institution proceeds largely as before. For change to take hold, one department and faculty after another needs itself to become an entrepreneurial unit, reaching more strongly to the outside with new programs and relationships and promoting third stream income. Their members need to participate in central steering groups. They need to accept that individuals as well as collegial groups will have stronger authority in a managerial line that stretches from central officials to heads of departments and research centers. The heartland is where traditional academic values are most firmly rooted. The required blending of those values with the newer managerial points of view must, for the most part, be worked out at that level. In the entrepreneurial university, the heartland accepts a modified belief system.

The integrated entrepreneurial culture

Enterprising universities, much as firms in the high tech industry, develop a work culture that embraces change. That new culture may start out as a relatively simple institutional idea about change that later becomes elaborated into a set of beliefs which, if diffused in the heartland, becomes a university-wide culture. Strong cultures are rooted in strong practices. As ideas and practices interact, the cultural or symbolic side of the university becomes particularly important in cultivating institutional identity and distinctive reputation.

In the transformation of universities, values or beliefs may lead, or follow the development of the other elements. We shall see them in cycles of interaction, themselves developing over time. Organizational values ought not be treated independently of the structures and procedures through which they are expressed. An *institutional* perspective is required. The first four of our five elements, are means by which transforming beliefs are made operative.

I wish to stress again that the conceptualization of these five common transforming elements developed in the course of research. Initial categories used during the first year of the study were broad and open-ended. In interviews I began with the personal background of the respondent and then moved on to five major topics: the overall character of the university; the nature of leadership, past and present; the relationship between the administration and the faculty; the bases of financial support; and the shape of research and advanced training - a category much on my mind from the focus of a prior project (Clark, 1995a). The exploratory categories were set out in a paper delivered at an international conference in the summer of 1994; it appeared later in an article on “leadership and innovation in universities” (Clark, 1995b). After the first visits to four of the institutions - Warwick, Twente, Strathclyde and Chalmers - I attempted “midstream” to develop more pointed and useful categories. They were reported in a second conference paper and follow-on article as a one-year progress report (Clark, 1996). I used the newly created common elements during the second round of field visits in 1996 both to clarify their conceptualization and empirical reach, and to determine if additional categories were needed. The five features offered a welcomed simplicity among the many that might have been discussed. Here presented in particularly simplified form, they become more elaborated when they are plunged into the complex realities of individual university development.

Without doubt, significant innovation in the character of a university means that some core tasks and some deep structures are altered to the point where the long-term course of the organization is changed. Such transforming work must be done locally, in the university itself. It must extend over years that often become decades. The sustained work calls for collective action, leading to new practices and beliefs, steps that are entrepreneurial in character, with much risk-taking and flexible adjustment along the way. When traditional habits are not enough, universities need to develop an *entrepreneurial response*. In the institutional case studies that follow, we will see that response, variously fashioned in detail, -composed of the features that are here identified as basic elements of transformation.

Summary of Chapter 2

WARWICK: TRANSFORMATION IN AN ENGLISH RESEARCH UNIVERSITY

- established in mid 1960's
- earned income policy, rather than fund raising, adopted
 - i. manufacturing group (Bhattacharyya)
 - ii. business school & MBA programs
 - iii. conference centers
 - iv. science park
 - v. arts complex (drama, music, dance,...)
- proper "decision-making" structures, blending lay members elected academic representatives and senior adm. officers
 - i. joint strategy committee
 - ii. allocations committee
- financial sources : 38% core (stream 1) , 15% research (stream 2) , 47% earned (stream 3)
- research fellowship programme (10 M pounds , 50 top scholars , 1/3 funded by dept.)
- "At Warwick, waiting for the government to come up with money was seen as an option taken only by those who did not face reality. Spiraling downward into the muck of self-pity and low morale that was diffusing through so many British universities by years of bitter university-government relations was a road to be avoided at all cost."

Summary of Chapter 3

TWENTE: CONSTRUCTION OF A DUTCH ENTREPRENEURIAL UNIVERSITY

- established in mid 1960's
- needed to escape the marginal, weak, threatening institutional position
- change initiated through the administrative core :
 - i. rhetorics of proactive institution serving the national need (industry, regional govern., community groups) and cooperating internationally
 - ii. budgetary system reformulated (lump sum, incentive to raise, full-cost accounting)
 - iii. Financial sources : 75% core, 4% research, 21% earned (incl.tuition)
- developmental periphery emphasized
 - i. Temporary Entrepreneurial Placement program
 - ii. Liaison Group : TT / CPD / Int. Coop.
 - iii. privatized business school (commercial MBA degree)
 - iv. CHEPS
- academic heartland responded by reviewing & diversifying teaching programs (first: BIT, communication, engin. mngmnt; later: telematics, medical techn., mngmnt of med. facilities) and taking part in "interuniversity research schools" activity
- entrepreneurial approach is defined as daring, risk taking (but also ,doing business+ making money)
- Twente's characteristic features : two-core , campus , responsible , w/o frontiers , focused , flexible
- Dutch universities now realize that they have to promote :differentiation / selectivity / competition

Summary of Chapter 4

STRATHCLYDE: ORGANIZATIONAL ASSERTION OF USEFUL LEARNING IN SCOTLAND

- prior history of 200 years of "useful learning"
- strengthened administrative core played the major role :
 - i. Univ. Mngmnt. Group (UMG) established;..."UMG played the crucial role in airing and then smoothing over the conflict between new managerial values and traditional academic ones...Elected deans play a central role:they come to UMG as representatives of their university sectors; they then find they must also consider the overall institutional interest. The UMG has been able to set a teamwork-oriented tone: there is no place for the partisan warrior, the representative pushing his or her own group interest at all cost. Deans can and do assert the individual interests of their faculties, but they must go beyond them if they are not to be personally embarrassed. Their ongoing intense interaction on the UMG, where they are members as major "budget-holders", presses them to assume responsibility for the entire university... In the UMG framework they must handle, issue by issue, the clash between managerial and academic values and the opposition between the interests of the center and the interests of the parts. "
 - ii. improvement of the physical plant
- three legged developmental periphery is developed:
 - i. Research and Consultancy Services office for EC funding opportunities, for IP issues, research marketing & start-up companies (R&D outreach office)
 - ii. research centers working as technology transfer highways

- iii. Teaching units serving nontraditional segments: MBA, teachers' training, bioengineering & artificial organ development
- financial sources : 46% core, 4% research, 50% earned(incl. tuition, IP being a specialty)
- the Univ. is committed to "closing the gap between industry and universities". "useful learning, strategic research and knowledge transfer" imply one another at Strathclyde and form the central idea.

Summary of Chapter 5

CHALMERS : ENTREPRENEURIAL AUTONOMY IN THE SWEDISH UNIVERSITY SYSTEM

- founded in 1829 as a private institute, became public after 108 yrs(as RC!);
- in 1994 moved out of state control to a "foundation university", continuing to receive annual state support for 15 more years
- top-down initiative toward a dynamic entrepreneurial posture; "program budgeting" to force greater responsibility and accountability
- highly personal leadership followed by a more collective one including 3 vice rectors, 3 admin. officers and 9 deans. "The deans at Chalmers have become central in the reconciliation of new managerial values with traditional academic ones, and in the linkage between overall institutional interests and the separate interests of major internal segments. Their involvement at the center helps to turn them into representatives of the entire institution."
- Chalmers Innovation Center(CIC)
- science park
- competence centers(ÜSAM)
- alumni, fundraising
- office of EU contacts
- student officers : paid / exempt from studies
- discretionary funding is of lesser impact; 55% core funding, 25% research, 20% earned

Summary of Chapter 6

JOENSUU : PILOTING DECENTRALIZED CONTROL IN FINNISH UNIVERSITIES

- established in late 1960's as the upgrading of a teachers college—w/o postgraduate education and with no resources for academic research
- soon it was recognized that research would underpin teaching and study
- the governments willingness to decentralize has been used to become a pilot institution in lump-sum budgeting
- further decentralizing internally by lump-sum allocation to departments and other basic units
- turning departments loose by giving them budgetary self-control is balanced by integrating elements embodied through university leadership and strategies/goals , which are shared by disciplines and departments
 - i. "dialogue" : rounds, once or twice a year, the rector and one or two immediate colleagues make to discuss departmental plans, achievements and problems – "... the university as a whole walked into the department and looked around..."
 - ii. "information systems" : administrative center keeping records of student admission, completion, faculty salary, faculty workload, support staff, library, research funding etc. to compare departments on sources of support, unit costs and "outputs".
 - iii. Maintenance of monies at the center as "strategic funds" , amounting to 7% of total budget, from which selective investments could be made
- flexible workload – negotiate on allocation of time between 4 major tasks of education / research / public services / other responsibilities
- financial sources : 66% core, 7% research, 27% earned
- science park (although there is no engin. School)
- the heartland of academic departments has increasingly exhibited entrepreneurial action, although leading outreaching fields such as engineering, business or medicine do not exist!

Excerpts from Chapter 7: THE PROBLEM OF UNIVERSITY TRANSFORMATION

Modern universities develop a disturbing imbalance with their environments. They face an overload of demands; they are equipped with an undersupply of response capabilities. In a demand-response equation of environment-university relationships they may be seen as falling so badly out of balance that if they remain in traditional form they move into a nearly permanent stage of disequilibrium. ...*demands on universities outrun their capacity to respond.*

- More students

- More qualification in professional career
- More expectations from patrons
- More knowledge than the system can absorb

...In the face of the increasing overload, universities find themselves limited in response capability. Traditional funding sources limit their provision of university finance: governments indicate they can pay only a decreasing share of present and future costs. ...Elaborated collegial authority leads to sluggish decision-making: 50 to 100 and more central committees have the power to study, delay, and veto. The senate becomes more of a bottleneck than the administration. Evermore complex and specialized, elaborated basic units —faculties, schools, and departments — tend to become separate entities with individual privileges, shaping the university into a federation in which major and minor parts barely relate to one another.

...Within the universities senior professors had commanding authority in their separate departments and institutes. This “continental mode” of state bureaucracy and faculty guild left a weak middle — the elected short-term rector assisted by only a small central staff and surrounded by congregations of powerful professors. The “British mode” of authority structure was just a half-step away, with only modest authority located in vice-chancellorships (compared to that of American university presidents) and a web of faculty committees in and around an academic senate very involved in the consideration of change. Weak institutional steering became the norm. With some strengthening of rectorial authority and the enlarging and professionalizing of central staff, this pattern changed somewhat in many European universities in the 1970s, 1980s, and early 1990s, but not enough to constitute a sturdy response capability with which to face mounting and fast-moving demands. The weak center has severely limited the university capacity to change.

...specialized universities are better positioned than the comprehensive institutions to control demand around their subject specialization and, with a more integrated character, to pursue an entrepreneurial response. Their subject concentration helps measurably to solve the growing problem of institutional focus.... research niches occupied by different universities offer comparative advantage. In exploiting numerous third-stream sources, universities have different possibilities set by location and historic capacity. Then as they individually maneuver, struggling to gain more resources, they widen the differences in specific configurations of external linkages. System evolution toward diversified income promotes a dynamic of institutional diversity and competition...

...In the American system, Leslie and Fretwell found there “was broad recognition that missions had become too loose, that too many different programs were being offered, and that scarce resources were being spread too thin across too many activities.” Administrators and faculty “reported (and lamented) that they had made too few hard decisions” during the previous two decades. ...being distinctive and purposeful is better than being all things to all people.” ...Now, particularly as knowledge outruns resources, a university’s basic departments are under ever-greater pressure to commit to specialties that differentiate them from their peer-discipline departments at other universities, whether in physics or psychology or history. And what happens among departments and faculties radiates upward to intensify the need for entire universities to differentiate themselves in niches of knowledge, clientele, and labor market linkage. Such differentiation can be left to drift, and hence to occur slowly; but with accelerating change, the costs of drift and delay rise — the demand-response imbalance only deepens. Institutional action then has to be set in motion.

1. The strengthened steering core

Warwick, Twente, Strathclyde, Chalmers, Joensuu — all exhibited in 1995 a greater systematic capacity to steer themselves than they had possessed 15 years earlier. ...the administrative backbone fused new managerial values with traditional academic ones. Management points of view, including the notion of entrepreneurship were carried from center to academic heartland, while faculty values infiltrated the managerial space. The blending of perspectives worked best when academics who were trusted by peers served in central councils and took up responsibility for the entire institution. Since the underlying traditional academic culture cannot be ignored, cannot be pushed aside, it must be put to work and thereby adapted.

Whatever its shape, the strengthened managerial core consists of agents who work to find resources for the institution as a whole. They seek other patrons instead of waiting passively for the government to return to full funding. They work to diversify income and thereby enlarge the pool of discretionary money. They seek out new infrastructure units that reach across old university boundaries to link up more readily than traditional departments with outside establishments, especially industrial firms. The core gives the institution a greater collective ability to make hard choices among fields of knowledge, backing some to the disadvantage of others; this in turn shapes access possibilities and job-market connections. The strengthened steering mechanism is necessary for the task of cross-subsidizing among the university’s many fields and degree levels, taxing rich programs to aid less-fortunate ones

A strengthened administrative core, then, is a mandatory feature of a heightened capability to confront the root imbalance of modern universities.

2. The enhanced development periphery

...They variously consist of outreach administrative units that promote contract research, contract education, and consultancy. They include a varied array of research centers that are generally, but not always, multi- or

transdisciplinary. ...But the developmental peripheries we have observed have a valuable common outcome: they move a university toward a dual structure of basic units in which traditional departments are supplemented by centers linked to the outside world. The matrix-like structure becomes a tool for handling the inevitable growth of the service role of universities. ...With tenured staff mainly based in the departments and nontenured and part-time staff often predominating in the outreach centers, the more temporary units of the periphery are more readily disbanded.

...But if not judged by academic values as well as managerial and budgetary interests for their appropriateness in a university, they can move an institution toward the character of a shopping mall. A connected and somewhat focused construction of the periphery requires a collective institutional capacity to make choices based on educational values. ...Traditional departments alone cannot effect all the needed linkages: in themselves, they cannot add up to an effective focus. The new periphery is necessary, even if it adds to the organized complexity of the university.... The peripheries of universities we observed in this study incorporate much Mode 2. Their units are established precisely to go beyond disciplinary definitions; they extend university boundaries to bring in the perspectives of outside problem-solving groups; they are prepared to take their leads from the outside and to work close to application.

3. The discretionary funding base

...Student growth and knowledge growth together increase enormously the costs of systems of higher education and individual universities. ...Government becomes an uneven patron, often acting like a sometime purchaser of university services; it can hardly be depended on in the long term. Its own changing agenda will at times give overwhelming priority to coping with depression, national debt, and international entanglements.

Traditional universities come to a fork in the financial road. They can passively fall in line and undergo parallel financial increases and decreases — as the government goes, so they go — with the governmental stimulus determining university response; or they can actively intervene by deciding to develop additional lines of income from pursued patrons. University ambition encourages the second choice, competition virtually demands it.

...To build a diversified funding base in a university is to construct a portfolio of patrons to share rising costs. As new patrons contribute, their expectations of what they should get in return readily intrude to become new constraints. Universities then need greater self-consciousness on where they draw the line between what they are willing to do and not do to meet those demands.

...But whatever the relations with specific patrons, a diversified funding base enhances university discretion. The enlarged portfolio of income streams increases total resources. It allows a university to “roll with the punches”: a loss here is replaced by a gain there. It allows a university to build reserves (and to borrow monies) and then to take innovative steps... Diversity in financing, it now appears, “can be regarded as a prerequisite for adaptability.” ...Top slicing and redistribution of funds by central committees tap the monies brought in by some fields and activities to aid others judged to be necessary and needy. Cross-subsidy becomes the financial heart of university integration. ...The greater the internal dispersion of fields and interests, the greater the need to have the haves help the have-nots. And the more contentious the issue of internal redistribution becomes.

4. The stimulated heartland

...Since departmental adoption of an entrepreneurial attitude will normally vary, a university that has partially transformed itself to be more enterprising might largely exist in a schizophrenic state, entrepreneurial on one side and traditional on the other. Administrators and faculty at the five universities studied rejected this option. Schizophrenic character did not appeal to them: it suggested a split that would mean endless, bitter contention. ...Overall scale and scope are perhaps decisive here. Small to middle size universities — 6,000 to approximately 13,000 in our five cases — are still positioned to seek a unified character, even if they stretch from microbiology to folklore... Stimulated academic departments must find ways to fuse their new administrative capability and outreach mentality with traditional outlooks in their fields....Departments have to make clear that they are not willing to respond to all demands that swirl around them in their respective fields of activities — from potential students, young and old, industrial firms and professional associations, local, regional, national, and international governmental departments. They have to select and thereby to focus.

5. The entrepreneurial belief

...New, institutionally defining ideas are typically tender and problematic at the outset of an important change. They must be tested, worked out, and reformulated. If they turn out to be utopian, they are soon seen as counterproductive wishful thinking. If found to be excessively opportunistic, they provide no guidance: any adjustment will do. Ideas become realistic and capable of some steering as they reflect organizational capability and tested environmental possibilities. ...An institutional *idea* that makes headway in a university has to spread among many participants and link up with other ideas. As the related ideas become expressed in numerous structures and processes, and thereby endure, we may see them as institutional *beliefs* that stress distinctive ways. Successful

entrepreneurial beliefs, stressing a will to change. can in time spread to embrace much and even all of an institution, becoming a new *culture*.

...the five elements of transformation become just that by means of their interaction. Each by itself can hardly make a significant difference. Those who see universities from the top-down might readily assume that the strengthened steering core is the leading element. But a newly constituted management group, for example, is soon without teeth if discretionary funds are not available, new units in the periphery cannot be constructed, heartland departments fall into opposition, and the group's idea of a transformed institution gains no footing. The interaction of transforming elements also largely takes place incrementally over a number of years. Our results accord strongly with an incrementalist view of organizational change. Particularly for universities, we stress *interactive instrumentalism*. Transformation requires a structured change capability and development of an overall internal climate receptive to change. ...“change in colleges and universities comes when it happens in the trenches; what faculty and students do is what the institution becomes. It does not happen because a committee or a president asserts a new idea.”

The Focused University

Universities are caught up in grand contradictions: with less money, do more and more; maintain as always the expanding cultural heritage, the best of the past, but quickly and flexibly develop new fields of study and modes of thought; relate to everyone's demand because all are “stakeholders.” An American university president crisply formulated in the mid-1990s that the modern research university (public *and* private) has become “overextended, under focused; overstressed, under funded.”

...The entrepreneurial response offers a formula for institutional development that puts autonomy on a self-defined basis: diversify income to increase financial resources. Provide discretionary money. *And* reduce governmental dependency: develop new units outside traditional departments to introduce new environmental relationships and new modes of thought and training; convince heartland departments that they too can look out for themselves. Raise money, actively choose among specialties, and otherwise take on an entrepreneurial outlook; evolve a set of overarching beliefs that guide and rationalize the structural changes that provide a stronger response capability; and build a central steering capacity to make large choices that help focus the institution.

...Universities need foci that help them solve the problem of severe imbalance and to define anew their societal usefulness. They need to find sustainable niches in the ecology of a knowledge industry that becomes more international and more dispersed among institutions outside formal higher education. ...To contain unbridled comprehensiveness, choices have to be made about the relative magnitude of beginning and advanced levels of study, different services to clienteles and occupations, and especially about fields of knowledge to highlight and downplay. And within every field choices have to be made to pursue certain specialties while ignoring others. If such choices are not made, then all units and subunits simply receive fair shares on the down slope of limited resources and hardened structures. Steering is left to the mercy of sunk costs.

...An entrepreneurial achievement of distinctiveness serves internally to unify an identity and thereby, ironically, to rebuild a sense of community. “Entrepreneur” may continue to be a negative term in the minds of traditional academics, all the more so after they have seen hard managerialism in action. They may go on thinking of entrepreneurship, as raw individualistic striving that is socially divisive. ...However, diffuse in structure and fragmented in intent, traditional European universities, and many others around the world, have had little or no common symbolic and material integration. What integration they have had is steadily eroded by increasing scale and scope. Collective entrepreneurship overcomes their scattered character, leading toward a more integrated self. ...Academic groups, small and large. Then see themselves in common situations with common problems, common allies, and common enemies, and in need of common action. A common culture grows, an identity is shared.

...collegiality is normally “biased in favor of the status quo. The challenge is “to redefine our understandings and commitment so that, in empirical terms, collegiality and difficult choices are not mutually exclusive.” The collective forms of entrepreneurship captured in this study change the equation. They put collegiality to work in the service of hard choices- Collegiality then looks to the future. It becomes biased in favor of change.