

## **The University: Interpreting Worldwide Expansion and Change<sup>1</sup>**

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## Abstract

For centuries, the differentiation characteristic of modernity has been thought to intensify the need for flexible and site-specific forms of training and knowledge, threatening the university. And yet the university has flourished. In our view, contemporary society rests as much on universalistic cosmological bases as on specialized roles. The university expands over recent centuries because – as it has from its religious origins – it casts cultural and human materials in terms of universal principles and global realities. Our alternative view helps us explain empirical phenomena that confound standard accounts that stress the role-differentiation of contemporary society: especially the university’s extraordinary propagation and global diffusion, and also its curricular and structural isomorphism and enduring solidity. All of this holds true especially after World War II, as national state societies made up of citizens disperse into a world society culturally constituted of empowered individuals. As imagined national boundaries around nature and society recede, as the pool of university beneficiaries and investigators extends worldwide, and as the persons who root it all grow individualized and activated, universalization is unbound, boosting the rate of university expansion. For the university’s knowledge and knowers, and for the pedagogy that brings them together, the implications of society’s reinvention are great. The new context recharges longstanding processes of rationalization and ontological elaboration, yielding great expansions both in what can and should be known and also in who can and should know. These in turn elongate the menu of approved strategies, techniques, and approaches for joining knowledge and knower as one. The “post-modern knowledge society” that results is distinguished by the extraordinary degree to which the university is linked to society. But it is equally distinguished by the degree to which society is organized around the university – in its abstracted and universalized understandings and in the pervasive presence of its degree certifications.

## **The University: Interpreting Worldwide Expansion and Change**

In this paper, we examine the contemporary development of the university around the world. Over recent decades, higher education amasses a large and rapidly increasing global population of eligible and certified students, the great majority of whom attend university-level institutions. Now approximately 20 percent of the relevant age cohort is enrolled in higher education worldwide (Altbach 1998; Schofer and Meyer 2005; UNESCO 2005). Not only are more people involved in tertiary schooling but also more kinds of people with more recognized qualities of personhood. The university comes to incorporate an array of formerly disregarded persons with highly variable student qualities. Differences in personal interests and capacities are recognized and accommodated, across gender, class background, ethnicity, and nationality; and many kinds of individual tastes are similarly welcomed. Also around the world through this period, the university extends to encompass a much broader and deeper academic portfolio, coming to cover grand schemes and minute details of nature and society, newly seen as constituting knowledge of some generality and significance (Frank and Gabler forthcoming). Within the university context, for instance, it is now possible to investigate and study raising children, doing plastic surgery, managing a business, or producing formerly denigrated forms of lowbrow art.<sup>2</sup>

It is common to see all this expansion as rooted in the university's success at training students and shaping cultural materials for the elaborating role demands of contemporary society. Indeed, this is the conventional ideological justification for the university's multidimensional expansion: The

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<sup>2</sup> Already a century ago, the range of university subjects was sufficiently extended to include surprises. At Tokyo Imperial University in 1900, for example, one could take courses in Bandaging, Manures, Horse Shoeing, and Cattle Feeding. In 1930, Belgium's l'Université Catholique de Louvain offered degrees in Brewery Engineering.

university provides the differentiated training and research programs that are functionally required by complex modern societies, and may even play a role in producing the desired development and complexity.

While sensible on the surface, and taken-for-granted in many quarters, this functional explanation shows limitations along several axes. First, the expansion of the university vastly outruns in scale and scope the social changes thought to drive or require it (Schofer and Meyer 2005). Second, functional explanations lead one mistakenly to anticipate radical cross-national variations in enrollments and academic contents, depending on local role complexity: Developed countries should have universities of a very different stripe, with much higher rates of recent expansion, than developing countries. However, this is not the case – universities, and their expansion, show a good deal of homogeneity around the world (Frank and Gabler forthcoming; Schofer and Meyer 2005). Third, functional logics also lead one falsely to expect, or hope, or fear, the fragmentation of the university over recent decades into specialized modular programs that map directly onto society's role structure. But again this consequence is not observed empirically: the main expansions in higher education occur under the umbrella of the university per se, not in disparate narrow-gauge institutions. Thus while the so-called Multiversity surely incorporates a broader range of topics and personnel than its predecessors (Kerr 1963), a posture of fundamental unity prevails. Fourth, functional logics generate the misplaced expectation that rapid social change should undermine the university's traditional social form, exactly as occurs with businesses and states.<sup>3</sup> But higher-educational institutions over the past millennium conspicuously retain the university's time-honored semblance, stressing claims to deep-seated continuity.

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<sup>3</sup> Indeed, Wolfe (1996) uses businesses and states as foils for the university's "feudal culture."

We propose that the success and relative homogeneity of the university worldwide reflect something far removed from the technical demands and training requirements of today's complex societies. The university survives and flourishes in the contemporary era not by practically shaping people and cultures for a great modern societal machine but rather by casting the building blocks of an ultimate cultural unity. In the original model of the university, this unity was religious and transcendental. While the frame is now secularized, the old model's meta-principles – that universal knowledge covers the entire world of nature and social practice and stands accessible to competent humans – remain secure. The university organizes particular students and cultural materials, that is, less around efficient production or performance than around transcendent principles, and less around unique qualities than as microcosms of the global.<sup>4</sup>

From this viewpoint, the huge expansions in the university's student enrollments and academic contents do not principally reflect a rise in the operational complexity of society. Rather, they follow from the intensifying interpenetration of the global and universal with the local and particular. The modern globalized knowledge system now extends into the far reaches of daily life, touching all aspects of nature and every modern social institution, from the family to the state. For instance, the problems of disciplining children – once treated as private matters – are now subject to a universalistic and global academic discourse, which displaces local child-rearing customs with scientized laws and world-level research. Analogous points can be made in regards

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<sup>4</sup> One finds many instances in which local particulars take the guise of global universals. For example in the 1879-80 Catalogue of the University of Wisconsin, a course in Agricultural Botany – addressed to the state's farm-raised youth – comes across in highly abstract and scientific terms. "Agricultural Botany: Botanical characteristics and geographical distributions of the natural orders, with their relative importance. The genera and species having agricultural value; those having commercial or medical value; those having ornamental value; and those which are noxious or detrimental, as weeds or poisonous plants."

to university enrollments in the contemporary period. Worldwide, a great many young locals are now seen to be capable and fit for university studies. But these locals, in becoming schooled, exchange marks of distinction for the mastering discipline of the universalized rules of contemporary global life. In the university, in short, the local particularities both of that which is known and those who know are increasingly reconstituted as global universalities.

## I. BACKGROUND

Throughout the last half-century in countries around the world, the university registers spectacular and unprecedented growth. There are more universities in more places, with more students from more varied backgrounds, studying a broader range of substantive matters with a broader range of pedagogical tools (e.g., Drori and Moon 2005; Ramirez and Wotipka 2001; Riddle 1993; Schofer and Meyer 2005; Frank and Gabler forthcoming).<sup>5</sup> Unsurprisingly, perhaps, certain aspects of the overall trend are decried, including the intensifying market pressures on researchers (as the university expands into society), the declining centrality of the Canon (as formerly excluded subjects gain curricular standing), and the creeping appearance of political correctness (in deference to the increasingly diverse university population) (see, e.g., Slaughter and Leslie 1997; Geiger 2004; Readings 1996; Kirp 2003; Bok 2004; Kors and Silverglate 1999). More surprising by far is the diffuse and general sense of misgiving that haunts much of the university expansion literature.

On the face of it, the university over the last several decades is a stunning success, growing along virtually every dimension and dispersing even to the furthest points of the Third World. Now, the

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<sup>5</sup> Thus the University of Chicago's Dean remarked, "The single biggest difference between the College as it is now and the College as it was 20 years ago is that there are more possibilities" (Boyer 2003).

university's degree certifications are mandatory for an extensive list of occupational and other social roles globally (Collins 1979; Brown 2001). And vis-à-vis an elaborate roster of public and private matters, the authority of the university speaks to the widest range of decision makers (Drori et al. 2003).

The literature, however, is curiously suspicious of the university's good fortunes. The institution's expansion is typically seen not as signaling vitality but as heralding breakdown, involving the collapse of a core and a descent from a Golden Age (Rojstaczer 1999). In most judgments, such fragmentation indicates the loss of cultural integration, established values, and high knowledge, and even the fall of autonomous truth in the face of the Modern or Post-Modern Leviathan. The related proliferation of university-society linkages, meanwhile, is seen not as reflecting the university's rising authority but as representing new forms of subjugation, involving heightened submission to external powers (Washburn 2005). Evaluations of this change, too, are typically negative, although some see in the tightened linkages – and even in the university's prophesied collapse in the face of more specialized arrangements – improved rationality and efficiency. So the rise of tertiary instruction outside the traditional university forms – for instance, in industries, by consultants, in private profit-making arrangements, or through licensing and franchising schemes – attracts much attention, whether from hope or from fear (e.g., Berg 2005). At the very least, it is assumed that the present-day university must become more efficient to survive the onset of less favorable, more competitive conditions.

Underlying nearly all such work is a common analysis of university expansion. It depicts contemporary society as ever more complex, differentiated, and dependent on specialized knowledge. And it poses the functional demands of this system – the needs of the “post-modern knowledge society” – as driving university growth, which in turn threatens to destroy its core.

The whole story here is a familiar reprise. With the high period of Modernity – between the late 18th century and World War II – much the same thing happened. On one hand to the surprise of many, universities expanded on a worldwide basis – in size, number, and importance. On the other hand, traditionalists lamented impending demise, while progressives hailed immanent destruction.<sup>6</sup> The basic analysis then was the same as that found now in the fashionable discourse. While Modernity may have spurred the university's first great expansion wave, it was assumed to be only a matter of time before the tide turned, as the differentiating social machine came to demand specialized – not university – training and knowledge creation.

Indeed during the high Modern period, major episodes of university destruction occurred (Riddle 1993). The radical Moderns successfully, if temporarily, undermined the institution – the French in preference for more specialized forms of state technical training, the Americans in preference for broader collegiate forms of national citizen socialization. In Germany and Spain too during this period, universities weakened. However by the late 19th century, they resurged everywhere, and the overriding story then as now is one of massive expansion – in the university's numbers, locations, and societal centrality.

In short, the fears and hopes of the 19th-century never materialized. The university did not collapse and give way, as foretold, to narrow functional training centers, catering to differentiated society. On the contrary, during the era, the population of universities swelled and the institution spread around the world. And exactly the same thing is underway even more intensely now, in the post-war post-modern knowledge society. To be sure, recent rates of university creation and

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<sup>6</sup> Already in the 16<sup>th</sup> century, “Rabelais ridiculed the scholars of Paris...accusing them of the sins with which scholars have been charged ever since: writing needlessly obscure books, ignoring simple truths, teaching nothing of value and abusing the respect of the population” (Botton 1999).

expansion exceed those of the earlier Modern period (Riddle 1993; Schofer 2002; Schofer and Meyer 2005). In one sample of British Commonwealth universities, the mean number of faculty spiraled upward between 1955 and 1995 – from 270 to 711 (Gabler and Frank 2005).

In order to understand the evolution of the university at present, it helps to reflect on what went wrong with those nineteenth-century forecasts of the university's demise at the hand of Modern complexity. The root intellectual problem lies only partly with a problematic understanding of the university and its role in society. A deeper problem lies in a mistaken analysis of Modern (and now also the post-modern knowledge) society itself.

## II. THE “KNOWLEDGE” SOCIETY AND THE UNIVERSITY

As suggested above, two broad and closely related guides to the university's changes recur throughout the literature. According to one, the institution's striking growth follows from its capacities to meet the technical-functional requirements of society. From this standpoint, the varied aspects of higher-educational expansion arise from the intensifying needs of a rapidly differentiating social system (Gumport and Snyderman 2002; World Bank 2000; Kerr 1963).

A less positive view of the same changes ties university expansion – and thus growing disorder and fragmentation – to the appearance and rising influence of novel Modern and post-modern social forces. For instance, it is imagined that diminishing social unity (e.g., identity politics) forces the university toward incompatible ends (Bloom 1987), while the ascension of disparate knowledge-dependent political and economic interests fragments the university and subjects it to distortion. Lost curricular coherence, fallen academic standards, a gutted Canon, and moral

relativism are all thought to symptomatize an institution whose explosive growth overwhelms its core foundations.

Both these analyses have obvious functionalist overtones (sometimes centrist; sometimes left-wing, embodying criticisms of inequality and injustice; and sometimes also right-wing, criticizing intellectual supports for statism and socialism). The core idea – rooted in much social theory, which depicts society as a fairly realist system – is that society has complex needs and differentiated roles, which increasingly demand from the university specialized knowledge, socialization, and technical training. Even among those theorists (such as Weber, Durkheim, and Parsons) conscious of the non-contractual bases of the social contract – i.e., those who do not assume that all members of society agree by choice to its terms – there is a tendency to project reified or essentialized societal bases (for instance, values) into the university's foundations.

The empirical problems with such functionalist analyses are clear: they cannot account for the university's extraordinary expansion across the globe, its relative homogeneity from Albania to Zimbabwe, and its organizational unity under a common umbrella that has endured for almost a millennium. A further problem is that functionalist analyses suppose that universities are actually effective in training people to perform important social roles (or at least were so during the institution's Golden Age). This supposition runs against a substantial research tradition (and common awareness) that university education is in fact not very good at preparing people for particular jobs. Arrangements such as apprenticeships, internships, and on-the-job training are much more successful (see Berg 1971 for a classic empirical statement). Doctors learn to be doctors on patient rounds, not in medical classrooms. Lawyers learn to be lawyers likewise. Business managers learn to manage from corporate mentors and from trial and error, not by taking courses in business schools. Schoolteachers learn their craft in front of classrooms – as

student teachers and in their initial years on the job. This is the way it stands now, and there is every reason to imagine it was all the more true in the blessed days of yore.<sup>7</sup>

These considerations forcefully raise the issue of the university's role both in earlier Modern and in today's post-modern knowledge society. If not to provide elaborated role training to more persons in more domains, then why has the university enlarged so rapidly? We address this question first by reflecting on the nature of Modern society and also post-modern knowledge society. Then we consider the role of the university in these structures.

### Modernity and the Knowledge Society

Unto itself, the “knowledge society” label is an odd one, since all societies obviously rest on a good deal of institutionalized cultural knowledge. The label's relatively recent entry into common parlance may be taken to indicate that contemporary society involves more knowledge, and more specialized knowledge, than its predecessors.<sup>8</sup> But that interpretation assumes a simple

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<sup>7</sup> In the early years of U.S. land-grant universities, there was often explicit recognition of the university's inability to supersede on-the-job training. For example in the 1879-80 Catalogue of the University of Wisconsin, the department of mining and metallurgy conceded: “It is not claimed that the [degree] turns out experts – except in assaying and draughting – but that it produces the proper kind of raw material to make experts from.” Likewise, civil engineering asserted only that, “The object of [the degree] is to give its students such instruction in the various branches of pure and applied science as shall fit them, after a fair share of experience, to fill responsible positions in the profession.”

<sup>8</sup> This imagery is commonplace. For instance, “A knowledge-based society is one where knowledge diffusion, production and application become the organizing principle in all aspects of human activity: culture, society, the economy, politics and private life” (UNDP 2003: 2).

continuum of social complexity, involving not an exploding university but only the slow elaboration of timeworn knowledge-production and role-socialization arrangements, such as apprenticeships. This is not what we observe empirically. Something more is clearly afoot.

We suggest that the *knowledge* at the heart of Modernity – and even more so at the crux of the post-modern knowledge society – is quite distinct from simple role-performance information and skills. Rather knowledge seems to refer quite generally to cultural materials that have been organized around supra-local principles, involving highly schooled conceptions and understandings of reality. In the current period, especially, skill in practice, no matter how productive or efficient, usually fails to count as knowledge proper. To make the knowledge grade, practical skills must be supplemented by at least nominal general principles, i.e., linked to transcendent and educationally certified truths. This is so whether the skill in question is navigating by stars, locating crude-oil reserves, or resolving parent-child conflicts. Individuals in the present day must be readily able to articulate such ultimate linkages, and indeed the ability to do so, encouraged in and certified by the university context, is more important for many purposes than the mastery of everyday competencies.

The core point here – crucial to understanding the extraordinary survival and expansion of the university in the current post-modern as well as in the nineteenth-century modern periods – is that knowledge appears to consist heavily of properly universalized principles, which can be and are understood by properly socialized and certified persons (Meyer 1977). While the university may be poorly organized to teach people how to do their jobs, the institution is well poised to teach people how specific features of nature and society relate to encompassing truths. Even better is the university positioned to teach people the meta-principle that all sorts of particulars can or could be understood as instances of general abstractions. In the world at hand, almost without

exception, cultural materials are conceived to be amenable to schooling – i.e., to being cast in the light of general laws and principles, and thus to be highly scripted worldwide.

What is true of “knowledge” in the contemporary world is also true of its possessors. It is now commonly thought that virtually all people (including those formerly stigmatized as retarded – Schmidt 2005) have natural capacities to learn and comprehend higher truths and laws, and can be schooled in the university to administer these understandings in generalized ways. University credentials and degrees, thus, can be recognized worldwide, on bases that cut across distinct social sectors of practice. A certified engineer does not stop being certified when moving from industry to industry. And an economist with a PhD does not lose this degree upon relocating to new economic terrain.

From this analytical purchase, it becomes clear that however much our post-modern knowledge society may require sharpened skills to fuel its day-to-day operations, it rests a great deal more on universalistic principles, in which “knowledge” conveys abstract and ultimate truths.<sup>9</sup> Being

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<sup>9</sup> This claim suggests that recent discussions of knowledge fragmentation are overstated: the massive expansion that occurs does so on universalistic bases. Thus a renowned university president can at once decry the fragmentation of knowledge and confidently assert its overriding unity. “Higher education has atomized knowledge by dividing it into disciplines, subdisciplines, and sub-subdisciplines – breaking it up into smaller and smaller unconnected fragments of academic specialization, even as the world looks to colleges for help in integrating and synthesizing the exponential increases in information brought about by technological advances. The trend has serious ramifications. Understanding the nature of knowledge, its unity, its varieties, its limitations, and its uses and abuses is necessary for the success of our democracy.... We must reform higher education to reconstruct the unity and value of knowledge...[which] is really just shorthand for saying that the complexity of the world requires us to have a better understanding of the relationships and connections between all fields that intersect and overlap” (Gregorian 2004).

based on such transcendent matters, university certifications provide the sole legitimate bases for the post-modern knowledge society's role-allocation and stratification systems.

The universalistic essence of contemporary knowledge is all the more apparent if we look back to the nineteenth and early twentieth centuries, before the recent waves of university expansion began. At that time, deep commitments to rationalized and scientized forms of knowledge were just emerging, along with the great hopes they inspired (Drori et al. 2003). Guided accordingly, moderns of the period, in the name of common goods, called upon their fellows to be socialized into scientific disciplines (like sociology) that as yet hardly existed outside the imagination. Such calls now read as striking assertions of faith.

What seems to have changed in the shift from the Modern to the post-modern knowledge society – raising the rate of university growth – is the nature of the societal model for which knowledge is required. The vision we are calling Modern supposed a bounded nation-state society that was a real functional social system built on clear (often material) interdependencies. Knowledge, often scientific but sometimes more cultural (to support social integration), was deemed necessary to perform the interdependent roles involved. Under these conditions, the university was to serve the needs of a reified societal machine. Thus it was possible to imagine too much education – i.e., over-education – yielding inefficiency and even perhaps disorder and anomie.

In several dramatic ways, the transition to post-modernity and the “knowledge society” after World War II changed and extended this vision of society – beyond merely adding complexity so as to functionally require more training. The remodeled society's globalized and individualized features offered enhanced centrality to the university, increasing the pace of expansion (and all but burying the concept of over-education).

This means first that it came to be understood that education generally and university education particularly could actively create the kinds of knowledge and personnel that could build – not just adapt to – societal development. For example in the economy, the idea took hold that human capital (viz., education) could directly spark change and generate prosperity, and similar ideas arose vis-à-vis political and social development. Overall, it became accepted that higher education could produce, not simply respond to, a future golden age.

Second, more and more of the institutions seen as defining socio-economic development themselves came to be seen as essentially derivative of and constituted by the educational or knowledge systems. In a host of new professions – forged from knowledge-system elements rather than material production dependencies – huge educational establishments rendered schooling as integral to development, as measured by its crowning indicator, GDP/capita (Chabbott 1999). Post-modern managerialism, for instance, consists of a mass of intangibles (strategy, branding, etc.), as do the post-modern state apparatus, and the medical and welfare systems, and so on. Much of the role activity of contemporary society, that is, is not just served by the educational system but is literally constituted by it. A comforting heart-to-heart is educationally transformed into expensive and valuable therapy when advanced degrees are involved. A similar metamorphosis occurs when educational credentials render casual business advice as consulting, or when the informal assessment of dangers succumbs to university-certified risk analysis. What's more, much of this value is educationally constructed without regard to the delivery of verifiable services. Therapy adds to the GDP even when the patient fails to get better, whereas similar solace from friends has no equivalent value even when the person improves dramatically (Meyer and Rowan 1977). The post-modern knowledge society, in short, is a society based on schooled knowledge – in the form of universal principles – that can be required, and can count as progress per se, over and above any material consequences.

The consequences of these great changes in dominant societal models show up everywhere in global and national policies. The World Bank's (2000) discussion of higher education for developing countries, for instance, makes no mention of the once-feared possibility of over-education. More is better in the vision of the Bank. The only concern now seems to be the opposite one – whether developing countries can sustain enough higher education, of sufficient quality, to enter the brave new world of the post-modern knowledge society.

### III. THE EXPANDING ROLE OF THE UNIVERSITY

Thus we arrive at an understanding of the university's endurance and rapid expansion through the current period. Its core task goes beyond shaping culture and personnel for efficient role performance in a societal machine. Much more, the university exists to design and assemble the cultural and human features of an expanded map of the cosmos. We now turn to a discussion of why this encompassing cosmic map – read the “knowledge society” – arises in the first place.

The current waves of expansion characterizing the world's universities originated in the period following World War II. The war and its aftermath broke down the earlier modern synthesis, in which society took form in the high national state, and opened the door to a more global and universalistic world society. At the heart of the postwar transition lay the decline of nation-state sovereignty under conditions of universalism. Obvious military forces (the nuclear age) were involved in the process, along with cultural ones (the stigmatization of fascism), and also political ones (a Cold War built around universal principles – democracy versus communism – rather than national cultures). Economic forces too may have contributed to the change, but these tend to be exaggerated in current thinking, which often and mistakenly defines globalization in exclusively economic terms. Certainly central to the shift was the conviction that the great new global world

being constructed represented the forces of progress and development rather than contraction. Against the backdrop of war, depression, and fascism (all thought to be produced by closed national states), there could be no retreat into tradition. An expanded new world was at hand, to which the university stood central.

We can see the university-society co-evolution if we look back to the rise of the university itself, in the early Modern era. The university's first widespread emergence occurred concomitantly with the rise of the modern nation-state. These twins of the age of reason provided reciprocal support to each other and together arose, sped by interstate and inter-university competition.

Indeed as closed and competitive national states grew institutionalized over time, becoming virtually coterminous with Modern rationalized society, universities came to be seen as their natural appendages: The university's students and academic contents increasingly took on national meanings and purposes (Altbach 1998).<sup>10</sup> As public life, in other words, became embedded in national community, and as personal roles and identities were packaged together into citizenship (Frank and Meyer 2002), both the domain of university knowledge and the population of university knowers were cast as nation-state projects – historically attached forms, bound to national history, tradition, and culture, and also to the functional requirements of nation-state society (Readings 1996; Soares 1999).

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<sup>10</sup> John Dewey made this point in his 1916 classic, Democracy and Education. Winther-Jensen (1998) summarizes thus: “[E]ducation became a civic function and the civic function was identified with the realization of the ideal of the national state. The ‘state’ was substituted for humanity; cosmopolitanism gave way to nationalism. To form the citizen, not the ‘man,’ became the aim of education.”

Under these societal conditions, the university enlarged substantially. First that which could count as official knowledge expanded. In the name of national progress, the university laid claim to cultural realms formerly considered inaccessible and forbidden, extending human sovereignty over natural territories, with rationalization based on empirical science, and also over spiritual and social territories, with rationalization based on principles.<sup>11</sup> The new university knowledge, as means for collective ends, promised benefits for the nation-state as a whole – for instance, in national literature and history (Frank et al. 2000) and in sciences oriented on natural-resource exploitation (prominently including agriculture and mining, which often predated the “basic” natural sciences in the university).<sup>12</sup> For example in 1900, the University of Tokyo featured nation-state-centric departments of Naval Architecture, Technology of Explosives, and Technology of Arms, while in 1930 l’Université Catholique de Louvain offered degrees both in Consular and Colonial Sciences.

Given the same Modern conditions, those who could count as university knowers also steadily multiplied. Under the aegis of the nation-state, persons were rendered as citizens and incorporated into the body politic – as basic motors of progress and justice. In opening its doors to new student populations, the university constituted Modernity’s active membership – voters and citizens for the national polity, producers and consumers for the national economy, and so on.

In all this expansion, legitimated by collective purposes, we see the university as the locus of important cultural ceremony, constituting and enacting Modern society via prescribed rituals and

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<sup>11</sup> A principles-based rationalization of nature seems subjective and therefore arbitrary, while a science-based rationalization of God seems reductionist and therefore arbitrary.

<sup>12</sup> Later the same impulse appears, e.g., in development economics (as in manpower planning) and throughout political science. For a recent discussion of manpower planning, see Livingstone (1998).

established forms. The national state and its citizens were the essential elements, interconnected by rationalized Modern linkages – a public bureaucracy, a national schooling system, a rationalized polity, etc. – and embedded within a scientized natural environment (conceived as a store of resources to be exploited for national development [Frank 1997]).

The end of World War II fundamentally altered this mutually beneficial arrangement, by redrawing the cosmic map rooting both nation-state and university. The liberal victory, part moral and part military, unleashed forces that broke down corporate bodies stigmatized in the war (religious, ethnic, and especially national) and swept away the limits they imposed on universalization. At the same time, the liberal victory laid tracks toward a new post-modern world society, composed of individualized persons, commonly conceived as autonomous, equal actors with a wide range of human rights (Tsutsui and Wotipka 2004). In the course of the post-war transition, the nation-state itself lost standing, and so too did citizens (Soysal 1994; Frank and Meyer 2002) and also the bureaucratic and professional bodies associated with the state (e.g., national scientific structures).<sup>13</sup> In their wakes, new and encompassing imageries of the world, individuals, and humanity – all conceived on universalistic grounds – strengthened considerably (Boli forthcoming).

The reconstitution of society in global-individual terms inaugurated a new age of university expansion. By (a) extending the natural and social contexts of university activities out beyond

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<sup>13</sup> The nation-state-to-individual shift in institutionalized models of society vividly shows in Colonial Studies. These stress the colonizing nation-state's objectives in the early twentieth century. For instance in 1930, a Colonial Sciences degree from the Université Catholique de Louvain required courses in Congolese Languages, Colonial Law, Cultures of the Congo (Farming, Hunting, and Fishing), Political Economy and Tools of the Colony, Ethnology and Ethnography (Indigenous Politics), Colonial Hygiene, and The State of the Catholic Missions. Now, Colonial Studies highlight the experiences of colonized individuals.

competitive nation-states to a unified world, by (b) scaling up the presumed engines and beneficiaries of university activities from national citizenries to global humanity, and by (c) breaking down Modernity's root elements – church, family, and above all nation – into individuals conceived as agentic social actors, the emergent model of a global and individual-based society set the stage for previously unimagined universalization and thus university growth. The situation is much as we find it still today.<sup>14</sup>

With the raw materials of knowledge – nature and society – reconceived on global rather than national bases, and with the designation of a global corps of knowledge producers, the post-war shift to an individualized world society produces a proliferation of globally systematized understandings of nature and also an explosion of universal social scientific principles common to the whole human race. On the latter dimension, the nation-state's decline provides particular impetus, as the universalization-inhibiting boundaries around society dissolve, allowing the extension of lawful principles far down into the details of every modern social structure (Castells 1996). For instance, prevailing models of nature shift from resource to ecosystem – the former a feature of national wealth and only partially scientized and the latter a system of global vitality and pervasively scientized. Vis-a-vis society, the same processes produce a stunning 20<sup>th</sup>-century rise of the social sciences worldwide (Frank and Gabler forthcoming). The newly dominant sciences of society are explicitly global in scope, while the formerly dominant humanities are typically national (American literature, American history, etc.).

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<sup>14</sup> An 1891 letter from future University of Chicago president Harry Judson to then president William Harper suggest the nation-state's curbs on knowledge: "I dislike the idea of a foreigner at the head of such a department in an American university. It seems to me that departments involving American history,

For many like reasons, the same post-war changes also generate a considerably broadened and empowered population of university knowers, with greatly enhanced knowledge capacities. In the globalized and individualized world, categorical restrictions on educational access are broken (including those based on sex, race, and above all citizenry), as are collective controls over knowledge distribution (opening access, e.g., to once guarded national secrets). Also as individuals schooled in knowledge come to anchor world society, the salience of degree certifications rises sharply. Numbers of students and faculty shoot upward accordingly.

The new causal dynamics favor not only the university's expansion in the contemporary period but also the unprecedented opening and interconnection of the university with society writ large (as in the rise of the "practical arts" [Brint 2002; see also Ramirez 2002]). With so few cultural materials remaining outside the university orbit and also with wide-open access to the student role, the university enmeshes with society as never before, undercutting the ivory-tower-style isolation that was sometimes earlier celebrated as a measure of purity.

Critics of this process see the university's penetration by society as the destruction of academic values, but they tend to grossly understate the countervailing trend – the rising extent to which academic values, perspectives, and knowledge come to transform and in many senses dominate the post-modern knowledge society (Schofer 1999; Maassen and Weingart 2005). In important ways, the destruction of the university's autonomy by the incursion of mundane societal interests seems far less thoroughgoing than the destruction of what was earlier thought of as local "society" by a universalizing academy. Thus, for instance, the proliferation of Boeing professorships may indicate something less revolutionary than Boeing's own requirement that its

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American literature, and American politics should be in charge of Americans.... I must confess that I don't fancy having to work under a German. I doubt if many American professors would" (Boyer 2003).

engineers – without exception – hold university degrees. Indeed over recent decades, this reverse infiltration proceeds unabatedly: university knowledge and university graduates deeply penetrate modern society’s constitutive foundations, so much so that the birth of the post-modern knowledge society – built around the university and its universalized meanings – is widely announced (Habermas 1987; Stichweh 2004; Beck 1992; Castells 1996).

Our overall argument thus is that – more than a system of material production – the post-modern “knowledge society” is a system of cosmic mapping. Even more than its earlier Modern analogue, the new society is built as much around religious-like pretenses (universal principles) as actual competences (local techniques). If expanded competencies were the only issue, an elaboration of routine training relationships probably could have handled the socialization requirements arising over time, and the university might – as feared and hoped – have indeed fragmented and collapsed. But the university survives and flourishes, as a grand and cohesive scheme, precisely because what are forged at its core are not mundane skills but the transcendent principles that constitute the foundations of the post-modern knowledge society.

#### IV. IMPLICATIONS OF THE ARGUMENT

As we have stressed, the argument put forward here can enlighten many aspects of the university’s contemporary development that are otherwise difficult to comprehend. First, it can explain why the university so completely outlasts all the technically-superior competition that is supposed to undercut it in the current period – exactly as it prevailed, in earlier form, in the nineteenth century. The university’s gifts at cosmic or religious work – the great ceremony of higher education, celebrating universal beliefs and doctrines – give the institution enduring power.

Second, the argument we proffer can help account for the surprising degree of homogeneity found among university curricula and enrollment patterns around the world, despite enormous cross-national variations in economies, political systems, occupational structures, and so on. To the extent that the contemporary university's main agenda is to bathe local activities in the light of universal truths – invoking models of ideal society more than summoning realities at hand – worldwide homogeneity in university foci makes sense. Notions of the ideal society, after all, and progress toward it, are quite uniform globally: centering on human rights, scientific models, and principles of social rationality (Meyer et al. 1997). Since such world-level models of society and progress are a good deal more homogeneous than the diverse realities on the ground, the university – itself built on an integrated and standardized vision – exhibits homogeneity.<sup>15</sup>

Third, our argument can help explain the rapid penetration deep into local society of university understandings and graduates. Everywhere now positions of value and esteem require the symbolic possession of certified knowledge, embodied in university degrees (Brown 1995). Under conditions of rapid globalization and weakening state sovereignty, local societies gain stability and legitimacy by invoking world models of meritocracy (Jencks and Riesman 1968). Thus the world's stratification systems, long known to display surprising similarity, take form around a relatively unified system of educational, and especially university, credentials (Treiman and Ganzeboom 2000).

## V. RESEARCH IMPLICATIONS FOR KNOWLEDGE AND THE STUDENT ROLE

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<sup>15</sup> The 1999 Bologna Declaration seeks an unprecedented degree of organizational homogeneity among the historically differentiated universities of Europe. See Krücken (2005) and Lenhardt (2002).

As the national state gives way to a world society built around individuals, scientization, and social rationalization, the university's structural and human dimensions (its knowledge and student identities) are transformed. Under the new conditions along the structural dimension, many aspects of social life are reorganized around principled university knowledge, making it routine to develop and promulgate general or universal analyses of cultural materials and role behaviors formerly treated as particular to national society and/or outside the university domain. One now can have seminars, for example, on peasant agriculture, teen-age sexuality, proper diet, and the medical effects of stress. Likewise, many aspects of nature lose idiosyncratic and unique qualities, accumulating instead universal and law-like meanings. The recognition of singular natural "wonders" declines, for instance, as the wonders themselves are demystified and subject to scientific scrutiny (Weber 1978). No longer captive to the nation (or family or church), the details of life in society and nature are universalized and come under cognitive control.

In parallel along the human dimension, there is an enormous expansion in the number of those – it is thought – who can and should be university students, at the same time as there is solidification in the standing of each individual student – a person with the right, capability, and obligation to acquire and develop universal knowledge and understandings. Under the new rules of the new society, it seems obvious that all sorts of individuals stand to benefit from university tutelage, independent of class, race, gender, ethnicity, nationality, or even what was once considered academic aptitude. Thus the university becomes the core site for the ultimate in contemporary baptisms – the union of empowered knower with universal knowledge.

At the heart of these expansions are two longstanding processes, accelerated in the post-war era. These are rationalization and ontological elaboration. Rationalization involves elaborating the causal texture of natural and social life, spelling out processes of action in globally pertinent cause-and-effect chains. We can now specify in classroom instruction, for instance, the precise

logics behind “right” and “wrong” ways to employ people or use materials. Rationalization furthermore involves defining the structure of natural and social life, mapping in detail the complex organizations and hierarchies of interconnection. Thus we can specify, e.g., the ramifications of “wrong” classroom decisions well beyond their immediate interaction contexts. Rationalization means that far down into the details of natural and social life, and into the actions of people in those arenas, general rules are discovered, structures of interrelationship are established, and abstract analyses are conducted. Rationalization strengthens our grasp both of how things work and how things fit together, and does so in universalistic terms.

By itself, of course, the reduction of both natural and social worlds to general causal principles and abstract chains of relation can be seen as profoundly alienating. This is a perspective common to many critical analyses of societal development over the last two centuries. But rationalized and scientized analyses are not the only dimension of global cultural change underway in the contemporary period (Drori et al. 2003).

For if rationalization provides one main boost to the interpenetration of global and local, an expanded and liberalized ontology provides the other – specifying exactly which things exist in reality and delineating precisely what those things can do (Thomas et al. 1987: Ch. 1). In particular, liberal-ontological elaboration reconstitutes society around individualized and activated global persons in the current era, bestowing them with autonomy and ultimate standing in the increasingly lawful and comprehensible worlds of society and nature. By definition, individualized actors (and the complex social organizations and states they create) can and naturally want to understand, use, manage, and learn. Furthermore with schooling, these individuals – as the linchpins of the new society – can hone and acquire capacities to benefit firsthand from personal experiences, which universalizing filters imbue with general significance.

All of this occurs as nature and society gain sufficient order such that unique individual experiences can shoulder and be stabilized around abstract and global meanings.

Ontological specification also occurs in the natural world. For example, more and more animal species are demarcated, with enhanced statuses and itemized “rights,” on top of increasingly elaborated capacities (now even dolphins are known to use tools). Physical places, likewise, are distributed among progressively more refined categories, to go along with the causal interdependencies multiplied by rationalization. Such places are discovered not only to do more but also to be more, occupying positions in unique constellations of physical and social (e.g., recreational) relations. Indeed as universalized meanings heap up, entities increasingly achieve singularity via distinctive packages of universals. This means that a world that is increasingly rendered as the same in its subjection to general causal laws is also increasingly filled with elaborately recognized difference (as also occurs in glocalization – the global production of local particularities according to global standards [Robertson 1992]). The university is uniquely suited to accommodate both the standardizing and particularizing processes underway.

As is clearly implied, ontological clarification stands parallel to, and interdependent with, rationalization. For instance as the category “copper” is specified more precisely, there can and must be more rules about how it works and fits together with other things. And the elaboration around copper both of rationalized rules and relationship structures require finer specifications of copper’s various forms and properties. In the course of both processes, local realities are universalized.

We have, thus, the rise of an orderly and predictable world, in which empowered knowers can command abstract knowledge through schooling and managed experience.<sup>16</sup> We turn now to suggest more specific propositions about what rationalization and ontological construction do to the routine fabric of the university as it changes over the last two centuries, giving special attention to the post-World War II era. We articulate some ways that the dual elaboration of means-ends relations and of the ontological physical and social components that enter into them alter both the theory of knowledge and the theory of the student (and the pedagogy suited to both).

### Changes in the Theory of Knowledge

In the nascent university of the medieval period, knowledge was scarce and precious. Beyond the realm of theology, few cultural matters could be formulated in universalistic terms.<sup>17</sup> What limited knowledge was found retained mysterious and arbitrary airs, being encased in ritual, tradition, and in sanctified texts (as in the monastery). The Modern period of the nineteenth century undercut many of the customary restrictions limiting the universalization of cultural

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<sup>16</sup> In the discussion above, we describe the university's changes as if they occurred everywhere in the same time frame. The implicit assumption is that expansive rationalization and liberalizing ontological construction are very widespread, as are their university consequences. This is not entirely unreasonable – changes in the university indeed occur in parallel worldwide. But it is also true that much relevant variation remains at lower levels of analysis – at national levels, at the level of individual universities, and at departmental and programmatic levels (see Jepperson 2002 for an illustrative general analysis).

<sup>17</sup> Until 1961, the world's oldest university, Al-Azhar in Egypt (founded 975), encompassed only three faculties: Theology, Shariat (Islamic canon law), and Arabic Language. Now, there are also faculties of Islamic and Arab Studies, Islamic Da'awa (spiritual awakening), Commerce, Education and Instruction, Languages and Translation, Sciences, Medicine, Chemistry, Engineering, Dentistry, and Agriculture.

materials. Order, albeit fragmentary, spread in the universe, giving rise to more lawful and factual understandings concerning nature and society. Such understandings, rendered as knowledge, lengthened the roster of university disciplines, even as the university maintained sharp symbolic boundaries between itself and profane society.

In the post-modern knowledge society, the globalized and individualized contextual frame invites extensive interpenetration of the local and cosmic, creating a knowledge explosion. It is increasingly the case that all things now – up to and including the likes of black holes and quarks, for which there is only the most speculative evidence – can be perceived and understood within universalistic frameworks. As knowledge grows pervasive, it is not only stored in university organizations but is also woven into the fabrics of mundane practices and routines (including those identifying the characteristics of the proper handshake and ideal laundry detergent). Knowledge furthermore comes to be structured into the proper life experiences of society's individual constituents. To wit, even the most personal and seemingly nonsensical dreams can be interpreted, thanks to Freud and Jung, within common symbolic frameworks.

The rising authority of knowledge over human experience is paralleled by a great increase in the authorization of social experience by the knowledge system. Thus while all can be known in the new world society, so also all *should* be known – that is, analyzed in the light of general principles of science, rationality, and human competence and rights. Given the primordial status of the individualized person, it would be offensive under post-modern conditions to eliminate or bar from the university all sorts of familiarities formerly considered mundane or corrupted. One must legitimate the sober analysis of an old sharecropper dialect, or romance novels, or lesser forms of fauna and flora, or the mistaken thoughts of children. Today, these things should be studied as instances of abiding truths and designated accordingly as knowledge. Doing so is considered to enrich individual experience, at the same time as it subjects, as noted above,

experience to the standardizing order of universalistic principles. Much changes when the old peasant dialect becomes an object of university analysis.

From the deep and mutual penetration of universal knowledge with local culture and individual experience follows the proliferation of university-based teaching and research programs (degrees, majors, departments, and other university divisions). New study domains appear, existing domains differentiate, and all domains deepen in the course of official knowledge permeation. The result, to take just one example, is that between 1900 and 2000, the University of Tokyo grew from 6 to 9 faculties and from 33 to 84 departments.

Along the path of proliferation and expansion, university-based programs not only develop as such but also extend into the wider society, connecting with the non-academic world through, for instance, a credentialing explosion, knowledge-sharing agreements, adult learning curricula, internship schemes, technology transfer programs, and cooperative exchanges of expertise. Additionally entirely apart from the university, university-style programs materialize in all sorts of public and private organizations. Firms and states and non-profits all come to see their practices as framed by universals, requiring university-like research and instruction (from the classic Bell Labs to the more prosaic McDonald's Hamburger University).<sup>18</sup> Partly such programs are meant to discipline the local world in practical terms, but partly they are intended to show off the universal knowledge that secures the local organization. The ordinary business firm now supplies perfectly appropriate subject matters for a doctoral dissertation.

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<sup>18</sup> The Corporate University Xchange is one of many consulting services offering guidance in such matters as "Corporate University Design and Development."

Amidst such widespread growth, the content of knowledge changes, too. There is extensive rationalization and global standardization, as local arenas acquire universal underpinnings. Thus, the study of the French Revolution gives way to the study of revolutions in general (Hymans 2005). There is also much ontology-based change, as knowledge in the form of inert substantive facts (“what is” knowledge) is rearranged into process-oriented abstract principles, suited to the capacities of activated individuals (“how to” knowledge). This shift is clearly apparent in the retreat of taxonomic frameworks in the natural sciences and the onrush of actor-directed experimentation (Gabler and Frank 2005; McEneaney 2003).

We thus find ourselves in a social (and university) world in which everything is knowable (and should be known in principle); where knowledge is deeply institutionalized in the codes and procedures of society (and thus is partially invisible); and where knowledge is the master key to a wide variety of social structures (hugely advantaging the schooled). It is a world where all kinds of local activities and phenomena are linked to universal natural laws, which typically transcend the national ones so prominent in the Modern period (Drori et al. 2003; Boyle and Meyer 1998).<sup>19</sup>

Thus we envision a broad time sequence in the manifestation of knowledge in the university. In the pre-Modern era, isolated bundles of categories – lists of birds or stars or sins such as usury, surrounded by clumps of rules and facts and theories – existed for the elect student to come laboriously to know. Over time, Modernity disciplined much of this: birds turned into ornithology, sins of usury into ethics and economics, and stars into astronomy. Knowledge thus expanded, rationalized, and systematized.

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<sup>19</sup> For example, the reinterpretation of female genital cutting on universalistic medical and psychological grounds transforms a local customary practice into a global violation of women’s rights (Boyle 2002).

The present-day post-modern synthesis represents huge steps forward in rationalization, with elongated and enumerated causal chains of interrelation. Birds, stars, and sins can now be analyzed in terms of complex processes of evolution and functioning and interdependence with their environments, which now prominently include not only natural but also human and social realms. The knowledge that is thereby produced has a functionalist quality – given its origins in rationalization – and it thus tends to diffuse out from the university, to be rooted in benchmark routines of production and practice. For example, elaborate causal links between birds and pesticides and human health arise in the knowledge system, standardizing the list of acceptable active ingredients in pesticides and the precise strength at which they should be delivered.

At the same time, liberal-ontological clarification also proceeds, elaborating the categories and capacities of entities generally and also invigorating the human individual. Given the new assumptions of society, the once simple bird acquires standing beyond that provided by Modern ornithology. Now, birds may be seen in terms of their relation to the essential person, such that inside and outside the university courses in bird-watching proliferate, alongside studies of the human interpretation of bird song, bird painting, bird appreciation, and the meanings of birds throughout human history in diverse societies. In the post-modern world, it is even possible that the putative perspectives of birds on the rest of nature and society become the focus of instruction (e.g., in courses on Deep Ecology). Similarly while humanity's views of the stars can provide rich fodder for instruction and research, so also, with the search for extra-terrestrial intelligence, can the attributed perspectives of stars on humans. In the same way, the matter of profit – stigmatized in the medieval period, turned respectable by Modern economics – develops various post-modern forms: e.g., detailed bookkeeping instruction with clear rules and standards on the

rationalization side and investment clubs to help elaborate the choice-making and taste-expressing logics of the human actor on the ontological side.<sup>20</sup>

## Changes in the Theories of Student and Pedagogy

Transformations parallel to those outlined above simultaneously reform the model of the student-learner. In the medieval world, few were deemed capable of knowing, and those who were deemed thus were thought to require enormous external discipline to be elevated out of their inherent corruption. Purification required a relentless focus on imitation, rote learning, behavioral correctness, and exact mimicry – and even then, most students were thought unable to move beyond knowledge reproduction. Under these circumstances, university instruction could be quite concrete, emphasizing things like correct grammar, precise penmanship, and various forms of drill.<sup>21</sup> Courses would typically focus on tangible modes of thought and behavior and

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<sup>20</sup> Gibbons et al. (1994) capture much the same evolution in the shift from “mode 1” knowledge (pure, disciplinary, homogeneous, expert-led, supply-driven, hierarchical, peer-reviewed, and almost exclusively university-based) and “mode 2” knowledge (applied, problem-centered, trans-disciplinary, heterogeneous, hybrid, demand-driven, entrepreneurial, and network-embedded).

<sup>21</sup> At China’s Imperial Tientsen University in 1900, e.g., penmanship and military drill were compulsory for all. The Yale Report of 1828, written to rebut critics of the classical curriculum, summarizes the discipline-oriented view of education. “The two great points to be gained in intellectual culture, are the *discipline* and the *furniture* of the mind; expanding its powers, and storing it with knowledge. The former of these is, perhaps, the more important of the two. A commanding object, therefore, in a collegiate course, should be, to call into daily and vigorous exercise the faculties of the student. Those branches of study should be prescribed, and those modes of instruction adopted, which are best calculated to teach the art of fixing the attention, directing the train of thought, analyzing a subject proposed for investigation; following,

would be most unlikely to stress broad law-like pictures of a scientized nature, liberalized individual, or rationalized society. Indeed, Hofstadter notes that the celebrated Latin and Greek writers, whose decline in the university is widely mourned, were used mainly for grammar exercises – not deep literary study (Hofstadter and Smith 1961).

The Modern period retained many of these accents, stressing still the university's distinctive nature and remove from everyday life and the scarcity of eligible or competent citizen-students (as seen, say, in barriers to women's participation [Ramirez, Soysal, and Shanahan 1997; Ramirez and Wotipka 2001]). Mandatory character references insured that those lacking essential moral fiber never entered the university. Still, at least some persons were understood to have reason or to have sufficient inclination to acquire it (the period, after all, celebrated rationalistic analyses). Thus a disciplined pedagogical approach to clear and differentiated bodies of knowledge became feasible. As a result, pedagogy grew increasingly codified in specialized organizations, roles, and materials, as in the formalization of pedagogy itself. The textbook commenced its reign as the ultimate carrier of general laws and fixed facts, and the standardized "introductory" course became the sanctioned start of a rationalized pathway from elementary to advanced studies.

In the contemporary or post-modern university much of this opens up. Everyone in principle should know and can, even through extra-classroom and extra-university participation and instruction (e.g., internships, study abroad). Recast as individual actors, people are instilled with

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with accurate discrimination, the course of argument; balancing nicely the evidence presented to the judgment; awakening, elevating, and controlling the imagination; arranging, with skill, the treasures which memory gathers; rousing and guiding the powers of genius....The habits of thinking are to be formed, by long continued and close application.... If a dexterous performance of the manual operations, in many of the mechanical arts, requires an apprenticeship, with diligent attention for years; much more does the training of the powers of the mind demand vigorous, and steady, and systematic effort."

authorities to create, discover, and use knowledge drawn from little more than daily experience.<sup>22</sup> Personal statements thus replace character references in university admissions. The new world is one where no one is obliged to know anything in particular (to the chagrin of critics [Hirsch 1987]) but where everyone is authorized to know anything at all. Thus specialized knowledge becomes a matter of individual taste, even as generalized competency and wide-ranging agency become *de rigueur*. The appreciation of Shakespeare is optional accordingly, but reading and writing – and the ability to exercise one’s interests in the choice of courses – are utterly compulsory.

Pedagogy in the post-modern era changes correspondingly, coming to emphasize participation, choice, decision, and experience, in versions of a “real world.” The textbook loses centrality and is at times replaced by students’ journals recording their own (broadly relevant) life lessons. Learning by doing becomes the preferred technique, such that composition gains ground on literature, and poetry courses replace reading with writing. Now university curricula are rife with free electives and independent studies (Robinson 2005), supplanting long lists of core requirements, prerequisites, and serial examinations (in 1906 at the University of the Cape of Good Hope, for example, the B.A. Exam followed the Intermediate Exam, which followed the Matriculation Exam). The idea is that the modern student, as a *bona fide participant* in the enterprise of education and life, has built-in capacities and interests to understand all aspects of social and natural reality. Thus cast as knowledge creator and educational consumer – with great sovereignty over the territories of knowledge – today’s student decreasingly requires, as in the Modern period, the moral and intellectual discipline of the introductory “principles” course or long chains of preparatory prerequisites. One consequence is a reduction in the standardizing

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<sup>22</sup> The valuation of individual experience in part underlies recent recognitions of diversity’s educational benefits (Hale 2003).

pressures on students – e.g., from required core courses, inflexible behavioral standards, rigid tracking systems, and so on – and the near-disappearance of the public rankings and humiliations that accompany failure to conform, as embodied in disciplined grading systems (with flunking grades).<sup>23</sup> The world in general opens up to understanding, and students join the category of the empowered granted natural abilities and inclinations to understand it. Pedagogy, then, becomes an enabling rather than disciplining process, linking students to available channels of knowledge and experience (Magolda 1999).

Thus, in contemporary society, more students appear, from a broader range of backgrounds. Their interests cover more domains, including all aspects of their own life experiences, and they are seen to be furnished with capacities to make gainful choices – among programs, courses, topics, and so on. Pedagogically, the instructional system unfolds to encourage the authority and active participation of students, both inside the classroom and in pedagogically-legitimated and accredited outside experiences.

## VI. DISCUSSION AND CONCLUSION

Over the last two centuries, a main social-scientific vision of societal development stresses specialization and differentiation as Modernity's (and now also post-modern knowledge

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<sup>23</sup> Public rankings and humiliations once were common. For example, the Dublin University Calendar of 1914-15 lists the hierarchical Order of Rank in the College: “Provost; Fellows; Noblemen, Sons of Noblemen, and Baronets; Doctors and Masters in the several Faculties; Bachelors; Fellow-Commoners; Scholars; Pensioners; and Sizars, who are students of limited means.” Additionally, Dublin held hierarchy-setting Corrections: “At half-past ten o'clock on Saturday mornings, the Junior Dean attends in the Hall, and reads out the names of all Students who have been punished for neglect of duties or other offences.”

society's) key tendencies. Operational complexity greatly increases. From this perspective, expanded contemporary education is a functional response, training young people to meet the demands of more and more intricate roles. On one hand, this idea is quite convincing, in part because it echoes the self-depictions of modern educational institutions. On the other hand, doubts arise – why does the training for complex, differentiated, and specialized roles occur off-site, in a relatively unified university, making grand claims to transcendent truths and continuity over time, organized around models that flow worldwide across the most variable societies?

The doubts are not only theoretical but are routinely articulated in the world of practice. For the last two centuries, a common refrain depicts or desires or fears the destruction of the integrated university and its cultural Canon in the face of specified training requirements. Differentiation is said to amplify the need for focused, flexible, and site-specific modes of preparation – in place of the university's sweeping truths. And yet for all the doomsday prophecies, the university holds steadfast and even flourishes throughout the period, showing long-term and across-the-board growth, which in recent decades grows dizzying. The university certifies people for more and more of the roles of the modern system, enrolls massive proportions of the young, and provides instruction on a constantly broadening range of topics.

Here we interpret this outcome by emphasizing the expansive centrality of the universalistic cosmological bases of contemporary society, rather than the differentiation and specialization of the roles arising under these bases. We understand the striking expansions of the university's student enrollments and academic contents first by re-designating the characteristic traits of Modern (and now post-modern) society from specialization and differentiation to universalization, which intensifies the interpenetration of the global and universal with the local and particular. We understand university expansion second by re-conceiving the institution's defining task as a

generalizing one with religious overtones – to render the world in encompassing law-like frames, rather than to impart specific role-oriented skills.

Given these alternative perspectives on society and the university, it becomes relatively easy to account for several empirical phenomena that stymie standard accounts. This is foremost the case vis-à-vis the university's astonishing expansion and global diffusion, and it furthermore pertains in regards to the university's high levels of isomorphism, and to its enduring cohesion under a unifying frame.

All of this holds especially true in the wake of World War II, as society relocates from nation-states and citizens out into a world society of empowered individuals embedded in a rationalized and scientized context. As the old national boundaries around nature and society fall away, as the pool of beneficiaries and investigators extends worldwide, and as the persons who root it all grow individualized and activated, universalization is enabled and set free.

For the university's knowledge and knowers, and for the pedagogy that connects them, the implications of society's reinvention are vast. The new context recharges old processes of rationalization and ontological elaboration, yielding great expansions both in what can and should be known and also in who can and should know. These in turn lengthen the menu of approved strategies, techniques, and approaches for joining knowledge and knower as one. The new societal context favors the rise of individual-based experiential knowledge, even as it grants to students greatly enhanced command of learning and authority. Pedagogy shifts accordingly, with emphasis on empowerment rather than discipline and on participation rather than imitation.

The “post-modern knowledge society” that arises in consequence is marked by the exceptional degree to which the university is opened to society (including, of course, the bogeyman of

corporate capitalism, but also every other institution demanding entry into the curriculum and research, pedagogy, and the enrollment roster). But it is also distinguished by the extraordinary degree to which society is built around the university – its abstracted and universalized understandings and its highly consequential degree certifications. In this dual process, the forces underlying university expansion are clearly apparent.

A striking feature of the resultant contemporary university is that it is not only built on globalized and universalistic claims, but is in fact globalized as an institution. There are, of course, traditional country-to-country and university-to-university variations. But the trends we analyze are global in scope, describing worldwide change and impacting the whole population of universities. Most impressively, even the resistant old European core institutions now are compelled to surrender centuries of feudal and early modern tradition under the pressures of what is called the “Bologna Process.” Where change is too slow, private universities arise to fill in the gaps. In the developing world meanwhile, with fewer inertial traditions to support resistance, change is even more rapid. The worldwide resonance of our story is loud and clear.

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