Routledge
Taylor & Francis Group

Design Philosophy Papers

ISSN: (Print) 1448-7136 (Online) Journal homepage: http://www.tandfonline.com/loi/rfdp20

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To cite this article: Ken Friedman (2003) Design Education in the University: A Philosophical and Socio-Economic Inquiry (Hot Debate), Design Philosophy Papers, 1:5, 243-253

To link to this article: http://dx.doi.org/10.2752/144871303X13965299302596

Design Philosophy Papers VOLUME 1, ISSUE 5 PP 243–254

Design Education in the University

A Philosophical and Socio-Economic Inquiry (Hot Debate)

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Life and work in the global knowledge economy demands more of education than has ever been required in human history.

At first, what is now called design education took place in the apprentice tradition of the artisan craft guilds. When formal and informal schools for craft or art developed, they took a central role in design education. Some of these became schools of art and design. In nations where design was taught outside the apprentice tradition, these were the primary centers of professional design and craft education until recently.

Over the past five decades, however, design education moved into the university. Design education in North American has been taught in university departments since the 1950s. These have generally been departments of art and design, and design has been seen as a form of applied art or craft skill. Some universities also developed specialized design programs in colleges of architecture, engineering, or – later – information science. European

schools of art and design remained independent until the 1990s, when a shift to university status became common.

The transition of design education to university study was not a response changes in North American higher education, however. It was a consequence of the new needs and demands of the nascent knowledge economy. These needs and demands affect all forms of professional education. The design professions involve advice to clients. In some cases, these are internal clients within a large firm or business that employs a designer on salary. In many cases, these external clients turn to a design consultancy for help in planning, making design policy choices among alternatives, problem solving, or any other number of professional decisions. Forms, products, software, or images are often part of the solution to many design problems, but artifacts are the implementation of a design solution. Design itself is a planning process.

The increasingly clear focus on the role of knowledge in every field brings about a richer and deeper understanding of what it is that professionals do. In design, this has shaped a distinction between the planning and problem solving process common to all professional design, and the specific artistic and artisan craft skills used in any specific design solution.

For this reason, the past quarter century saw many of the independent design schools of the United Kingdom first grow into polytechnics and later merge into universities. A similar process took place in Australia. In other nations, independent design schools took on university status by government decision. In both cases, these university schools now face the challenges of all university level professional schools.

The challenges that face contemporary design education can be seen as a necessary outcome of the role that the design profession plays in a larger society. If we fail to recognize this important fact, changes in design education and curriculum can become a matter of fashion as university administrators attempt to attract a proper number of students.

Nothing could be more dangerous to our conception of what university-level design education is or should be.

The University Today

Modern universities have many roles. They prepare citizens for life in industrial and post-industrial democracies. They train people to work in demanding jobs. They enable individuals to understand and interpret the world around them. They offer individuals the opportunity to think about fields of inquiry and study. They host research programs that create new knowledge. They establish projects to apply the knowledge that reach generates. Universities fulfill all these functions and more.

The curriculum is the mechanism through which the university meets its obligations to students. With the exception of individual

faculty research – but not excepting research training and student research – delivering the curriculum is in some respects the core activity of a university.

The importance and scope of curriculum in a serious university requires curriculum development to be a large systemic enterprise. Curriculum involves course planning, course content, pedagogical delivery, and learning objectives for the individual teacher. For the student, it involves learning styles, personal development, mastery of content, and mastery of skills. At the program level, it requires coordination among teachers and across courses. At the school and university level, it involves other issues still.

In design, curriculum development involves eight kinds of education. In university, these include 1) undergraduate education, 2) professional education, and 3) research training. Many schools offer 4) lifelong learning, 5) continuing education, and 6) executive education. Some schools also offer 7) vocational training and 8) special courses. Since design is both a field of professional practice and a research discipline, the plural dimensions of research and practice affect all curriculum needs.

To place today's curriculum challenges in context, it is helpful to explore the evolution and changing role of the university over the past five thousand years. Without giving the larger history, it is worth reviewing some highlights of the relatively recent past.[1]

The Shift to Research Universities

The shift from medieval universities to modern research universities was a long, slow process that involved many strains and difficulties. One typical example of conflict gave rise to Kant's famous series of essays, 'The Conflict of the Faculties'.[2]

The core of the dispute was a conflict between the so-called lower faculty of philosophy and the so-called higher professional faculties. The conflict raised an important question in university life: how is knowledge to be established, and which faculty shall govern? This was a conflict between the free search for knowledge and the bounded search for knowledge. The free search for knowledge was a search for pure truth that goes back to the Platonic Academy. The bounded search for knowledge involves the applied knowledge of the professions, a form of knowledge constrained in Kant's time by the obligations of service to church or state, and governed by the needs of ecclesiastical and public policy.

On the one hand, the claim of professional education was – and is – a claim of service to society. It is bounded by the oath of service that each physician, lawyer, or priest takes on entering office, and it stands for the highest professional ideals of humanity. On the other, it is subject to constraints that generally restrict the concept of knowledge to what is accepted today – or to what has been acceptable in the recent past. This is a contrast with the free search for knowledge on which new knowledge depends.

Both principles represent an important social value. The challenge to universities is that each principle has at different times had superior claim. Most often, the claim of service has prevailed because it is linked to the funds that establish and support the university.

One key issue in this great debate is the concept of the lower faculty. The idea of a lower faculty is not an idea of reduced status, but a concept of fundamental standing, for it is the lower faculty on which the university rests. The lower faculty is the first faculty, and philosophical knowledge is the foundation on which the university depends. While the higher faculties generally represent worldly power and higher social standing – not to mention better salaries – the higher faculties cannot exist without the lower.

We see the conflict of the faculties in several current debates. One is the debate between the university as a center of free inquiry and the university as a center of applied knowledge and social service. Another is the debate on how the university shall be controlled and governed – whether by the professorate on behalf of science, or by governors representing state, church, or private founders. These debates find voice echo in such important current books as an updated discourse on the conflict of the faculties[3] or Bill Readings's highly regarded critique of the university in the post-industrial nation-state.[4]

These debates are relevant to design education in several ways. These include the frequently conflicted relations between theory and practice and the difficulty of linking the design curriculum to the larger university curriculum. The conflict of the faculties also occurs in the insistence of many design teachers that design schools teach a special professional knowledge that must be linked to the practicing profession, which they claim to represent, as contrasted to the larger body of knowledge represented by the university professorate.

When this debate touches on design schools, three paradoxical aspects condition the claim of professional knowledge by design teachers. First, it is linked to the crafts guild tradition that was never connected to universities. Second, none of the learned professions considers design a profession, and most professionals regard design as a vocation connected neither to the lower nor the higher faculty, but to a tradition of vocational education outside the university entirely. Third, few design teachers genuinely represent design profession. Few leading designers teach, and relatively few design teachers have had active careers in business or industry. Interestingly, those who have ha an active design career tend to enter the university because they love research. It is a doubly interesting that many successful designers who become academics argue for the new curriculum. In contrast, those who argue for guild knowledge and craft traditions tend to represent the art and craft approach, and – for

the most part – these art and craft designers have had no major work outside design schools.

Kant's debate set the stage for the birth of the first modern research university, the University of Berlin, established in 1809.[5] Research became a central feature of the university. Students attended the medieval university to pursue a career in church or state service. Training for the professions gave way to a vague post-medieval education in which the sons of gentry and nobility were expected to spend time engaged in a transition from childhood to manhood. While these universities followed the noble goal of training for citizenship expressed by Newman and others, universities were also places where students drank away the lazy days, learning to duel or brawling in place of study with professors who rarely (if ever) taught.[6] The post-medieval university culture was the basis of Adam Smith's savage critique of Oxford in *The Wealth of Nations.*[7]

The major change from post-medieval to modern university came in the United States, when a century-long move created the great land grant universities, the major general universities, and the full-fledged research universities that have become the model for universities around the world today.

At the end of the Second World War, the United States made a far-reaching and influential decision when Congress enacted the Veteran's Readjustment Act of 1944. Commonly called the GI Bill, the act made it possible for all returning service members to attend university.[8] Higher education was no longer a privilege of the fortunate few. The GI Bill and a host of successive measures made it possible for nearly any student to attend university, at least to attend the great public universities where tuition was reasonable and quality high. This, in turn, created rising expectations for access and knowledge, and widespread higher education became a cornerstone of the coming knowledge economy. The relation between broad student participation in university life and the impact of higher education on the greater society is a central fact of academic life today.[9] The result is visible in the shifting role of knowledge in modern industrial life. This, in turn, has brought about a powerful transition in every industrial democracy that strives to maintain its position relative to the other developed nations.

The creation of universities has become a general democratic decision of the electorate in many places, and a strategic initiative of government in others. The result has been the same. Universities have been established more widely and in greater numbers than ever before. Some have grown out of other institutions. Some have come about by merger. Altogether, there are some tens of thousands of universities around the world. Only a small number of the universities we find today existed a century ago, and many are only a few decades old.

The Four Challenges of Higher Education

From the most ancient to the newest, all universities face four challenges that have been at the core of higher education for the past five thousand years. These are:

1) Creating new knowledge,
2) Preserving existing knowledge,
3) Training specialists, and
4) Educating citizens

These challenges represent an inherent dialectical tension.

The requirements of new knowledge demand a foundation in earlier knowledge while pushing the boundaries of what is known. This means negotiating a delicate series of forces that draw the past into the future. At some moments, the need for preservation emphasizes the past, and love of the past often involves a tendency to preserve the past intact. At other times, the need for new knowledge can overwhelm the past, and those who move forward sometimes care little for what we have known as societies and as individuals.

The first institutions of higher learning were imperial and religious centers of specialized education created in vastly hierarchical societies where a few knowledge specialists served even fewer great lords and potentates, all of them ruling a vast and oppressed majority with little thought for service to the whole.

The Greek ideal of democracy brought about a new kind of higher learning: education for the wise exercise of civic responsibility. This was not democracy as we know it today. Only a few citizens could afford this education in city-states where only a few more were entitled to vote. These societies depended in great part on slave labor and the subjugation of smaller and lesser cities to the great powers of the era. At the same time, the ideal of democracy set in motion a chain of events that would eventually affect the universities of the modern world.

This ideal would finally translate into the modern democracies as a tension between education for the few and education for an increasingly large many. In different ways, this tension has been a pendulum driving the growth and spread of education from the first days to our own time.

The two poles of knowledge and citizenship also establish a subtle dimension of opposing and cooperating tendencies.

Professions require specialisation and the preservation of a coherent body of knowledge. This cements professional engagement and permits the management of professional practice. At the same time, all professions require new knowledge to improve and grow. This demands research and a challenge to what is known. This challenge in itself can weaken professional solidarity while strengthening the profession in the long term.

Professions are by nature inclined in two directions. In one direction, they serve the larger polity. Most professions are granted formal control of professional affairs and high social status because they serve the larger polity. In one sense, all professionals are citizens who act on behalf of the larger society. At the same time, the privileges and opportunities that drive professional development set professionals at odds with fellow citizens outside the professional group.

Any diagram of the relationships among the four challenges will reveal a series of conflicting and communicating forces that operate in an energising dialectic. Each step demonstrates tensions between specialisation and generalisation, between theory and practice, between research and repetition, between hierarchy and democracy, between the pull of the past and the press of the future.

These tensions meet today in a new knowledge economy. The central virtues and challenges of the knowledge economy are simple. Societies must know more and do more to thrive. Knowledge is an inherent property of individuals. To thrive, therefore, any society rooted in a knowledge economy must achieve two goals. The first is to increase its corps of professional specialists. The second is to widen democratic participation.

The rich web of social interactions implicit in this simply stated challenge is not simple to achieve. I will not address the problem of achieving a balanced social network here. Instead, I will use the concept to set the stage for a few basic thoughts on design education for the knowledge economy.

If today's design skills could still be taught or learned in artisan guilds or independent design schools, this conceptual background would not be important. The fact is that nearly every form of design that has a purpose in today's world is far too complex for the older forms of education that were suitable as recently as the 1970s. Designers are now professionals, and they must become increasingly skilled to perform the professional services that are now required of them. Developing these skills is a challenge that requires university education and the research culture around which universities grew.

Today, we designers and design educators find ourselves debating the nature of research in a formerly vocational field. While most of us teach in universities, our departments and schools are relatively recent. In some places, design schools have only entered the university or attained university status quite recently. Doctoral education and research training are a central concern for the field, but some of us seek new forms of doctorate while others are not quite sure what the doctorate is. This debate can be framed in the question of the new university.

The Shift to a Knowledge Economy

Before turning to the specific challenges of design education in today's universities, I want to set a background in several issues that face all forms of professional education in a knowledge economy.

The industrial revolution of the eighteenth century brought enormous change to the world economy. In the nineteenth century, the electrical telegraph ushered in the first telecommunication era, and by the end of the century, the telephone and the railroads had reshaped societies around new communication and transport media. Soon after, Henry Ford's mass production methods and the automobiles they made possible would reshape much of the world. Over this same period, physical science advanced from Newton's mechanics to Maxwell's equations, and then it leaped forward as Einstein developed the theory relativity and paved the way for quantum physics. By incremental steps and quantum leaps, these changes shifted the world from agriculture to mechanics to electrics and finally toward electronics.

Just before the Second World War, the Australian economist Colin Clark [10] created an important classification scheme for different kinds of economies.[10] He identified three classes: primary, secondary, and tertiary. Primary economies extract wealth from nature, secondary economies transform extracted material through manufacturing, and tertiary economies engage in service. At the same time, the Canadian economist Harold Innis[11] was laying the foundation of a social theory based on information, while American economist Fritz Machlup[12] developed the first theories of information economics. During these same years, Peter Drucker studied the managerial society.[13] In 1959, he concluded that we were about to enter the post-modern world, a world defined by well-known social forces meeting in radical new configurations.[14] In the 1960s, Daniel Bell summarized these developments in the concept of a post-industrial society, stating that a significant change in the character of knowledge was taking place, with a professional knowledge elite developing to manage it.[15]

By the time of Colin Clark's model of societies, a focus on knowledge became inevitable. So, while the vocabulary of the knowledge economy is relatively new, the idea of a knowledge economy has been emerging for the past half century. Effective knowledge work demands creating, sharing, and distributing information as the raw material that individuals and organizations process into knowledge. The administrative principles developed in by Frederick W. Taylor, Henri Fayol, and Henry Ford restricted the flow of information and power in vertically stratified organizations.[16] The management principles of a knowledge economy encourage the flow of information and knowledge within dynamic networks.

Today, these forces affect university education at a time of crisis. National economies suffer many forms of turbulence. Aging populations and a shrinking base of workers who must pay for increasingly costly social services and pension requirements exacerbate these strains. As societies attempt to meet a greater range of demands across an increasing range of social services, the demands on higher education increase while resources are increasingly constrained.

Good universities balance the tension between these forces by developing better and more effective curricula. This is true of education for professions, liberal arts, humanities, and technology. It is even truer of fields such as art and communication with a weak link to career outcomes – and it is true of many design fields. Effective education is more important in these fields than elsewhere. Any serious inquiry into design education must offer a systematic overview of the many issues involved in curriculum development for design. It must relate these issues to the changing needs of both the profession and the discipline.

Design is changing as a professional field and a discipline. To understand the curriculum needs of university-level design education today and tomorrow, requires placing design in the context of the larger knowledge economy within which designers now work. Systemic analysis that sets professional education in a university for the knowledge economy must form the basis of effective education in design programs.

Notes

1. For a more comprehensive account of these issues see Ken Friedman, 'Design Curriculum Challenges for Today's University' keynote conference lecture for Enhancing the Curricula: Exploring Effective Curricula Practices in Art, Design and Communication in Higher Education, Center for Learning and Teaching in Art and Design, First International Conference, Royal Institute of British Architects (RIBA) London 10–12 April 2002. Co-sponsored by ELIA (European League of Institutes of Arts) and ADC-LTSN (The Art, Design and Communication – Learning and Teaching Support Network) London: CLTAD, The London Institute, 2003, 29–63.
2. Immanuel Kant *The Conflict of the Faculties* (Der Streit der Falkultaeten, 1798). Translated with an introduction by Mary J. Gregor, Lincoln, Nebraska: University of Nebraska Press, 1992.
3. Richard Rand (ed) *Logomachia: The Conflict of the Faculties* Lincoln, Nebraska: University of Nebraska Press, 1992.
4. Bill Readings *The University in Ruins* Cambridge, Massachusetts: Harvard University Press, 1996.
5. Claudius Gellert 'The German Model of Research and Advanced Education' in *The Research Foundations of*

Graduate Education: Germany, Britain, France, United States, Japan Burton R. Clark (ed) Berkeley: University of California Press, 1993, 5–11.

6. John Henry Newman *The Idea of a University* Chicago: Loyola University Press, 1927. See also *John Henry Newman: The Idea of a University* Frank M. Turner (ed) with contributions by Martha McMackin Garland, Sara Castro-Klaren, George P. Landow, George M. Marsden and Frank M. Turner, New Haven, Connecticut: Yale University Press, 1996. See esp. Turner on 'Newman's University and Ours' 282–301.
7. Adam Smith *An Inquiry into the Nature and the Causes of the Wealth of Nations* (1776), Chicago: University of Chicago Press, 1976: v. II, 283–296, 334–335.
8. Robert H Fenske, Frank H. Besnette and Stephen M. Jordan 'The Process of Setting Tuition in Public University Systems: A Case Study of Interaction Between Governing Board and Campus Management' in *Managing Colleges and Universities* Allan M. Hoffman and Randal W. Summers (eds) Westport, Connecticut: Bergin and Garvey, 2000, 105–114.
9. Denise C Ottinger 'Student Development: Its Place in the Academy' in *Managing Colleges and Universities* op cit 139–159.
10. Colin Clark *Conditions of Economic Progress* London: Macmillan and Co., 1940.
11. Harold Innis *Empire and Communications* Oxford: Oxford University Press, 1950; *The Bias of Communication* Toronto: University of Toronto Press, 1951; *The Idea File of Harold Adams Innis* William Christian (ed) Toronto: University of Toronto Press, 1980; *The Bias of Communication*, Introduction by Paul Heyer and David Crowley Toronto: University of Toronto Press, 1995; *Staples, Markets and Cultural Change* D. Drache (ed) Montreal and Kingston: McGill-Queen's University Press, 1995.
12. Fritz Machlup *The Production and Distribution of Knowledge in the United States* Princeton, New Jersey: Princeton University Press, 1962; *Education and Economic Growth* Lincoln, Nebraska: University of Nebraska Press, 1970; *Information Through the Printed Word: the Dissemination of Scholarly, Scientific, and Intellectual Knowledge* New York: Praeger Publishers, 1978; *Knowledge and Information* Princeton, New Jersey: Princeton University Press, 1979; *Knowledge and Knowledge Production* Princeton, New Jersey: Princeton University Press, 1980; *Knowledge, Its Creation, Distribution, and Economic Significance. Vol 1 Knowledge and Knowledge Production* Princeton, New Jersey: Princeton University Press, 1982; *Knowledge, Its Creation, Distribution, and Economic Significance. Vol 2 The Branches of Learning* Princeton, New Jersey: Princeton University Press, 1982; *Knowledge, Its Creation, Distribution, and Economic Significance. Vol 3*

The Economics of Information and Human Capital Princeton, New Jersey: Princeton University Press, 1984. See also: Fritz Machlup and Una Mansfield (eds) *The Study of Information* New York: Wiley, 1983.

13. Peter F. Drucker *The Age of Discontinuity: Guidelines to our Changing Society* New York: Harper Torchbooks, 1973; *The New Realities* London, Mandarin, 1990; *Management Challenges for the 21st Century* New York: Harper Business, 1999.
14. Peter F. Drucker *Landmarks of Tomorrow: A Report on the new 'Post Modern' World* (1959) Rutgers, New Jersey: Transaction Publishers, 1996 (with a new introduction by the author).
15. Daniel Bell *The Coming of Post-industrial Society: A Venture in Social Forecasting* New York: Basic Books, 1999.
16. Frederick Winslow Taylor *The Principles of Scientific Management* New York: Norton, 1911; Henri Fayol *General and Industrial Management* (1916) London: Pitman Learning, 1987; Henry Ford *My Life and Work* Garden City, NY: Doubleday, Page, and Co., 1922; Henry Ford *Ford on Management: Harnessing the American Spirit* Oxford: Basil Blackwell, 1991. See also: Roy Jacques *Manufacturing the Employee: Management Knowledge from the 19th to 21st Centuries* London: Sage Publications, 1996; Daniel Nelson *Frederick W. Taylor and the Rise of Scientific Management* Madison Wisconsin: University of Wisconsin Press, 1980.