Graphic Design Education as a Liberal Art: Design and Knowledge in the University and the "Real World"

by Gunnar Swanson

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Although this essay concentrates on issues of graphic design education, my arguments also pertain to education in other areas of design; most apply to arts education and many are relevant to post–secondary education in general. I assume a university setting, although many of the ideas presented in this essay apply equally to art schools. Finally, just as the essay calls for a broad view of design education and a broad context for design, I hope it will be read in a broad context and the arguments applied wherever appropriate.

Foreword

WITH ALL OF THE PRESSURES ON HIGHER EDUCATION and all of the questions facing graphic designers and design educators, why reconsider the basic premise of graphic design education? Since inertia tends to discourage basic change, why not concentrate on excellence within the current system?

The answers to those questions center on both fairness and survival. Ask most graphic design teachers what happens to their students who do not become graphic designers and you will get the same silence or lecture that you hear from basketball coaches when someone asks about players who don't go on to the NBA. Not just the reaction is comparable, the whole situation is. Measuring the success of college sports by the number of players that go on to play professionally often

leads to players' being cheated out of a real education and a chance for a satisfying life. We need to consider whether our attitudes toward "professionalism" in design education do the same.

Graphic Design Education

Though hardly homogeneous, the vast majority of graphic design programs, whether in vocational schools, art schools, or universities, are, at least in concept, vocational training programs.

The Bauhaus, which was grounded in craft ideology and stressed intuitive solutions to design problems, provided the model for much of modern design training.[1] Hannes Meyer, the architect who became director of the Bauhaus after Walter Gropius, brought in experts from other disciplines as speakers but his tenure was too short to have established a design theory at the Bauhaus. When László Moholy-Nagy formed the New Bauhaus in Chicago in 1937 (which later became the Institute of Design at Illinois Institute of Technology), he included lectures by philosophers and scientists.[2] Since then, various other programs have introduced semiotics, literary theory, etcetera to their curricula, and there is a growing recognition that a wide-ranging education is needed for a synthetic and integrative field such as design to progress.

By "synthetic" I mean that design does not have a subject matter of its own—it exists in practice only in relation to the requirements of given projects. The path of progress for the field is not defined by the next great unsolved design problem. Design is "integrative" in that, by its lack of specific subject matter, it has the potential to connect many disciplines.[3]

Even while some design programs are strengthening their liberal studies requirements, the tendency toward professional rather than general education at colleges and universities has been growing for the past two decades. Graphic design programs are, on the whole, doing well. Students and parents alike seem to be impressed with the idea that there will be a job waiting at the end of four years of study and, at many schools, graphic design has made up for declining enrollments in traditional fine arts programs.

As the estimated 2000 graphic design programs in the US pump out more graduates than there are jobs in traditional graphic design firms and corporate

1 For a discussion of the development of modern design education, see Victor Margolin, "Design Studies and the Graphic Designer" *Proceedings of the Graphic Design Education Association 1990 Symposium*, 58–62.
2 Margolin, 60.
3 For an expanded discussion, see Richard Buchanan, "Design as a New Liberal Art" *Papers: The 1990 Conference on Design Education,* Industrial Designers Society of America, 15–16.

design departments, the natural tendency may be toward entrenchment of professional training. Each school would reason that in fairness to its students it must do a better job of providing entry-level job skills so its graduates have a chance in this competitive job market.

In light of this tendency toward professionalism, it may seem counterintuitive then that I suggest that we not only increase the augmentation of design training with more liberal studies, but also reconsider graphic design education—as a liberal arts subject.

The Historical Context of the Liberal Arts

The concept of liberal arts was first delineated by Aristotle. He characterized liberal studies as those studies fitting for the education of a freeman. He made "a distinction between liberal and illiberal subjects," the latter being those that would "make the learner mechanical . . . [and] make the body, soul, or intellect of freemen unserviceable for the external exercise of goodness."4

Aristotle defined the liberal arts as having four points. First, they are not mechanical. Second, they are not utilitarian, i.e., they have intrinsic value; even if extrinsically useful, their pursuit is useful in and of itself. Third, if an area of study is undertaken as a liberal study, there must be no specializing that would restrict the mind. Finally, liberal arts study must be undertaken for its intrinsic value, not merely to earn a living or to impress others. (Thus intrinsically valuable studies undertaken for the wrong reasons would be disqualified as illiberal.)

It would be easy to dismiss this classical view of the liberal arts as a product of and for a society where routine work was left to slaves. Although the distinction of liberal versus illiberal studies came to light in that cultural context, the development of reason, moral grounding, and pursuit of truth was a prerequisite for citizenship in the fullest sense. Despite their primary interest being intrinsic, Aristotle recognized their utility in building a democratic society. Since our conception of democracy is broader based and more inclusive than that of the ancient Greeks, the current cultural context does not argue for the reduction of liberal studies, but rather for broadening their influence.

It is not clear what subjects Aristotle considered liberal, but the Greeks and later the Romans came to agree on seven liberal arts: the trivium of grammar, logic, and rhetoric and the quadrivium of arithmetic, geometry, music, and astronomy. In medieval times, reason was subordinated to revelation until St. Thomas Aquinas harmonized Christian doctrine and Aristotelian philosophy with the addition of theology—reason leading to the knowledge God had revealed. The humanism of

4 Aristotle, "Politics" in *Aristotle on Education*, John Burnet, translator, 1903, Cambridge University Press, London 107–109.

the Renaissance rediscovered Aristotelian liberal education through the rediscovery of classical literature and came to equate liberal education with literary studies.

It was not until the nineteenth century that various concepts of liberal education akin to Aristotle's theories were reintroduced (reconsidered, of course, in the light of modern knowledge). Cardinal John Henry Newman's views are seen as more-or-less purely Aristotelian, but practical values played some part. In his lectures during his tenure as Rector of the Catholic University of Ireland in the 1850s (published in 1873 as The Idea of A University), Newman claimed: "when the Church founds a university, she is not cherishing talent, genius, or knowledge, for their own sake, but for the sake of her children . . . with the object of training them to fill their respective posts in life better, and of making them more intelligent, capable, active members of society . . . ,"5 but his main emphasis was on purely intrinsic value. According to Newman, the University's

"function is intellectual culture . . . . Intellect must have an excellence of its own . . . the word 'educate' would not be used of intellectual culture, as it is used, had not the intellect had an end of its own; that had it not such an end, there would be no meaning in calling certain intellectual exercises 'liberal,' in contrast with 'useful,' as is commonly done . . . ."6

The nineteenth century English critic Matthew Arnold modified Aristotle's view that the pursuit of knowledge is intrinsically worthwhile and the fulfillment of man's rational nature. Arnold concentrated on building rationality—in his view, knowledge is important in that it allows one to develop abilities and live a harmonious natural life.7

The value of the liberal arts, however, was not universally assumed. Harvard instituted the elective system in 1883 with the purpose of allowing students to move in the direction of their future careers. Johns Hopkins University was founded in 1876 as the first research institute in the United States. In 1890, the Harvard Graduate School of Arts and Sciences was established in much the same mode. Its main purpose was, and still is, the production of college teachers with doctoral degrees, while producing scholarly research that is, at least in the ideal, not solely utilitarian.

A movement for "liberal culture" in opposition to both utilitarianism and research was significant enough that, in 1909, Charles William Elliot, who instituted both the elective system and the graduate school, was replaced as Harvard president. Within a few years the debates over educational philosophy died down. Most universities soon accommodated utilitarianism of one sort or another and the

5 John Henry Newman (Cardinal), *The Idea of a University*, 1959 Image Books, Doubleday and Co., Garden City, NY, 9.
6 Newman, 149.
7 Paul Hirst, "Liberal Education," The Encyclopedia of Education Volume 5, Lee C Deighton, ed., 1971 The Macmillan Company & Free Press, New York, 505–509.

liberal arts.8 The notion that professional training, general education, and research were incompatible lost most of its voice in the early part of the twentieth century. This accommodation of multiple approaches continued, expanding the nature(s) of the university. By the mid 1960s, Clark Kerr, then president of the University of California, coined the term "multiversity," comparing the "idea of a university" to a village with its priests, the idea of a modern university to a one-industry town with its intellectual oligarchy, and the idea of a multiversity to a city of infinite variety.9

In such a "city of infinite variety" that provides the football team for local and national entertainment, the hospital where babies are born, as well as scholarship, professional training, continuing education, and a multitude of other services to diverse publics, Kerr recognized that"There is less sense of purpose than within the town but there are more ways to excel."10 The clarity of Cardinal Newman's goals may be lost, but the opportunities are more numerous and varied.

College Education Today

It may be that universities have survived by being, to a large extent, all things to all people. Higher education has largely escaped serious damage from parallel charges of elitism and abandonment of traditional standards, eggheadedness and mundaness, or impracticality and bourgeois debasement by maintaining a wide variety of virtues, thus maintaining support of an eclectic plurality.

However, attempting to be all things to all people has produced some paradoxes. For example, the same psychology course may be a start toward the understanding of human behavior for one student, a "breadth" requirement for another, and an introduction to what will be a specialized field of study and research for a third. An art history course might add spiritual enlightenment to the psychology class's list of aspects; an English class might also provide remedial communication for native speakers and, increasingly, language training for foreign students.

Largely because standards of excellence and paths of career progress are more clear within the research/publishing/specialization path than they are in a teaching/personal enlightenment/broad education one, the liberal arts have become less an approach to integrated learning and more of a list of fields defining "broad education." Even though the vast majority of students have no intention of specializing in a given academic subject, classes tend to be preparatory for graduate study and thus pre-professional education.

Although there may be careerist tendencies, the system of students with

8   Louis Menand, "What are Universities For?" Harpers, v. 283, #1699, December 1991.
9   Clark Kerr, The Uses of the University, 1966, Harper, New York., 39–40.
10   Kerr, 41.

traditional subject majors assumes preparation for life as well as vocation. Philosophy teachers, for example, do not measure their success based on whether the majority of their students become philosophers. Likewise, the goal in literature is not only to create producers of literature or literary critics, but to create literate people. By contrast, ask teachers of graphic design about students who don't make careers in design or a related field. Most often, those students are seen as failures. There is little feeling that graphic design has prepared the student for life or a career other than design.

On the whole, design schooling has not helped students become broader thinking people who can help shape a democratic society. The tools for analysis and insight of many disciplines have broad extra-disciplinary application for understanding the world. The tools of graphic design do not seem to serve much purpose beyond a graphic design career. Graphic design education is not, for the most part, education. It is vocational training, and rather narrow specialized training at that.

Vocational Training for a Changing Vocation

It has become a cliché of career counseling to point out that most of today's jobs won't exist in fifteen years and most jobs that will exist in fifteen years don't exist now. Certainly the changing names of programs—commercial art to advertising design to graphic design to visual communication and sometimes back to graphic design—testify to the fact that, although there may be graphic designers in fifteen years, graphic designers will likely be doing something very different from the present vocation of graphic design.

Most four year graphic design programs try to teach something beyond "entry level skills," but preparing students for their first job is often seen as "practical education." It is questionable whether such job training could rightly be called education or even if it is rightly deemed "practical" If simulating a "real world" environment is the best preparation for a designer, design training should take the form of apprenticeships— what could be more "real" than the real world itself?

The entry-level jobs of the past were largely in production. Since paste-up artists are largely a thing of the past courtesy of small computers, many programs now struggle to produce computer operators. It is only faith that makes us assume that upward mobility will be available to the '90s version of the often-trapped (and now largely unemployed) paste-up artists. The QuarkXPress®, Adobe Illustrator®, and Photoshop® jockeys, today's electronic paste-up artists, may soon find their skills obsolete in the next technological revolution.

Design teachers should teach basic principles of form and communication, but

are, by teaching what they were taught, teaching the graphic designers of the twenty-first century how to be mid twentieth century graphic designers. Educators can and should examine trends (we know, for instance, that electronic communication will increase and become more flexible than it is currently) and try to prepare themselves and their students for the future. There is only one thing, however, that we really know with precision about the future—it will be different from today. Therefore, the best thing we can do for design students is to make them adaptable.

General Education and Adaptability
The correlation between general education and adaptability makes a belief in general education for designers widespread, although hardly ubiquitous. This belief is often tempered by a distinctly anti-intellectual streak in design teachers. In the mid 1970s, an industrial design teacher of mine told me I was "too articulate" and that great design happens when designers have no other way of expressing themselves than with form. Paul Rand, perhaps the best known living graphic designer and design educator, recently wrote that a "student whose mind is cluttered with matters that have nothing directly to do with design . . . is a bewildered student."[11] Clearly many design teachers and many design students see "academic" classes as time stolen from their true purpose—the design studio.

Rand's denial of "matters that have nothing directly to do with design" places design education clearly in the realm of vocational training. In addition to his questionable assumptions about the separability of form from meaning, Rand's statement assumes that any current list of subjects that "have nothing directly to do with design" will apply in the future.

Institute of Design at IIT professor Sharon Poggenpohl argued well for the opposite stance.[12] She adopted the term "contrarian" from Wall Street where long-term players, recognizing the cyclical nature of the stock market, determine what everyone else is doing and then do the opposite. I believe design educators must be contrarians and look at the fact that "practical education" is neither practical nor education and move beyond, as Charles Bailey puts it, the present and particular.

Graphic Design as a Liberal Art
What would graphic design as a liberal art entail? It would no doubt take a variety of forms. Certainly the current trend toward history and theory would be an element, but the switch to "liberal" design will require a change in outlook. We must begin

11 Paul Rand, *Design, Form, and Chaos*, 1993 Yale University Press, New Haven CT and London, 217.
12 Sharon Poggenpohl, "A Contrarian Approach to Graphic Design Education" *GDEA Proceedings 1990*, Graphic Design Education Association.

to believe our own rhetoric and see design as an integrative field that bridges many subjects that deal with communication, expression, interaction, and cognition.

Design should be about meaning and how meaning can be created. Design should be about the relationship of form and communication. It is one of the fields where science and literature meet. It can shine a light on hidden corners of sociology and history. Design's position as conduit for and shaper of popular values can be a path between anthropology and political science. Art and education can both benefit through the perspective of a field that is about expression and the mass dissemination of information. Designers, design educators, and design students are in a more important and interesting field than we seem to recognize.

Design and Scholarship

What form the new liberal field of design would take is unclear. Currently there is no clear role for design scholarship. Unlike most traditional fields of scholarship, design has no subject matter of its own, so it is hard to find models for this new approach. Design, in practice, exists primarily in response to an externally generated need or situation. Richard Buchanan, chair of the Department of Design at Carnegie Mellon, pointed out that the "subject matter for the designer is an indeterminate problem, made only partly determinate by the interests and needs of clients, managers, and the designer."[13] This contrasts with the more clearly defined subject matter found in other academic fields.

At present, design scholarship largely takes the form of historical analysis or criticism. Although there is a place for the history of design in and of itself, (just as in the histories of science and many other academic fields), it would be absurd to suggest that any field abandon itself wholly to the contemplation of its own past. Design in any full sense will, of course, involve methodology and the creation of designed objects.

Clearly most design programs would include a significant concentration on skills. This would hardly be unique to academia—language programs do not hesitate to have students conjugate verbs, chemistry students learn laboratory procedures, and there are professional aspects to social science classes. Technique will probably be a large part of any design program, but the meaning of techniques will take on more importance.

Buchanan has suggested rhetoric as the closest available model for design.[14] Rhetoric, as a field of study, is both the practice of verbal persuasion and the

13 Buchanan 1990, 15–16
14 Richard Buchanan, "Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice," Design Discourse, History, Theory, Criticism, Victor Margolin, ed. 1989, University of Chicago Press, Chicago, 91-109.

formal study of persuasive verbal communication. Design may be seen as the visual counterpart to rhetoric. Buchanan is quite persuasive in his argument that through designed objects, "designers have directly influenced the actions of individuals and communities, changed attitudes and values, and shaped society in surprisingly fundamental ways"15 Buchanan writes primarily of what is usually called product design or industrial design, but the case for graphic design as a parallel to rhetoric is more obvious.

Graphic design, more than other design areas, is usually directly about persuasion—intellectual, logical, aesthetic, and emotional. Thus the balance of practice and analysis of rhetoricians clearly makes sense for graphic design. This is not to say, however, that the formal procedures of rhetorical study should be applied to graphic design to the exclusion of all others. Grammatical, semiotic, theatrical, anthropological, psychological, physiological, philosophical, and political perspectives also need to be considered.

Design as a Liberal Art versus Design Plus Liberal Arts Mark Salmon and Glenn Gritzer argue for integration of liberal arts, in general, and social sciences, in particular, into the professional design curriculum.16 They reject the strategy of art faculty introducing social science material because of lack of academic preparation on the part of faculty, and that of team teaching with social scientists because of assumed lack of willingness on the part of faculty. Salmon and Gritzer advocate parallel content, where social science courses that correspond to the design curriculum are offered. For instance, interior design students would study courses on marriage and family, sociology, and occupations, while their design courses covered domestic design, office design, etc.

Such courses are to be encouraged, but, while parallel disciplines are the basis for understanding the context of design, we can hardly expect a real examination of design issues by non designers. Research into issues of typography and understanding, for instance, generally misses the questions a designer would ask. (Broad categories, such as sans serif typefaces, are often assumed to be homogeneous, alternative design solutions are rarely considered, etcetera.) Other fields can provide a framework for basic consideration of some design issues, but we cannot rely on them to advance design any more than medicine can rely solely on the work of biologists. The concerns of design will not be directly addressed by academia until it becomes an academic subject.

15 Buchanan, 1989, 93.
16 Mark Salmon and Glenn Gritzer: "Parallel Content: Social Sciences and the Design Curriculum".
Design Issues, Fall 1992.

Balancing Skills and Understanding

A primary task of design education is to find the balance between skills training and a general understanding that will benefit students, the field of graphic design, and working professionals. Bailey charts his ideal balance of skills and knowledge in British elementary and secondary education. Under his scheme, students in the earlier grades will be primarily involved in learning "serving competencies" or skills. Later, social sciences and other "inquiries into goings-on themselves manifestations of intelligence," will share the stage with, and ultimately take over from natural science and the like, or "inquiries into goings-on not themselves manifestations of intelligence." Bailey acknowledges that his allocation applies only to "a liberal and general education. Nothing is said . . . [about] specialist training."17 If for no other reason, Bailey's particular division cannot be applied directly to graphic design education because it ends at an age before most design training begins. It does, however, offer an analytical framework for considering components of an education.

It is too early to assign the activities of students in the hypothetical liberal field of design, but it is interesting to observe that the present pattern of education is often the opposite of the most common forms of professional training. At the risk of overcategorizing, most professional education begins with general knowledge, moves on to an overview of the profession's underpinnings, and concludes with specialized activity.

As a general pattern, design training runs the opposite direction. Although usually preceded by a "core" class, common to many of the arts, undergraduate training tends to be specialized design skills. It is only in the upper division, if at all, that undergraduates are introduced to history, theory, or a broader perspective on design. Early post-graduate work is often remedial skill enhancement, and it is only at the level of MFA study that many design programs introduce what resembles the abstract overview provided a freshman in an introductory social science course.

Is Design Important?

Designers and design educators spend much time and energy talking about developing public awareness of design and how to gain recognition for design. Victor Margolin points out that arguments over legal theory and even literary theory appear in popular magazines because people can see the importance for their lives, but design remains unnoticed.18 Can studying design be of general, not just professional, interest? Can the study of design inform other areas of study? We assume that a design student would benefit from studying anthropology; we

17 Charles Bailey, *Beyond the Present and Particular: A Theory of Liberal Education*, 1984., Routledge & Kegan Paul, London, 114.
18 Margolin, 73.

need to consider whether an anthropology student would benefit from the study of graphic design. Do we really have anything to offer outside of the sometimes questionable promise of a job?

Even a field as abstract, specialized, and self-referential as cosmology recognizes that its activity, in addition to its intrinsic value, ultimately matters because of its relation to general knowledge. In *A Brief History of Time*, Stephen Hawking writes:

"What would it mean if we actually did discover the ultimate theory of the universe? . . . In Newton's time it was possible for an educated person to have a grasp of the whole of human knowledge, at least in outline. But since then, the pace of the development of science has made this impossible. . . . Seventy years ago, if Eddington is to be believed, only two people understood the general theory of relativity."[19]

Hawking noted that relativity is now widely understood, at least in outline, and an ultimate theory of the universe could be absorbed by non-physicists. The real importance of the goal of cosmology for the world's best known cosmologist seems to be that philosophers could understand science as they did in the eighteenth century. Hawking bemoans the fact that science has become so technical and mathematical that only specialists can understand and philosophers' scope is reduced from the great tradition of Aristotle and Kant to Wittgenstein's statement that "The sole remaining task for philosophy is the analysis of language."[20] A unified theory of the universe could be understood by everyone, Hawking writes:

"Then we shall all, philosophers, scientists, and just ordinary people, be able to take part in the discussion of the question of why it is that we and the universe exist. If we find the answer to that, it would be the ultimate triumph of human reason—for then we would know the mind of God."[21]

The point is that, although each branch of study may be an end to itself, the progress of each field is doubly validated as it contributes to general knowledge. The revolutions in physics that Hawking seeks to surpass would not have come about without previous breakthroughs in mathematics. The revolution in literary criticism of the 1970s and 1980s would not have come about were it not for previous breakthroughs in linguistic theory.

In light of those linguistic and literary revolutions, I should point out that I don't share Dr. Hawking's disdain for Wittgenstein's goal of language analysis, although

19 It is said that, shortly after Einstein published his theory, Sir Arthur Stanley Eddington was asked it if were true that only three people really understood relativity and that he was one of them, he replied that he couldn't think who the third person might be. See Stephen Hawking, *A Brief History of TIme,* 1988, Bantam Books, New York, 167-168.
20 Hawking, 174-175.
21 Hawking, 175.

I do agree that a single task for any field might represent a too-narrow viewpoint. If the word language is used in the broadest sense, then language analysis is at the core of much of the humanities and social sciences. Design, and graphic design in particular, is in the position to be at the center of this study.22

Design's past failure to have carved a proper academic niche for itself may, in the end, be one of its saving graces. Design as a professional practice has often bridged fields as diverse as engineering, marketing, education, and psychology. Design as an academic study can do no less.

22 The choice for design is not as simple as "do we want to become the center of the new academy or do we want to continue as we have?" Universities of all sizes are cutting budgets. Support staff reductions and across-the-board cuts can only go so far before the pain of cutbacks will be greater than the pain of making basic decisions. Universities looking at departments to eliminate will naturally choose the "lesser" professional programs. Design and nursing have been the first targets at more than one school.

Liberal Arts and Graphic Design: Six Cautionary Questions

by Gunnar Swanson

TWELVE YEARS AGO I WROTE AN ARTICLE with he unassuming title "Graphic Design as a Liberal Art: Design and Knowledge in the University and the 'Real World'"1 I think it has been quoted more than everything else I've written combined. It also may be my most broadly misinterpreted writing. For many who have cited the article it has been a source of pithy quotes about design but for most it's been a source to footnote for the idea that graphic design students should get more of a general education.

I don't disagree with the promotion of liberal education for graphic designers. Liberally educated people are likely to be more interesting people; interesting people are more likely to be interesting designers. Broad education is good for people and it's good for society. The only problem is that my article wasn't about increasing liberal arts in graphic design education. It clearly and specifically stated that. It wasn't really even primarily about graphic design (although it was tangentially so.) It was about a crisis in liberal education. It did not propose augmenting vocational training; it proposed ignoring it. (I share some responsibility for the confusion. The article appeared in Design Issues and in several graphic design writing anthologies so I shouldn't blame people for assuming that it was about graphic design education.)

Whether we view the relationship of graphic design training and liberal education with gleeful anticipation or with dismay, there are some questions we need to consider.

Q #1: Who is qualified and how do we know that?
I still think it's an interesting idea: reinventing liberal arts education using a subject like graphic design or multimedia as the nexus of broad knowledge. I'd love to

1 *Design Issues*, MIT Press, vol. X number 1, Spring 1994; reprinted: *The Education of a Graphic Designer*, ed: Steven Heller; reprinted: *Looking Closer 2: Critical Writings on Graphic Design*, ed.: Bierut, Drenttel, Heller, & Holland

work on such a project (although I doubt it's in the interest of any graphic design program to abandon professional education.) I do have some worries about the implementation. The first is who would teach in such a program: Why would they be qualified and how could we tell? It's not an insurmountable problem for the first small program but it is a serious impediment to scaling design-as-liberal-art up to a size where it could have a real influence.

What many of us see as a crisis in the liberal education has a lack of integration at is heart. Liberal arts used to be defined as everything an educated man (yes, they were pretty much all men back then) should know. Now there's almost nothing common to the knowledge base of all educated people. There's not even a lot of common ground within a given academic discipline. The liberal arts have become like an old fashioned Chinese restaurant menu—take two from column A and one from column B. Nothing can restore universality—there's just too much to know—but a sense of coherence is important. Overspecialization seems to be the enemy of coherence.

But academic specialization has some distinct advantages. It promotes the goal of increasing knowledge and it helps ensure excellence. The concentration of knowledge raises standards in an era where complete general knowledge is an impossibility. As David Baker says about graphic design specializations, "There is something to be said for actual expertise."

What happens when graphic design faculty wander too far from teaching graphic design? These academic squatters can dilute graphic design education and provide substandard teaching of other subjects. By encouraging students to define their projects by personal interests, often far outside graphic design, a graphic design degree no longer certifies actual expertise. It needs to be clear exactly what it does mean. Academic squatting can undermine curriculum by substituting, say, political science in what was scheduled to be graphic design class. It is an ironic twist that designers, the very people who are supposed to understand systems, often undo curricular systems in this manner.

Q #2: Who understands and speaks for design?

Higher education is usually the purview of people with terminal degrees in the subject they are teaching. The nearly-universal currency of specialized knowledge in academia is the PhD degree. Practice-based fields like art, law, and medicine have their own degrees. Design PhDs are becoming more common but are relatively rare and often based in research that is divorced from design practice. If graphic design education drifts away from specialization and a concentration on practice then the imperative that design programs be run by designers with MFA degrees

will not be as strong as it is now. This could encourage the academic bigotry that a PhD degree outranks other terminal degrees among university officials and that in turn could encourage academic carpetbaggers—PhDs from fields tangential to design and PhDs in design research who have no design experience—displacing designers in design programs.

Q #3: What is the price of coherence and relevance?

How then can we pursue the promotion of liberal education for graphic designers in a manner that is more integrative and coherent? One solution is "parallel content," where liberal arts classes are timed to relate to the subject matter of a design curriculum.2 I was once on an advisory board for the animation program at East Los Angeles College where they had a physics course specifically for animators. I'm sure the science department considered that strictly-Newtonian world to be inadequate physics but the class nonetheless seemed to be a success for everyone involved.

Physics for animators is a good example of the pitfall of such curricular customizing: While the approach can make the point that there is a world of knowledge out there that applies to design, both the subjects and the nature of general education are necessarily distorted by this approach. One admirable goal is to breed a generation of designers with a general craving for education and a broad perspective. It should be noted that a model of education as vocational support and the covert message that learning is worthwhile only when it serves design directly could undermine that goal.

Q #4: Who will do the work?

Customizing classes for design students can be a substantial amount of work and requires insights into design to have it work well. The practicality of the parallel content approach depends on context. An art school that provides all general education classes as an auxiliary to a design curriculum can, perhaps, specify the content of social science classes to correspond to the students' current design issues. When humanities faculties are hired as support staff for the arts, they are likely to be willing to tailor their subjects to design students' needs.

Many general subject areas can be approached strictly from a design point of view and a large population of students required to take a course can make such tailoring attractive to another department. In many cases, however, humanities faculty are no more likely to take the time to rework their specialties to conform to the desires of design students than designers are likely jump at the chance of

2 See Mark Salmon and Glenn Gritzer: "Parallel Content: Social Sciences and the Design Curriculum". *Design Issues*, Fall 1992

developing classes specifically for those with only a passing interest in design.

Anyone who has dealt with people from another discipline attempting to make their work "relevant" will know one of the pitfalls of this approach. It is too easy for an outsider to drift into specialized subjects and do damage to standards by advocating naïve approaches. "Parallel content" requires a high degree of cooperation and significant work from both sides of the parallel.

Q #5: Are designers willing to leave their specialization?
In the end, are designers willing to do the work that they'd like others to do? Instead of consumers of liberal education could designers be providers? What does graphic design have to offer to non-designers? What is it that designers know that others don't?

A general awareness of design and design in culture is a fairly weak answer to those questions and designers may tend to overrate their abilities in that arena anyway. Design as culture and cultural analysis may be better left to anthropologists and others with analytical frameworks that leave them better equipped to deal with culture broadly.

By the nature of design practice, designers are ahead of many fields in dealing with complexity. Designers' iterative work patterns are well suited to dealing with uncertainty. Several years ago I was involved in a campus navigation system project that included computer science, business MIS, marketing, and graphic design students. Most of the students seemed to want to solve the problem during the first class, divide up the tasks, and reappear late in the semester to put it all together. Only the graphic designers were used to working in a manner where this week's work led to next week's discovery which, in turn, led to throwing away last week's work. Although hardly unique to graphic design, experience in working concretely toward discovery for large, under-defined tasks is needed throughout a range of fields.

Finally, systemic thinking—an understanding that, as John Muir put it, "When we try to pick out anything by itself, we find it is bound fast by a thousand invisible cords that cannot be broken to everything in the universe"— is a hallmark of a design perspective. Although ecology is now an important part of biology, the discipline was slow to accept the approach of looking at organisms' common habitat and relationships. Many other areas of academia could benefit from the ecological understanding that comes with design practice.

Q #6: Can design start small?
It's clear that graphic design can make a real contribution to general education but maybe before design declares itself to be the nexus it should show itself to be one important part of liberal education.

No matter how graphic design programs resolve the question of the role of liberal education, two things are clear to me. The first is that the models of graphic design education as narrow craft training or as applied fine art are insufficient for the changing role of design. Increasing competition from software-savvy untrained designers is likely to continue eroding graphic design as limited object making. Whether liberally educated or vocationally broadened, graphic design must reach outside itself.

The second is that graphic design programs at universities will have to meet the same challenges as other subjects. For many years graphic design programs have expanded as other visual arts areas (and many traditional liberal arts subjects) have become less popular. Traditional graphic design programs are already finding themselves left behind by "computer graphics" and multimedia at some schools. Counting on recognition and program protection based on ever-increasing student numbers is not a viable long-term plan. Unless graphic design is visibly moving forward or engaging the university in some vital manner then it will be vulnerable in the ever-changing budgetary landscape of higher education.

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