

A proposal for the future of design education

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In 2000, the International Council of Graphic Design Associations (ICOGRADA) published their first “Design Education Manifesto,” noting “many changes” in design practice, defining “visual communication designer,” and suggesting “a future of design education.”¹ The ICOGRADA manifesto marked a turning point—an international design body addressing change at the millennium. Publishing the manifesto was a significant accomplishment. A decade later, ICOGRADA are updating their manifesto. This essay responds to their request for input.

Framing the manifesto

The manifesto acknowledges change without quite defining it and lists attributes of an emerging practice and education without quite prescribing them. The manifesto does not explicitly define goals or audience. It does not decry indulgences or urge reform. It does not sound an alarm or assert a theory.

Instead, the manifesto asks that we consider our responsibility for harmony, balance, and each other. It invokes *oullim*, a Korean word denoting resonance and connoting mutual duty. It might also have invoked similar ideas with the Chinese word *ren*.

In a thoughtful commentary on the manifesto and its development, Sharon Poggenpohl and Ahn Sang-soo acknowledge that “the search was for common ground” and “consensus” and that the manifesto is somewhat quiet.”

Yet, Poggenpohl and Ahn note, “A manifesto is a form of communication predicated on three beliefs: that a change has occurred ... that human agency can change circumstances into something more desirable; and the timing is advantageous ...”²

- Thus, in relation to the ICOGRADA manifesto, we must ask:
- What has changed?
 - What could be better?
 - Why act now?

Framing the context

The manifesto begins by acknowledging changes in design. “The term ‘graphic design’ has been technologically undermined ... Boundaries between disciplines are becoming more fluid ... The variety and complexity of design issues has expanded.”¹ We might better understand these changes by understanding their context and causes.

So: What is causing the large shifts in design practice?

Computers? Software tools? The Internet?

Yes, but they manifest a much larger shift in technology, economic structure, and culture. The industrial revolution is ending. A new revolution in information is beginning, on top of which comes another revolution in biology, also largely about information—“understanding how organisms encode it, store, reproduce, transmit, and express it.”³

The shift is not only about what's produced (from things to services) and how they are produced (from long-lead editions to continuous adaptation, from proprietary to open source, from transaction to relationship), it is also a shift in world view (from mechanism to organism), a shift in framing metaphors (from clock-work to ecosystem, from turn-the-crank-linear-causality to feedback-enabled-dynamic-equilibrium), a shift in organizing structures (from individual nodes to webs of links, from top-down to bottom-up, from serial to parallel), a shift in human values (from coherence to responsiveness, from seeking simplicity to embracing complexity).

Thus, we must also ask:

- How will we transform design in the age of information and biology?

Framing design

Design grew out of craft. A craftsman planned-for-making-things and made them. The craft tradition was cut short by the industrial revolution. Mass production separated planning-for-making-things from making them. Planning-for-making-things became design, and design took on some of the assumptions of mass production: notions of objectivity (e.g., framing situations in terms of problems and solutions), an expert or "professional" stance, a concern with getting things right" (because in the world of mass production, the cost of fixing a design mistake can be quite large).

These assumptions may no longer apply; they may even be dangerous. Problem framing becomes more valuable than problem solving. Software is never right". And it's never done. In software development, delays are often more costly than mistakes. With network-based applications, change becomes continuous. We enter perpetual beta. (For designers who acknowledge that improvement comes from iteration and that ending conditions are arbitrary, perpetual beta may be more comfortable than mass production.)

In the new world of information and biology, design will change. Less common will be situations in which things are designed by designers, in advance of use by users, enforcing a single view. More common will be situations created by participants, during use, enabling multiple views. Today's users will become designers; today's designers will become meta-designers, creating conditions in which others can design.

In this world, a media-based focus is less relevant. All design becomes trans-disciplinary. A concern for the form of objects will give way to a concern for the experience of services. A concern for products and things will give way to a concern for networks of interaction and communities of systems.

ICOGRADA has shifted from graphic design to communication design. The new position still focuses on individual products. A further shift to focus on

platforms—to design of systems in which communications can take place—might be more consistent with the technological, economic, and cultural shifts we face.

We might even go beyond communication (which implies Shannon's somewhat mechanical model of delivering messages) and focus on conversation (interactions that converge on understanding, agreement, and action). We might frame design as conversation—with a goal of designing *for* conversation.⁴

Threats and opportunities

The very basis of graphic design is under assault. Printing is dying. In another 10 years, commercial offset lithography will have all but disappeared, save possibly for a handful of luxury artisans. Mass-production lithography will be replaced by mass-customization ink-jet or other digital printing techniques—or by electronic communications. New printed newspapers, magazines, and books may all but disappear, too.

At the same time, new forms of communications will emerge. Networked tablets will provide an environment for re-inventing the relationship between text, image, motion, and sound. Games, movies, and social networks will spawn new hybrids. E-books will become applications. Data-visualization will become a profession, employing thousands of designers.

We are also finding new ways to apply information technology to design. We are learning that hardware products want to be web-sites," and data-driven design is emerging as a new discipline.⁵ Computation-based design (the application of algorithms to exploring solution spaces), long a subject of research, is entering practice and promises to become a discipline in its own right. Scan-edit-print, long a framework in two-dimensional design, is becoming a framework in three-dimensional design, and not just for mechanical objects but also for living things.⁶

Given these opportunities, we must ask:

- What skills are required to take advantage of them?

Framing design's relation to code

Juxtaposing the threat to traditional graphic design with the opportunities of "emerging media" might suggest an easy transition. And many traditional design skills do translate directly. But are they sufficient? Designers will also need to understand computers, networks, and software—as they previously had to understand printing, binding, and other manufacturing technologies.

Yet that industrial-age framing no longer fits. A designer's relation to a printer is very different than a designer's relation to a programmer. In both cases, a designer may develop a specification, but both the specifications and what happens next are very different.

Printing is all about reproduction and requires little invention from the printer; programming has almost nothing to do with reproduction and requires a lot of invention by the programmer. Consulting your printer during design is a good idea; consulting your programmer during design is a necessity.

Practice has not settled the nature of the relationship between designer and coder, and it is the subject of intense debate among programmers. Alan Cooper has suggested it should be like the relationship between architect and builder. But most buildings are designed by builders, not architects. (And most software is designed by programmers, not designers.) Yet, when the architect is also an excellent engineer, such as Robert Maillart or Toni Kotnik, the results can be amazing.

We've also seen amazing results from designers who can code, such as David Small, Lisa Strausfeld, John Maeda, Ben Fry, Casey Reas, and many others. In fact, the best young designers are teaching themselves to code, and the best young engineers are teaching themselves to design. Is this a race? Or will they converge? Can we create schools for hybrids?

End-user programming tools have long promised to shield designers and others from coding, but so far, the best they offer is an easier way to begin. So far, learning mark-up and scripting languages remains a necessity. The best way to convey how you want software to behave is to demonstrate the behavior.

Framing design education

Our notions of design are rooted in the industrial revolution framing of design as planning-for-making-things. Yet our strategies for design education are even older; they remain rooted in the craft era, in the master-apprentice relationship played out in the design studio. In this tradition, students learn by emulating teachers. Almost all their learning is tacit. Response to change is slow.

In the craft world, where change is slow, the master-apprentice system works well. In the post-industrial world, where change is fast, the master-apprentice system tends to fall behind. Often, the apprentice knows more about new trends and new tools than the master. A post-industrial design education system can no longer rely solely on tacit learning. It must also turn tacit knowledge into explicit knowledge—"distill rules from experience, codify new methods, test and improve them, and pass them on to others."⁷

"The focus on design research at a few top schools is a positive development." A few design journals publish articles that build lasting knowledge, but they are not widely read. A few design blogs are widely read, but they aren't building lasting knowledge. Research must inform practice, and practice must inform research. They must co-evolve. This evolution requires invention, for example, fusing the studio and case-study methods.⁷

Research must be more than observation or even abstraction. Research must also invent theory. The holes in design knowledge are huge. We lack theories of conversation, interaction, platforms, products and product management, and service. Filling these holes is an important task for design practice and education. Both must learn how to learn. Both must develop mechanisms to build and share knowledge.

Summary

The manifesto grew out of a recognition of change, mis-alignment, and the need to put things in order. Yet it was circumspect, almost vague. I urge ICOGRADA to greater clarity. Clarity invites response, which can lead to iteration, which can lead to improvement, which is a goal we share.

In the interest of clarity, I propose this summary:

The design practice that grew out of the industrial revolution is no longer sustainable (economically or ecologically). A new practice—one that responds to the information revolution—has begun to emerge. We can see its outlines, but much remains to be invented. For this, we must take responsibility. In addition, we must invent a mechanism (an organic system) through which the discipline of design can learn and evolve.

At the same time, design education still largely reflects design's origins in craftwork. Simply put: Design education is out of date. What is worse: Change is accelerating, and design education is stuck. It has little means to move forward. We must also take responsibility for re-inventing design education and integrating it into an organic system through which the discipline of design evolves.

And what if we ignore the situation? What if we remain vague? What if we remain stuck?

Design schools will become increasingly irrelevant. But more will be lost: some continuity of history, certain values concerning quality, and perhaps a sense of humanness. The world will fall further under the sway of those satisfied with making things work without making them delight.

This need not be so. Our relationship to our technology is not inevitable. We design it. We have responsibility for it.⁸

I look forward to the conversation that will ensue as ICOGRADA update their manifesto and continue the process of re-inventing design.

End notes

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