Design Issues, Volume 21, Number 2 (April 2005)

1 Introduction

Richard Buchanan, Dennis Doordan, Victor Margolin. Introduction. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 1-2

3 Altruism as Design Methodology

David Stairs. Altruism as Design Methodology. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 3-12

13 Semiotic Neighborhoods

Ilpo Koskinen. Semiotic Neighborhoods. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 13-27

28 From the Gospel of Efficiency to Modernism: A History of Sweet's Catalogue, 1906-1947

Andrew M. Shanken. From the Gospel of Efficiency to Modernism: A History of Sweet's Catalogue, 1906-1947. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 28-47

48 What the Film Archive Can Tell Us About Technology in the Post-digital Era

Michael Punt. What the Film Archive Can Tell Us About Technology in the Post-digital Era. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 48-62

63 The Bicycle, Cross, and Desert

Andrew Weed. The Bicycle, Cross, and Desert. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 63-70

71 Visualizing the Vague: Invisible Computers in Contemporary Design

Sara Ilstedt Hjelm. Visualizing the Vague: Invisible Computers in Contemporary Design. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 71-78

79 Culture and Design: A New Burial Concept in a Densely Populated Metropolitan Area

Kin Wai Michael Siu. Culture and Design: A New Burial Concept in a Densely Populated Metropolitan Area. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 79-89

90 Icograda 2003 Congress Visualogue: A Visual Dialogue Between Designers

Gitte Waldman, Trysh Wahlig, Robert Zolna. Icograda 2003 Congress Visualogue: A Visual Dialogue Between Designers. *Design Issues*, Volume 21, Number 2 (April 2005), pp. 90-95

Introduction

We begin this issue of the journal with three different perspectives on the broad theme of design and consumption. In "Altruism as Design Methodology," David Stairs investigates an alternative to traditional for-profit design practice, the tradition that is deeply implicated in the culture of consumption with which we are well familiar. He offers an impassioned and intelligent discussion of the idea of altruism and its role in a new form of non-competitive design practice, illustrated in organizations such as Design for the World, Design for Social Impact, and Designers Without Borders—the latter conceived and operated by Stairs and his partners. He argues that this form of practice represents a sea change in design thinking and a new trend in the design community, oriented particularly toward people in developing countries such as Uganda.

In contrast, "Semiotic Neighborhoods" offers a sociological discussion by Ilpo Koskinen, who focuses on the culture of consumption in highly developed countries. What is innovative in this article is the identification of whole neighborhoods within cities and towns that are largely devoted to satisfying the desires of the upper-middle classes and tourists with luxury goods created by designers. These urban areas are distinguished from shopping malls as well as entertainment districts. They are "historical creations in which the streets belong to people, property ownership is decentralized, and passersby are exposed to a full scale of life rather than to a managed version of it." Semiotic, in this article, refers to "semiotic goods," where "most of their economic value is based on the meanings people give to them rather than their functionality." The argument is illustrated with a specific discussion of Helsinki.

Following this unusual juxtaposition of perspectives, there is an article by Andrew Shanken on the history of Sweet's Catalogue, from 1906 to 1947. Sweet's Catalogue is a famous compilation of building resources for architects. Shanken's careful historical research reveals "the ways in which architects responded to, and were shaped by, the emergence of a consumer culture." The reader is rewarded with a clear discussion of the communication strategy operating behind the catalogue as well as an insightful discussion of the strategies of visualization and information organization that made the catalogue an important tool in the practice of architectural design.

The next two articles—separated by a visual essay, "The Bicycle, Cross, and Desert," by Andrew Weed—discuss different aspects of digital media and computers. In "What the Film Archive

Can Tell Us About Technology in the Post-digital Era," Michael Punt explores the relationship between analogue and digital cinema, pointing toward cinematic imagination in its two manifestations: a concern for the image and a concern for the technology and materials that support image creation. This is a wide-ranging discussion that touches on a variety of topics that are of interest to designers, including the place of animation in cinema, the disappointment of the CD-ROM, and the design concept behind Broderbund's *Living Books*. Of special interest is the parallel that Punt draws between the early technology of moving images and the early digital media.

In "Visualizing the Vague," Sara Ilstedt Hjelm presents an important critical discussion of the idea of the "invisible computer." Championed by some industrial designers and cognitive engineers, the invisible computer or ubiquitous computing (aka "Ubicomp") is a strategy of design thinking that seeks to embed computers into the surrounding environment in such a way that one pays no attention to the power of computing and its pervasive influence on our lives—a kind of ultimate usability ideal. With Ubicomp, Hjelm observes, "everything appears normal" and the power of the computer appears more a natural fact than a cultural phenomenon that is open to explorative and critical aesthetics. Therein lies the rub. Ubicomp may serve the interests of commercial development and lead to increased sales, but is it wise to allow information technology to be hidden from view when it is so powerful and problematic for our lives? Drawing from psychology, design theory, sociology, and feminist theory, Hjelm presents an argument that deserves careful attention and further discussion.

The final article in this issue of the journal turns to culture, death, burial and design in Hong Kong. Michael Siu presents a research and design project carried out in Hong Kong in 2001. The problem is the conflict between traditional Chinese cultural beliefs about burial and the limited amount of available land in one of the most densely populated cities on the planet. Once again, usability and cultural satisfactions appear to be at odds with each other. Siu and his team offer a new burial concept that seeks to balance vastly different interests in a culture that prizes tradition and respect for ancestors.

We conclude this issue of the journal with a conference review by Gitte Waldman, Trysh Wahlig, and Robert Zolna, on the ICOGRADA 2003 Congress "Visualogue," involving a visual dialogue between designers, and a book review by Danielle Schwartz of John Heskett's *Toothpicks and Logos: Design in Everyday Life.* The combination of perspectives reveals, again, how complex and rewarding the field of design can be.

Richard Buchanan
Dennis Doordan
Victor Margolin

Altruism as Design Methodology

David Stairs

Design must disengage itself from consumer culture ... and participate in projects for the welfare of humankind both inside and outside the market economy.
Victor Margolin
The Politics of the Artificial [1]

Suppose that the altruists also have a tendency to cooperate with one another in a way that ultimately benefits each altruist at the expense of non-altruists. Cliques and communes may require personal sacrifice, but if they are bonded by possession of one inherited trait, the trait can evolve as the groups triumph over otherwise comparable units of non-cooperating groups.
E. O. Wilson
Sociobiology [2]

The Argument

Over the last decade, there has been a tentative loosening of the stranglehold corporate models exert upon the design profession. In successive waves, designers and design theorists have embraced social and environmental causes with the growing awareness of slightly guilty affluent urbanites hoping to participate in a counter-cultural revolution.

For design writers, perhaps no better barometer of this growing awareness exists than Victor Margolin's *The Politics of the Artificial.* Published by the University of Chicago in 2002, Professor Margolin's book is a compilation of journal essays that appeared in print in the nineties. Addressing everything from design education to eco-feminism and sustainability, Margolin's book is a "what's what" of evolving design mores at the century's end. But politically correct appearances can be deceiving. While Margolin laments the way the "rhetoric of idealism is at odds with the reality of daily practice," and admits "The world's design needs are evident, but the plan for reinventing the design profession is not," [3] he stops short of providing a full-bodied prescription for the needed paradigm shift.

I'd like to suggest that, contrary to Margolin's cautious optimism, the design profession is being reinvented even as you read this, and in ways so antithetical to conventional design practice as to signal a sea of change in the way design is practiced. I propose to frame this change in terms of one of humanity's oldest collective instincts: mutual support, or altruism.

1 Victor Margolin, *The Politics of the Artificial* (Chicago: University of Chicago Press, 2002), 99.

2 E. O. Wilson, *Sociobiology* (Cambridge: Harvard University Press, 1980), 54.

3 Victor Margolin, *The Politics of the Artificial,* 102.

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Transcending Transcendentalism

Victor Margolin is not alone in his call for systemic reform. Among postmodern anthropologists and sociologists, the awareness of the need for change dates further back. In 1979, Mary Douglas already was talking about having "selected against them (the poor) in the constituting of our consumption rituals" in *The World of Goods*,[4] and Daniel Miller's 1986 investigation of consumption cogently differentiates "segmentary, holistic, communal tribal society" from "fragmented, hierarchical, individualistic" industrial capitalistic societies.[5]

Margolin has read both Douglas and Miller. In his call to "look at economic and social development from a global perspective, and address the gross inequities of consumption between people in the industrialized countries and those in the developing world,"[6] he is ahead of many other design theoreticians. But just as putting a "wage peace" sign in one's front yard is not quite as daring as doing volunteer work in a Palestinian refugee camp, Margolin, in his most creative solutions, takes a rather timid approach to addressing the problems at hand.

Ralph Waldo Emerson, that nineteenth century paragon of the transcendentalist movement, lived and wrote during the first industrial revolution. His idealist championing of *a priori* metaphysical knowledge of life over materialism (paralleled by the romantic movement in poetry, and followed by Morris's Arts & Crafts initiative in design) was undoubtedly, in part, a response to the expanding industrialization of his world.

In December 1841, Emerson delivered an oration at the Masonic Temple in Boston that came to be known as "The Transcendentalist." While crediting Kant with inventing the term transcendental, Emerson said, "Nature is transcendental, exists primarily, necessarily, ever works and advances, yet takes no thought for the morrow."[7] Having established the "otherness" of nature, he had to admit that no man was a pure transcendentalist: "... we have yet no man who has leaned entirely on his character, and eaten angels' food; who, trusting to his sentiments, found life made of miracles; who, working for universal aims, found himself fed, he knew not how ...."[8] But the presentation, in staying true to its theme, roundly criticized the material mind at the expense of the ideal:

> The materialist insists on facts, on history, on the force of circumstances, and the animal wants of man; the idealist on the power of Thought and of Will, on inspiration, on miracle, on individual culture.[9]

It should be noted that, in an era of so-called "manifest destiny," when westward expansion was redefining the American psyche, Emerson, always with a finger on the American pulse, was revising

4 Mary Douglas and Baron Isherwood, *The World of Goods* (New York: Basic Books: 1979), 205.

5 Daniel Miller, *Material Culture and Mass Consumption* (Oxford: Basil Blackwell, 1987).

6 Victor Margolin, *The Politics of the Artificial*, 102.

7 Ralph Waldo Emerson, *The Collected Works of Ralph Waldo Emerson* Vol. I. (Cambridge, MA: Harvard University Press, 1971), 206.

8 Ibid., 206.

9 Ibid., 201.

or would soon revise his earlier beliefs on a number of key issues, including abolition, and perhaps more important, on the world of nature as it related to industrial society.

Margolin, Emerson's latter-day successor on this particular theme, leaves little doubt about his feelings. He is "terrified" of "the specter of instrumental reason" set loose on nature. His disgust for postmodernist proponents of such appalling futures is palpable and, I believe, justified.[10] But while I agree with Margolin's argument for a view of design "... that does not attempt to completely replace the natural, but moves instead to complement it ...." I do not hold with his call for a re-enchantment of design. Again and again in his book's central essay, Margolin proposes spirituality as an anodyne, "A meta-narrative of spirituality can help designers resist technorhetoric that sanctions the continuous colonization of the natural."[11] Spirituality, in Margolin's metaphor, is another term for environmental justice, and while spirituality might enhance society's general well-being, so too could simple charity or, for the sake of my thesis, social altruism.

As suggested above, by 1844, Emerson was sounding a different tune. In an address now known as "The Young American" given in February of that year to the Mercantile Library Association of Boston, he said:

> It is easy to see that we of the existing generation are conspiring with a beneficence, which, in its working for coming generations, sacrifices the passing one, which infatuates the most selfish men to act against their private interest for the public welfare. We build railroads, we know not for what or for whom; but one thing is very certain, that we who build them will receive the very smallest share of benefit therefrom.[12]

Emerson's turnabout is significant. Well before the Crystal Palace exhibition of 1851, this great "idealist" was extolling the benefits of industrial progress, even unto "... the extension to the utmost of the commercial system ...." He hadn't lost sight of the need for "moral causes" or of the benefits of altruism, as the preceding passage indicates, but his idealism had clearly been tempered with a strong dose of pragmatism.

Margolin, on the other hand, sounds more like the middle-years Morris, when he was still at war with mechanization. Social problems, such as crime and poverty, stem from complex preceding causes, such as overpopulation and resource depletion, and can't be corrected by well-intentioned nostrums. While the social evils of the first industrial era may have found small redress in the fluctuating commentaries of Emerson, today's problems are 150 years more mature. Fortunately, so too are the solutions.

10 See my essay, "Biophilia and Technophilia: Reexamining the Nature/Culture Split in Design Theory," *Design Issues* XIII: 3 (Autumn 1997).

11 Victor Margolin, *The Politics of the Artificial*, 119.

12 Ralph Waldo Emerson, *Collected Works*, 232.

Economics Re-envisioned

The 1990s will long be remembered as a decade of accomplishment not for scientific discovery, in spite of the Human Genome Project, but for humankind's relocation of social mores. The re-enchantment of everything takes a distant back row seat to an expanded awareness of the environment, the ascendance of diversity (both cultural and biological), and the recognition of the critical significance of sustainability to both organisms and living systems.

Classical economics generally had little to say about the social and environmental costs of capitalism. The birth and expansion of monetarism did not take time to factor the negative growth indices for pollution or corporate annexation. With the Soviet Union's collapse in the Cold War, proponents of globalization appeared to have gained an unobstructed inside track to world domination. And yet, even the staid, objectivist discipline of economics, the "dismal science," felt the groundswell of change during the '90s.

Years before the general 1999 confrontation with the WTO in Seattle, economist and development theoretician David Korten began writing about the need for fiscal sanity. Schooled in traditional economics, and preened for a career in business, Korten took a thirty-year detour into the developing world and was deeply moved by what he found there. Convinced that the capitalist system itself was the problem rather than the solution, he finally left development work in 1992 and devoted his considerable talents to helping create models of sustainable change for the future.

A vocal critic of financial globalization and the artificial consolidation of wealth, Dr. Korten equates capitalism with cancer. He advocates what he calls "people-centered development," the effort to attain sustainable improvements in the quality of life for individuals and communities. His rallying cry is especially pertinent for designers who, as often as not, act as handmaidens to the corporate bottom line, which Korten sees as anathema to a healthy world. He writes:

> They (capitalist institutions) eliminate regulations that protect the human and environmental interest, remove economic borders to place themselves beyond the reach of the state, deny consumers access to essential information, seek to monopolize beneficial technologies, and use mergers, acquisitions, strategic alliances, and other anti-competitive practices to undermine the market's ability to self-organize.[13]

Korten does not mince words in his proposals for democratic and economic reform. Targeting advertising as an example, he is strongly critical of both school and political advertising. Rather than allow corporate tax breaks for advertising, Korten suggests "... it (advertising) should not be deductible as an expense and should be taxed at a rate of at least fifty percent."[14] This would have a profound effect

13 David C. Korten, *The Post-Corporate World* (West Hartford/San Francisco: Kumarian Press/Berrett-Koehler, 1999), 62.

14 David C. Korten, *When Corporations Rule the World* (West Hartford/San Francisco: Kumarian Press/Berrett-Koehler, 1995), 311.

on those tens of thousands of design professionals worldwide who earn their livings directly as corporate employees or indirectly as advertising subcontractors.

Korten's calls for ending corporate subsidies and reforming the Bretton-Woods institutions are no longer wild outsider proposals.[15] And his idea to discourage short-term international monetary speculation by levying a small tax on all financial transactions is inspired. But Korten does not tear down without proposing an alternative: "A globalized economic system has an inherent bias in favor of the large, the global, the competitive, the resource extractive, and the short-term. Our challenge is to create a global system that is biased toward the small, the local, the cooperative, the resource-conserving, and the long-term ...." [16]

In other words, think globally and design locally.

Altruism and Individualism

Nigel Whiteley spent considerable time in *Design for Society* comparing the evils of consumer-led design with a perceived need for socially-conscious design. "The materialism of consumer-led design testifies to private affluence on a substantial scale .... Thus individualism rather than individuality pervades our consumerist society .... With individualism, society is no greater than the sum of its individualistic parts, and so consumer-led design offers us no social vision—no vision of society." [17]

Actually, in an economic system that reinforces selfishness, social vision is an oxymoron. Yet, it hasn't always been this way. America was founded on individual rights resulting in collective good. David Korten reminds us, "Some claim the American Revolution was as much a revolution against the crown corporations as against the crown itself .... The few corporate charters issued (in the early days of the Republic) generally were for a limited duration to serve a carefully delineated public purpose, such as constructing a canal system." [18]

Korten would trace our loss of innocence to the apotheosis of for-profit corporations. But this is too simplistic. In his thesis on altruism, philosopher James R. Ozinga defines an important dichotomy. "Altruism is behavior benefiting someone else at some cost to oneself, while selfishness is behavior that benefits oneself at some cost to others." [19] Thinkers, and more recently sociologists and neuroscientists, have been attempting to understand the mechanisms underpinning altruism for centuries.

Ecologist Garrett Hardin qualifies the two aspects of the matter. About altruism he reflects, "For a social animal, merely observing the pleasure of others is a reward. Measuring psychological gains against material losses certainly is a difficult problem, but millions of years of evolution have selected us to do just that." [20] There seems to be empirical evidence supporting this contention. We know altruism exists not only among human populations, but also

15 Similar entreaties have been made in print by William Greider, Walden Bello, and others.

16 David C. Korten, *When Corporations Rule the World,* 270.

17 Nigel Whiteley, *Design for Society* (London: Reaktion Books, 1993), 41.

18 David C. Korten, *The Post-Corporate World,* 76.

19 James Ozinga, *Altruism* (Westport: Praeger, 1999), 9.

20 Garrett Hardin, *The Limits of Altruism* (Bloomington, IN: Indiana University Press, 1977), 15.

among other species of higher mammals such as wolves, which act in concert to protect and defend the young of the pack.

Food sharing and suicide in defense of the hive are basic instincts of social insects. Peter Kropotkin famously argued that "... sociability is the greatest advantage in the struggle for life." [21] Both Hardin and Ozinga suggest the deep genetic underpinnings of altruistic behavior. At one point, Ozinga even refers to altruism as "natural law."

While Peter Singer considers that Kropotkin's anarchism compromised his understanding of Darwin, allowing for generations of social-Darwinist misinterpretation, even Singer, a self-described utilitarian, chips in a good word for cooperation:

> Tests of our ability to make inferences show that although we are not adept at formal logic, we are particularly good at recognizing social contracts, and especially, the cheats who break them. This readiness to cooperate is a true universal among humans (and not only among humans—it applies to other long-lived intelligent social animals too).[22]

Materialism (and here we mean largesse based upon excess consumption) is inherently self-destructive. A little further on, Hardin suggests a possible social brake on self-indulgence: "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all." [23] He goes so far as to criticize John Rawl's monumental *Theory of Justice* for its failure to address the future with what Hardin calls "intergenerational justice," current levels of environmental abuse being considered one of humankind's great injustices to our progeny.

Certainly, as recognition of the extent to which we have despoiled the commons has collectively dawned upon us, many have made personal attempts to correct their behavior. It's not easy. The current international financial system, as self-defeating and cynically anti-life as anything we've ever devised, is deeply rooted. And yet, a growing clamor of criticism of corporate libertarianism suggests that altruism may be more than just nostalgia for lost paradise.

Entrepreneurial Altruism

In *The Politics of the Artificial* Victor Margolin comes enticingly near to identifying some of the "new forms of practice" both he and Whiteley seek. In describing Kenji Ekuan's "Design for the World" concept, Margolin writes, "His call for a new purpose is significant and forms part of an emerging dialogue among some designers. However, the terms of this dialogue are not yet well enough defined to lead to viable strategies of practice." [24] Again, Margolin walks right up to the threshold only to draw back. His call for a "new spirituality" in design would carry a good deal more weight if it framed the discussion for the exercise in civics as it actually is.

21 Peter Kropotkin, *Mutual Aid* (New York: Alfred A. Knopf, 1918), 50.

22 Peter Singer, *A Darwinian Left* (New Haven, CT: Yale University Press, 2000), 46–47.

23 Garrett Hardin, *The Limits of Altruism,* 38.

24 Victor Margolin, *The Politics of the Artificial*, 98.

In fairness to Margolin, things are moving rather fast, making prediction a perilous art. What may have seemed "undefined" five years ago (a number of Margolin's essays date from or predate this period) is today much more clearly delineated. As a result, where Margolin sees a vaguely defined dialogue, others are actively involved in a worldwide conversation leading to clear alternatives to traditional practice.[25]

According to Korten, "The depth and seriousness of the massive dysfunctions of global corporations ... have only recently gained prominence in the public mind. Already, new initiatives are emerging that draw attention to the need for serious structural mechanisms to hold corporations accountable to the public interest."[26] A good example in design is Ekuan's organization, Design for the World (www.designfortheworld.org). It was formally incorporated in 1998 as a collaboration of ICOGRADA, ICSID, and IFI, with the support of the Barcelona Design Center. Whether questioning where graphic design fits in the global fight against AIDS, refashioning refugee camps as sustainable settlements, or promoting GUI-based computers for the illiterate, Design for the World functions as a nexus for change and exchange in the true spirit of high social altruism.

Another exemplar is Design for Social Impact (www.dfsi.org). Founded in Philadelphia in 1996 by Ennis Carter, DFSI, which now employs a dozen designers, promotes communication design as a form of social activism. Touting a client list ranging from the Clean Air Council to the World Wildlife Fund, DFSI attempts to provide design support to public interest organizations at below market cost.

Cameron Sinclair and Kate Stohrís Architecture for Humanity (www.architectureforhumanity.org) has had great success sponsoring design competitions for refugee housing and mobile health clinics on the Internet. Following the tsunami of 2004, AfH has been designated by the government of Sri Lanka as the rebuild agency for the village of Kirinda, and they are also at work with NGOs in Pottuvil, Sri Lanka; Banda Aceh, Indonesia and in Tamil Nadu, India.

Both the Society of Graphic Designers of Canada (www.sgdc.org) and ICOGRADA (www.icograda.org) are dedicated to doing more than merely designing for profit. In fact, the ICOGRADA Code of Professional Conduct emphasizes that a designer's responsibilities to the community are prior to and above his/her client. A finer instance of "... measuring psychological gains against material losses ...." would be hard to find.

Whether one observes venerable organizations such as the AIGA (www.aiga.org), which featured prophets of sustainability Fritjof Capra and David Orr at its 2003 national convention, or recent phenomena, such as Sappi Fine Papers's "Ideas That Matter" program (www.sappi.com/itm), it seems everyone's getting into the act. The original legal purpose of corporations was in the public interest, a purpose corrupted by both kings and mercantilists, who

25 In an excellent paper delivered at Archeworks, Chicago in October 2003, Margolin moves much nearer to an embrace of the contemporary design-philanthropy scene, especially with his remarks regarding the rise of civil society as it relates to social action, and his "social agenda for designers." (Personal correspondence with Victor Margolin, November, 2003.)

26 David C. Korten, *The Post-Capitalist World*, 203.

discovered in the legal fiction of corporations a means to nearly risk-free accumulation of vast sums of money. It is poetic justice that the Internet has become a breeding ground for the socially grounded types of organizations Adam Smith foresaw in *Wealth of Nations*. The late-twentieth century explosion in "dot orgs" online, in almost inverse proportion to the collapse of "dot coms," suggests that the kinder, gentler *fin de siecle* angst of the '90s was not completely in vain.

Altruism as Design Methodology

The preceding section, listing a number of organizations often expressly dedicated to design altruism, may seem like a "tempest in a teacup" when compared to the ocean of for-profit design. "Are you really describing altruism as a methodology, or merely as a principle?" I have been asked. My experience tells me, and the preceding examples confirm, that altruism is more a physical condition than a mere ideal. E. O. Wilson describes altruism's evolution by natural selection as the central theoretical problem of sociobiology. He believes kinship is the plausible reason for its spread in a population—the shared genes of two organisms of common descent having an increased contribution to the next generation as a result of an altruistic act.[27]

In my endeavors to reconcile design with philanthropy, I have employed many of the same methods discovered by other organizations to practice design in an altruistic manner. Through Designers Without Borders, my partners and I dispense equipment, software, and advice, based on a belief that people less fortunate deserve access to microcomputers and networking technology. By working with African secondary schools and universities to develop curriculum, we expand design pedagogy. By assisting nonprofits such as The National Committee of Women Living With AIDS in Uganda (www.designerswithoutborders.org/nacwola.html) with their print promotions, we attempt to improve the viability of these organizations in the very competitive world donor market. Through Website authoring and hosting, we increase the profiles and accessibility of worthy but under-resourced institutions including The Margaret Trowell School of Industrial and Fine Arts of Makerere University (www.makerere.ac.ug/sifa). All of this activity addresses problem solving from a social perspective, with an eye to the effectiveness of design as an agent of development.

We do not do this work using a competitive model; there is more of Ghandi than Gates about us. Conceived while on a Fulbright to Uganda, DWB enjoys a tenuous existence as a 501(c)(3) educational and charitable foundation, dependant upon grants, donations, and lots of imagination. While it may not seem like an intelligent way to get ahead in the world, and might not be possible at all outside academia, we regularly meet designers, often young, who

27 E. O. Wilson, *Sociobiology*, 276.

are ready to abandon their corporate careers and move overseas to carry on similar volunteer work.

We have been described as "design ambassadors."[28] While there is always something diplomatic about international assistance, we are no more statesmen and stateswomen than the other organizations described above. To our academic partners, we provide equipment, tutelage, and curricular development free of charge. We ask only that they guarantee a secure space for donated computers, and a staff member willing to learn and carry on in our absence. This is sustainability in a fiscal and academic sense, something required by large foundations. When we enter into an agreement with a foreign NGO, we ask for a small retainer ($100US), which later is applied to the costs of printing or domain registering. Although we donate our time, we also attempt to further minimize client expense, a hallmark of careful applied design. Unfortunately, sometimes even these modest requirements can exclude worthy organizations, but they are our one concession to the need for a professional contract.

Such activities are localized. Our field operations presently are limited to Uganda, but in a wired world this is already changing as we advise and consult students world wide on issues ranging from design for development to African vernacular. In the past, we have worked with members of the U.S. diplomatic corps, especially the Public Affairs Officers at U.S. embassies. Our mission is not tied to that of the State Department, nor are we encumbered by the philosophy of exchanging development aid for democratic values. In many parts of the world, this does not work well. But we have found that an approach which binds ideologically-neutral respect to selective-within-limits assistance usually is rewarded with a mutually gratifying cultural exchange.

It is our sincere hope this will continue.

Conclusion

Life prevails; this much we know.

Neither the faded specter of forced Soviet collectivism, nor the senescent aspect of ruthless American individualism, will outlast life. Altruism already is providing a sought-after alternative to strictly for-profit design practice. Having long existed as a fringe benefit of the market economy, nonprofit corporations truly have come of age. Realizing the enlightenment definition of what corporate legal entities originally were meant to be, nonprofits have assumed the role of social antidote to the rapaciousness of their distinctly unneighborly counterparts, shareholder-driven for-profit corporations.

That stakeholder-driven nonprofits should appear in great numbers at this moment to counteract the scandals and depredations wracking shareholder for-profits is more than just a matter of fortuitous timing. David Korten sees it as part of the "emergence of a planetary consciousness," one that "mindfully" chooses life over

28 *HOWDesign*, April 2002: 180–185.

money. E. O. Wilson points out that it is man's ability to share that even makes an economy possible. "... money ... is a quantification of reciprocal altruism." [29]

But, while it may be "in the genes," consciously selecting altruism is not easy. As Korten points out, in a corporate libertarian-dominated system, altruism is not considered good business. "We must not kid ourselves. Social responsibility is inefficient in a global free market, and the market will not long abide those who do not avail of the opportunity to shed the inefficient." [30] And yet, designers *are* rising to the occasion, developing socially active nonprofits at an unprecedented rate. This is good. Richard Dawkins, who contends that altruism itself is merely a form of a gene-selfish survival strategy, goes on to say, "If there is a human moral to be drawn, it is that we must *teach* our children altruism, for we cannot expect it to be part of their biological nature." [31] Perhaps one day design firms will automatically donate a percentage of their net profit to social causes, the for-profit agenda being seen as not only anachronistic, but downright antisocial.

Toward the end of his book, James Ozinga opines, "It could be argued that our culture is sterile because we have substituted the power of knowledge for the wealth of life." [32] To the extent that we both over produce and over consume, I have to agree with him: in a sense, our culture is sterile. But it also is ethically and creatively fecund. That we are powerful in knowledge is an obvious truth. But we are also naïve. When we mistakenly substitute power for life, we need to be chastised but also forgiven, for this is the worst sort of callowness.

Still, I'd like to think that, in our tireless quest for knowledge, in our insatiable efforts to consolidate wealth, fame, and power; we have uncovered a few abiding truths. Among these, one holds that altruism is as good a choice for evolutionary success as selfishness.

We have only to apply it mindfully to rediscover the lost world of our heart's desire.

29 E. O. Wilson, *Sociobiology*, 3.

30 David C. Korten, *When Corporations Rule the World*, 237.

31 Richard Dawkins, *The Selfish Gene* (London: Oxford Uinversity Press, 1976), 96.

32 James Ozinga, *Altruism*, 28.

Semiotic Neighborhoods

Ilpo Koskinen

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Introduction

In his *Philosophy of Money,* the classic sociologist Georg Simmel noted that industrial products "lack the spiritual determinacy that can be easily perceived in a product of labor that is wholly the work of a *single* person." When produced in large quantities, products have to be designed so they are "acceptable and enjoyable to a very large number of individuals," and therefore "cannot be designed for subjective differentiation of taste." In contrast, some products still have a personality: we can personally relate to them. For Simmel, such products include works of art, philosophical treatises, and crafts.[1]

Markets certainly have understood the craving for more personalized products. Take the example of a design icon, the "Juicy Salif" lemon squeezer, designed for Alessi by Philippe Starck. In the summer of 2000, the Juicy Salif sold for 40 Euros in Helsinki (a gold-plated one sold for 150 Euros). The fact that it is practically unusable makes it easy to see as an object of art. If it were displayed in a museum, it would be no more than an object of reflection. In ordinary contexts, however, it is available for use. An analysis of this object can focus on the product, but also on the designer, the company, or even the art and design world. It offers multiple possibilities for reflexive consumers who seek to build their identities through design objects, fashion, and art. It also is partly through these objects that people define good taste.[2]

These are "semiotic goods": most of their economic value is based on meanings people give them rather than their functionality, be these iconic, indexical, or symbolic. Unlike unsigned products, or products from flea markets, these meanings support and maintain significant parts of the economy. Today, the worldwide worth of the luxury retail sector alone, depending on the estimate, is 55–100 billion Euros. This sector makes its living mainly from fragrances, cosmetics, jewelry, watches, accessories, and fashion. Its main market is Asia, followed by the United States and Europe.[3] In addition to goods, "semiotized" services and experiences are a part of our everyday life. In the U.S., since the early 1960s "fun services" and "experience industries" have grown faster than other sectors of the economy.[4] Some theorists have generalized that this development is part of a postmodern world in which the real world is so absorbed into signs that people cannot escape from this signed reality.[5]

1 G. Simmel, *The Philosophy of Money* (London: Routledge, 1990), 454–7.

2 M. Featherstone, *Consumer Culture and Postmodernism* (London: Sage, 1994); S. Lash, *Another Modernity, a Different Rationality* (London: Blackwell, 1999); P. Bourdieu, *Distinction* (London: RKP, 1986); G. Simmel, ibid.

3 WWW information from www.hsbc.com, www.mintel.com.

4 G. Esping-Andersen, *The Three Worlds on Welfare Capitalism* (Cambridge: Polity, 1990); and J. B. Pine and J. H. Gilmore, *The Experience Economy* (Boston: Harvard University Press, 1999).

5 J. Baudrillard, *The Consumer Society* (London: Sage, 1998); and J. Baudrillard, *Symbolic Exchange and Death* (London: Sage, 1999).

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The received wisdom is that this new consumption scene originated among the new, high-earning middle classes in global cities, with a recent estimate putting their number at fifty million worldwide.[6] This new consumption also has changed the look and feel of the shopping environment. While cities have lost many of their department stores, they have gained "megastores," shops-in-shops, flagship stores, posh restaurants, cafés, art galleries, antique stores, and luxury retail shops. In this paper, I call some areas with a high concentration of these types of places of consumption "semiotic neighborhoods." These areas live off selling and manufacturing semiotic goods. They are different from entertainment districts, which have a high concentration of movie theaters, theaters, restaurants, and bars. They also differ from malls. Unlike malls, semiotic neighborhoods are historical creations in which the streets belong to people, property ownership is decentralized, and passersby are exposed to a full scale of life rather than to a managed version of it.

Semiotic Neighborhoods

Downtown areas have dominated consumption for much of the twentieth century. Consumption in downtown areas is led by traditional department stores. Another dominant form of trade today follows suburban expansion. As suburbs have grown in North America and in Europe, retail trade has followed population to the suburbs, where retail corporations and developers have created large, centrally managed malls and retail parks. In terms of services, more upscale malls resemble higher-end department stores, with boutiques embedded in them. Typically catering to the middle-classes, department stores and malls offer a wide range of goods and services, some of higher quality than others, but overall, their business is geared towards the middle-income customer.[7] Less mobile classes and younger customers consume in what sociologist Sharon Zukin calls "neighborhood shopping streets."[8]

In contrast to these forms of mass consumption, exclusive goods traditionally have been available for the rich in the first type of semiotic neighborhoods. As Lewis Mumford noted in *The Culture of Cities*, hand-crafted, quality goods with extraordinary prices are available for the traditional upper classes in places such as New Bond Street, Rue de la Paix, and Madison Avenue.[9] As they are exclusively upper-class, goods and services in these streets and neighborhoods are far beyond the reach of ordinary consumers, except for window-shopping. Some of these streets have existed for centuries, and typically are rooted in royal courts and aristocratic consumption in Europe, and in their capitalist equivalents in North America.

A more recent development has created another type of semiotic neighborhood: designer streets and quarters. At the more exclusive end, there are a few ultimate designer streets: Avenue Montaigne and Rue du Faubourg St. Honoré in Paris, the *quadrilatero* in Milan, London's Sloane Street, and parts of New York's Fifth

6 S. Sassen, *The Global City: New York, London, Tokyo* (Princeton: Princeton University Press, 1991); M. Savage, et al., *Property, Bureaucracy, and Culture* (London: Routledge, 1995); www.mintel.com; and P. Ray and S. Anderson, *The Cultural Creatives* (New York: Three Rivers Press, 2000).

7 G. McCracken, *Culture and Consumption: New Approaches to Symbolic Character of Consumer Goods and Activities* (Bloomington: Indiana University Press, 1988); R. Sennett, "The Fall of the Public Man" in *On the Social Psychology of Capitalism* (New York: Vintage, 1978); and M. B. Miller, *The Bon Marché: Bourgeois Culture and the Department Store, 1869–1920* (London: Allen & Unwin, 1981).

8 S. Zukin, *The Cultures of Cities* (Malden, MA: Blackwell, 1999). Of course, at the high end of department stores, luxury brands typically are present as shops-in-shops. Here, the line between boutiques and department stores vanishes.

9 L. Mumford, *Kaupunkikulttuuri* (Porvoo, Finland: WSOY, 1949), 214. (Originally, *The Culture of Cities*.)

Avenue.[10] Similar displays of luxury exist in all global cities.[11] Smaller cities and less exclusive areas in global cities have developed local versions of these luxury streets, as witnessed by the examples of Strøget in Copenhagen and North Esplanade in Helsinki. Shops in these streets offer a vast selection of goods, ranging in price from 5 Euro key rings, to 25,000 Euro jackets to 100,000 Euro watches and upwards.

Semiotic neighborhoods have many functions in cities. They supply people with goods, services, and experiences with which they may construe identities and partake in conspicuous consumption. They attract tourism, educated residents, and creative inhabitants. Their indirect economic effects come through services such as restaurants, museums, coffee shops, and elegant magazines. Furthermore, these areas may become important elements in building a city's image. These neighborhoods also connect local society to global taste, and provide the cultural understanding any modern economy needs to function. Finally, they provide work for local artists, designers, and craftspeople.[12]

Traditional luxury shop areas aside, semiotic neighborhoods only fairly recently have become elements of cityscapes, from the mid-1960s.[13] Also, their tendency to concentrate in certain neighborhoods is a fairly recent phenomenon. Success breeds more success; in the end, several shops flock to the same area, pushing other businesses out. Some functions win in this competitive process, and come to dominate business in that area to the point where it becomes the neighborhood's second nature.

Take Rodeo Drive in Beverly Hills, California, with its extravagant displays of luxury, as an example. Rodeo Drive was elevated to its present status fairly recently; in fact, the first international luxury shops arrived at this short stretch of land at the end of the 1960s.

> Aldo [Gucci] continued the drive to open new stores. He identified Beverly Hills's then sleepy Rodeo Drive as a choice location long before it became a chic shopping avenue, and in October 1968 inaugurated an elegant new store there with a star-studded fashion show and reception.[14]

There had been jewelry shops, antique dealers, and high-end clothiers before, but with the likes of Gucci, other luxury shops followed. Today, more than fifty luxury shops populate this stretch of land (see www.rodeodrive.com).

In contrast to most consumer goods, proximity to other shops benefits the design trade: a Gucci bag is *not* identical to a Hermès bag. Since it is the semiotics embedded in products that makes the difference, not the price, proximity to other shops benefits the economy. When people and media recognize an area as a semiotic neighborhood, the area gets a "character." Circulated in media and folklore, this character directs people to these areas to browse goods

10 For a recent and amusing analysis of luxury products, shops, producers, and customers on these streets, see J. B. Twitchell, *Living It Up: America's Love Affair with Luxury* (New York: Simon & Schuster, 2002). Twitchell studies in detail boutiques on Rodeo Drive (Beverly Hills), Worth Avenue (Miami), Las Vegas; as well as "mothership shops" in midtown Manhattan.

11 S. Sassen, *The Global City: New York, London, Tokyo*. For Sassen, global cities are cities capable of envisioning, organizing, and financing business as well as other activities on a global scale. They are central nodes in the most recent wave of globalization, and differ from "world cities" that have led world culture for centuries. For Sassen, the global economy is shaped by activities organized in global cities rather than by major corporations as such. She holds that global cities have become a home to a group of professionals with top salaries who, in turn, create a market for designer goods and services. Thus, she links the current expansion of the luxury market to the global city phenomenon. In her original book, Sassen analyzed global cities mainly in terms of financial markets, concentrating on New York, London, and Tokyo (and Frankfurt and Paris *in passim*). In more recent editions, she has widened the term to include places such as Los Angeles and Berlin (leaders in culture) and Chicago (multinational corporations, world-class science), but also to smaller cities such as Stockholm and Helsinki (mobile communications technology).

12 R. Florida, *The Rise of the Creative Class* (New York: Basic Books, 2002), 165–89; S. Zukin, *The Cultures of Cities*; V. Narotzky, "A Different and New Refinement: Design in Barcelona, 1960–1990," *Journal of Design History* 13 (2000): 227–43; E. W. Soja, *Postmetropolis* (Oxford: Blackwell, 2000); and A. J. Scott, *The Cultural Economy of Cities* (Thousand Oaks: Sage, 2000).

13 S. Sassen, *The Global City: New York, London, Tokyo*, 335–6.

14 S. Gay Forden, *The House of Gucci* (New York: Harper-Collins, 2000), 35.

and services, and to enjoy the atmosphere. These inscriptions of place guide consumers' actions "from a distance," as the French philosopher Bruno Latour says.[15] Shopkeepers' associations may develop to market the exclusive facet of the area (see the Oak Street Council, www.oakstreetchicago.com), as does trend journalism. When such second-order cultural constructs come to shape the city, entrepreneurs' location decisions go beyond economics alone, and are ultimately grounded in cultural processes.

To justly be called a semiotic neighborhood, I believe that three necessary conditions have to be met. First, the distribution of sophisticated semiotic goods has to concentrate in these areas: every part of a city cannot be established as a semiotic neighborhood.[16] Secondly, these areas have to have to have a dense enough concentration of semiotic business to give them a special look and feel in contrast to department stores, retailing, banks, or business services. Third, these areas have to be written into the popular imagination with maps and other media coverage. Without such inscription, people cannot get to these areas, and shopkeepers cannot locate there because of the "atmosphere" of these neighborhoods.

Data and Methods

This paper analyses semiotic neighborhoods in Helsinki, Finland. They are mostly located in South Helsinki, which dominates the national trade in arts, antiquities, design furniture, accessories, and fashion. In particular, neighborhoods surrounding downtown Helsinki contain a series of shops, as well as producers of culture such as advertising agencies, architectural firms, designer workshops, and interior design studios. As in any successful restructured postindustrial city economy, the crafts industries also have become important wealth creators in these areas of Helsinki.[17] This article focuses on goods rather than on services (such as luxury beauty parlors) or live entertainment (music, theater, and other cultural events). It also focuses on distribution, not on production (architects, designers, interior designers, sound production, and advertising). Finally, public sector investments in symbolic facilities such as opera houses and theaters are excluded, because these are based on political rather than market impulses.[18] I have had to limit my analysis in several ways. I have not studied fashion, which means that the downtown is underrepresented. Also, department store and mall distribution of luxury items is not included.

The term "semiotic business" is the main unit of data gathering. First, semiotic businesses include shops selling designer goods, arts, and antiques, and related services (such as interior design), but not knowledge-based services such as research and law. Secondly, it includes producers such as interior decorators, industrial designers, and architects, but also TV, video and sound producers, new media companies, and advertising agencies. The concept of semiotic neighborhood can be broken into smaller units. For example, in

15 B. Latour, "Drawing Things Together" in *Representation in Scientific Practice,* M. Lynch and S. Woolgar, eds. (Cambridge, MA: The MIT Press, 1991).

16 Possible exceptions are small holiday resorts at, say, the French Riviera; small artistic colonies; and "latte towns," as the journalist David Brooks has called wealthy, upper-middle class suburban towns in his book on "bobos," the bohemian bourgeois. See D. Brooks, *Bobos in Paradise: The New Upper Class and How They Got There* (New York: Simon & Schuster, 2000).

17 I. Koskinen, "Kulttuurikorttelit," *Yhteiskuntasuunnittelu* 39 (2001): 9–28. [Culture Blocks, in Finnish]; and E. W. Soja, *Postmetropolis,* 164.

18 On cultural events and their significance in the "symbolic" city economy, see S. Zukin, *The Cultures of Cities.* For an analysis of production, see S. Lash and J. Urry, *Economies of Sign and Space* (London: Sage, 1994); and A. McRobbie, *British Fashion Design: Rag Trade or Image Industry?* (London: Routledge, 1998). Incidentally, cultural production in the Helsinki region concentrates in south Helsinki. Even new digital industries have located in these neighborhoods, much like architecture in the early decades of the twentieth century, and the advertising industry later in the century (see I. Koskinen, "Kulttuurikorttelit").

areas that otherwise are empty of semiotic business, there may be "semiotic corners"—street corners on which semiotic business dominates the scene; the concentration of designer outlets at Brompton Cross in Knightsbridge, London, provides an example. Streets that are dominated by semiotic businesses are called "semiotic streets"; Union Street in San Francisco is an example. Finally, a "semiotic neighborhood" consists of a set of semiotic streets packed together; perhaps the best example is New York's SoHo, in which more than one hundred fashion boutiques exist between Lafayette, Sullivan, West Houston, and Broome Streets.

Data for this article came from three types of sources: (1) Data on shops (1952, 1960, 1970, 1980, 1990, and 2000) was obtained from the "Yellow Pages" directory, and was supplemented with design organizations' catalogs; (2) Cultural inscriptions were studied in general-purpose shopping guides, commercial maps distributed by department stores, and art and design maps. *Helsinki This Week* provided a time series back to 1956. It contains a monthly listing of places and events of interest to tourists; (3) Statistics used came from Statistics Finland, and the cities of Helsinki, Espoo, and Vantaa.

The Appendix locates south Helsinki neighborhoods on the map; readers unfamiliar with Helsinki ought to consult it at this point. For my analyses, I divided Helsinki into the following five zones. The first three constitute "south Helsinki":

1 "Downtown" consists of three neighborhoods;
2 "The downtown rim" denotes four neighborhoods adjacent to it;
3 "Other South" denotes three southern neighborhoods that do not belong to the downtown or its rim;
4 "Other town" refers to neighborhoods outside the south;
5 Espoo and Vantaa are major, independent municipalities bordering Helsinki. They are referred to with their own names.

Finally, Helsinki has one peculiar feature when it comes to semiotic neighborhoods: it has no traditional luxury areas. The reasons for this probably are historical. Along with Bern and Dublin (and possibly Oslo, which has had a royal family for less than a century), Helsinki is the only European capital that has not been home to a royal court. Finland also has had a small and poor aristocracy, which historically has been based in Stockholm and St. Petersburg, rather than Helsinki.[19]

The Concentration of Semiotic Business in South Helsinki

The first necessary condition for a neighborhood to be called "semiotic" is that business in that neighborhood is significantly more semiotic than in other neighborhoods. In the citywide context, all neighborhoods in south Helsinki have become semiotic over the last three decades of the last century.

19 E. Jutikkala, "Johtavat säädyt," in *Suomen kulttuurihistoria II* (Jyväskylä: Gummerus, 1934), 33–65. [*The Leading Estates,* in Finnish]; E. Jutikkala, "Varallisuussuhteet Suomessa Ruotsinajan päättyessä," *Historiallinen aikakauskirja* 47 (1949): 170–206 [*The Distribution of Wealth in Finland at the End of the Swedish Era,* in Finnish]; K. Wirilander, *Herrasväkeä: Suomen säätyläistö 1721–1870* (Historiallisia tutkimuksia 93, Helsinki: Suomen Historiallinen Seura, 1974) [*Gentry: Gentry in Finland 1721–1870,* in Finnish]; and E. Konttinen, *Perinteisesti moderniin: Professioiden yhteiskunnallinen synty Suomessa* (Tampere, Finland: Vastapaino, 1991) [*Traditionally to Modernism: The Social Birth of Professions in Finland,* in Finnish].

If we look at the antique and art trade, and interior design, we get a picture of the process. Table 1 shows that the antique trade became an important feature of the Helsinki landscape in the 1980s, not just in the south, but also in other town. A similar pattern characterizes the art trade, which grew to a quantitatively new level in the 1980s, and has continued to expand in the 1990s, although at a slower pace. In particular, south Helsinki is significantly overrepresented in the art trade. In interior decoration, business spread to other parts of town in the 1960s, breaking the leading role of the south. The highest concentration of theaters, movie theaters, popular restaurants and bars, and live music establishments is in downtown Helsinki. The largest crowds in the evening flock to this downtown-based entertainment district.

Table 1
Distribution of Semiotic Businesses (frequencies)

	1952	1960	1970	1980	1990	2000
Antiques						
South	20	11	18	31	69	65
Other town	0	0	1	8	14	17
Art						
South	17	14	17	29	41	56
Other town	0	0	2	4	19	7
Interiors						
South	18	29	25	21	49	56
Other town	4	9	12	11	43	39

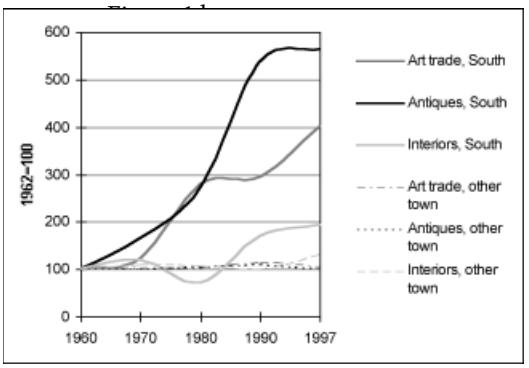
In some respects, Table 1 has a mixed message. On the one hand, the south historically has led the art trade. On the other, the table shows that semiotic business grew faster in "other town" in the 1980s. However, the recession in the early 1990s hit business outside the south hard. Thus, the art trade again has concentrated in the south, with a similar development taking place in antiques as well as interior design. In the 1990s, the south added shops, while business elsewhere suffered.

In qualitative terms, the high end of the market has concentrated in the south. In 1990, seventy-seven percent of art galleries (in contrast to mere art dealers) were in the south. In 2001, this figure was ninety-three percent. In interior decoration, Italian, German, and Danish furniture, Italian and French accessories, and other foreign interior decoration textiles have all concentrated in the south. In 2001, ninety-two percent of boutiques with foreign names (Finnish, Swedish, and English names excluded) were there. In other parts of town, as well as in the suburbs, there were only two shops with foreign names. During the 1990s, the top end of galleries, antique shops, and interior design shops have selected their home neighbor-

hood more conservatively than before, opting for southern locations. The south specializes in symbolically sophisticated goods; while cheaper goods are sold elsewhere in town.[20]

Figure 1 gives an index of how these three businesses developed over the last four decades of the twentieth century. Notice that numbers are standardized by area size to compensate for growth of the city and its suburbs. The figure shows that the antique trade in the south grew more than five-fold between 1960 and 1997. In other parts of Helsinki, growth has been modest, if we relate it to their overall growth. If we take into account suburban sprawl in the neighboring cities of Espoo and Vantaa, the special role of the south would be even more staggering. Close to 300,000 inhabitants migrated to these towns between 1970 and 2000, but there still are only a handful of galleries, antique shops, or interior decoration shops in these cities, although both have set up civic centers.

Figure 1
The development of Three Types of Semiotic Shops (shops/km²)



Thus, although business in general has spread out of the downtown area as the city has grown,[21] semiotic business has countered the trend and, in fact, has concentrated in the southern neighborhoods. With good justification, we can say that south Helsinki neighborhoods are "semiotic": their economy revolves around signs more than the economies of other parts of town.

Which South Helsinki Neighborhoods Are Semiotic?

The second condition a neighborhood must fill to be called "semiotic" is that it is densely populated by semiotic businesses. This section studies development *within* south Helsinki to see how semiotic business has located there.

Figure 2 ranks Helsinki by area in terms of semiotic businesses (in 2000). The figure consists of art galleries and art shops, art museums, antique dealers, antique and arts-oriented auction houses, and interior decoration shops that sell designer goods. For comparison, this figure also gives a similar number for companies that produce culture.[22] The figures are standardized by the size of the area to account for size differences between the southern neighborhoods and the rest of Helsinki.

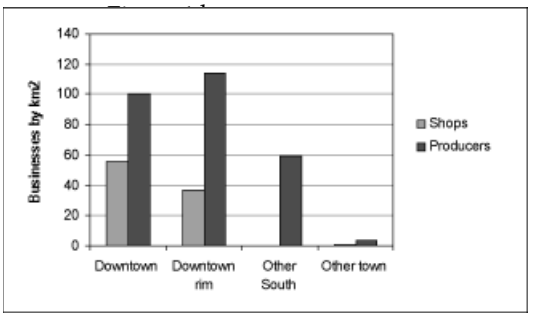
20 I. Koskinen, "Tuleeko keskustasta kulutusparatiisi?" (Working paper. National Consumer Research Centre, Helsinki, 2003) ["Is the City Going to be a Consumer's Paradise?" In Finnish, available at www.ncrc.fi/publications/]

21 S. Laakso, *Yritystoiminnan alueellinen erikoistuminen pääkaupunkiseudulla* (*Helsingin seudun suunnat* 1/2002, Helsinki: Tietokeskus, 2001) [*The Spatial Differentiation of Business Activity in the Capital Region,* in Finnish].

22 Including architects, industrial designers, interior designers, and other product design professionals.

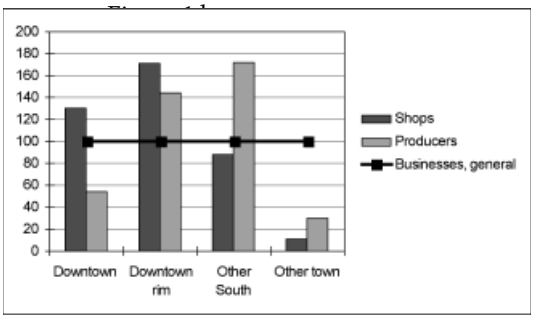
The concentration of business in the south is striking, if we compare these figures to the citywide average of 2.7 shops/km^2, and 7.56 producers/km^2. In terms of shops, all top eight neighborhoods are located in the south, and only three southern neighborhoods are missing from the top ten. Since Helsinki has almost 130 neighborhoods, these figures reveal a significant concentration of activity. Closer analysis shows that the downtown area has the densest concentration of shops, along with the downtown rim producers. The key message of the figure is that Helsinki's semiotic marketplace is heavily concentrated downtown and in the neighborhoods in its immediate vicinity.

Figure 2
Semiotic Business in Helsinki by Area (2000)



However, Helsinki's central business district also is located in the south (see the Appendix). As dense as semiotic business is in this area, it is overshadowed by other economic activity. Figure 3 compensates for business activity, and elaborates the results of the previous figure by relating semiotic business to the overall number of businesses in the city. If an area's score is above 100, semiotic business is overrepresented in it. For example, the figure shows that, if there were 100 businesses per square kilometer in the town, there would be 130 semiotic shops downtown, 170 in the downtown rim, 87 in other parts of the south, and 11 in other town.

Figure 3
Semiotic Businesses and Other Economic Activity in Helsinki (indexed by overall business activity) (2000)



This figure shows that, even though significant in absolute numbers, semiotic business does not characterize the downtown. It has a significant number of semiotic shops, but its look and feel is based on the financial world, central government buildings, and department stores rather than art and design shops. In contrast, the downtown rim scores higher in this measure: compared to its share of economic activity and workplaces, semiotic business is overrepresented in the downtown rim, and producers in other southern neighborhoods. If we look behind these figures, we see that west of downtown, the Punavuori neighborhood, in particular, stands out in terms of semiotic business. In all, seventeen percent of its businesses either sell or produce semiotic goods. There are more than ninety semiotic shops, and more than 230 producers in each square kilometer in Punavuori. An old, working-class area that has gentrified since the 1960s, Punavuori still has plenty of workspaces and small apartments, which creates conditions for artistic invasion. Helsinki's semiotic neighborhoods surround the downtown: in the downtown rim, semiotic business is dense enough to give these neighborhoods a special character.[23]

The Cultural Inscription of Semiotic Neighborhoods

The third condition required for a semiotic neighborhood is that it is marked culturally with concepts and maps. Without such inscriptions, customers would not know what to seek in these areas, and there would be one economic reason less for entrepreneurs and businesses to settle there. The two previous sections have shown that Helsinki's semiotic neighborhoods lie in the southern part of town. This section looks at whether inscriptions follow the real thing.

The map in the Appendix shows how Helsinki's semiotic businesses are construed from three alternative value systems. Commercial and general-purpose maps locate the central point in the downtown area, while the art and design-oriented maps place it slightly southwest of downtown. Still, even on these maps, Helsinki's central point lies in the immediate vicinity of downtown. Thus, the distance between the central points in commercial maps and the arts map is only about five blocks, which makes it barely more than 500 meters (under 1,700 feet). Statistically, this distance is not significant(t-test>.70). Downtown's lively commercial world effectively biases this estimate. See the map of Helsinki in the Appendix.

Although Helsinki's southern neighborhoods have not gained distinct identities in cultural inscriptions, two factors should be noted. First, south Helsinki as a whole becomes a semiotic neighborhood if we situate the picture given by these inscriptions in the urban ecology of the Helsinki region: all maps place Helsinki's semiotic business in a small area in the south. Secondly, if we look at semiotic business only, there are rudiments of differentiation in perceptions of

23 These figures suggest two quantitative criteria for a semiotic neighborhood. First, it has to be an economically active place. Three design offices are not enough to make a neighborhood semiotic, if there is no other business in the area. Secondly, more than ten percent of its business activity has to be semiotic in character. In Helsinki, these criteria make three neighborhoods semiotic: Punavuori (17%), Ullanlinna (10%), and Kaartinkaupunki (9–10%). However, although these measures have the virtue of being simple, they ought to be refined using data from other cities.

southern neighborhoods. As Table 2 shows, *Helsinki This Week*

Table 2
Semiotic Businesses in *Helsinki This Week*, 1960–2000 (frequencies)

Neighborhood	1960	1970[1]	1980[1]	1990	2000	Combined
Downtown						72
Kluuvi	8	3	4	10	20	45
Kamppi	0	1	3	2	12	18
Kaartinkaupunki	0	0	3	3	4	10
Downtown Rim						21
Punavuori	3	1	1	2	6	13
Ullanlinna	0	0	1	1	4	6
Kruununhaka	0	0	0	1	1	2

1 Only major shopping street mentioned in 1970 and 1980.

has consistently placed the main shopping area for semiotic goods in the downtown area. In the downtown rim, only Punavuori and Ullanlinna received attention before the 1990s.

However, this perception changed in the 1990s. Table 3 shows how three tourism maps in 2000 displayed semiotic businesses, broken down by neighborhood. For this table, the top five neighborhoods in each map have been ranked from 1 to 5 (with 5 being the highest score). Again, downtown ranks as the main shopping area, though nearby neighborhoods increasingly challenge it. In particular, in the design-oriented *b-guided map*, Punavuori (the downtown rim) follows Kamppi (downtown) at the top, in front of the other downtown neighborhoods of Kaartinkaupunki and Kluuvi. Without Stockmann's downtown-centered commercial vision, Punavuori would top the table together with Kluuvi (downtown).

Table 3
The Ranking of Semiotic Neighborhoods in Three Shopping Guides (2000)

Neighborhood	*Helsinki This Week*	b-guided.net	Stockmann	Sum
Downtown				25
Kluuvi	5	3	5	12
Kamppi	0	5	0	5
Kaartinkaupunki	3	1	4	8
Downtown Rim				18
Punavuori	4	4	0	8
Ullanlinna	3	2	1	6
Etu-Toolo	0	0	3	3
Kruununhaka	1	0	0	1
Other South	0	0	2	2

5 = Neighborhood with most markings on each map.

1 = Neighborhood with fewest markings..

As this analysis shows, these representations follow the real thing. However, these neighborhoods are hardly celebrated as such in the press and national imagination. A few downtown streets have come to be known for their creative qualities,[24] but most attention in the popular press goes to bars and nightlife. Much of this publicity is targeted to a youthful audience, whose members are neither interested in, nor wealthy enough to attract attention from, the more exclusive types of semiotic business.

This, of course, contrasts with global cities, in which tourism industries follow commercial developments in minute detail, and offer these as prime attractions for tourists. One obvious reason is that Helsinki's downtown is situated on a narrow cape, which tends to concentrate many economic activities close together.[25] The absence of geographic markers such as the island in Stockholm, or the medieval old town in Copenhagen, makes differences between neighborhoods difficult to perceive. Also, unlike New York or London, old industrial, harbor, and warehouse districts were not opened for commercial and residential use on a significant scale until the late 1980s. The real estate business operates with old neighborhood names instead of manipulating perceptions with New York-style innovations.[26] Finally, south Helsinki neighborhoods by and large have been designed by a fairly small group of architects and master builders in the national romantic and art deco styles.[27] For an untrained eye, a walk around the south does not become a catalogue of distinct neighborhoods, for their look and feel does not change dramatically as one passes from one neighborhood to the next. However, rudiments of such area identities exist in Helsinki, and semiotic business is one of the driving forces in the differentiation of urban space.

Conclusions and Discussion

This paper has introduced the notion of semiotic neighborhoods. This concept describes areas of town in which there is a high concentration of semiotic shops, with fewer in other districts, and when this semiotic quality is recognized in maps and other institutionalized cultural constructions. The term is justified when these three conditions are met. These neighborhoods are a distinct aspect of city landscape today, although routine consumption, mass consumption, and extravagant "cathedrals of consumption" have received much more scholarly attention than whole neighborhoods in cities.[28] "Semiotic neighborhoods" captures a visible, but largely neglected aspect of consumer culture, the trade of sophisticated goods targeting mostly the upper-middle classes and tourists. These areas also are landmarks in real estate, trend magazines, and tourism, each making business out of the semiotics of space.

In their archetypal form, semiotic neighborhoods can be found in global cities such as Los Angeles, Paris, and London. However, this paper shows that this concept describes consump-

24 C. Landry, *Helsinki: Towards a Creative City* (Helsinki: Comedia and Helsingin kaupungin tietokeskus, 1998).

25 L. Aario, *The Inner Differentiation of the Large Cities in Finland* (Turku, Finland: Fennia, 1952); and J. Siipi, *Pääkaupunkiyhteiskunta ja sen historia* (Helsinki: Helsingin kaupungin historia V.1, 1957) [*The Capital and its History, part V.1.* in Finnish].

26 Zukin shows how the real estate profession invented the acronym "SoHo" in an effort to turn former industrial area into more profitable residential and business districts. Of course, SoHo was just the first in a long line of increasingly ingenious names and acronyms aimed at effacing working-class and slum associations from old neighborhood names in Manhattan and Brooklyn. See S. Zukin, *Loft Living: Culture and Capital in Urban Change* (New Brunswick, NJ: Rutgers University Press, 1989).

27 J. Moorhouse, et al., *Helsingin jugendarkkitehtuuri 1895–1915* (Helsinki: Otava, 2002). [*Jugend Architecture in Helsinki*, in Finnish].

28 See S. Zukin, *The Cultures of Cities,* Chapter 6; and M. B. Miller, *The Bon Marché: Bourgeois Culture and the Department Store, 1869–1920.* The term "cathedrals of consumption" is from G. Ritzer, *Enchanting the Disenchanted World: Revolutionizing the Means of Consumption* (Thousand Oaks: Pine Forge, 1999).

tion in smaller cities as well, even though they have a more modest luxury sector than global cities. An analysis of these neighborhoods in Helsinki shows that south Helsinki dominates the trade in arts, antiques, and other types of highly semiotic goods. Other parts of the city have not been able to compete with these neighborhoods. In fact, the south has become increasingly "semiotized" in the midst of suburban sprawl.

In conceptual terms, it is important to distinguish semiotic neighborhoods from two other types of areas. First, they are different from entertainment districts, as characterized by theaters, movie theaters, and popular restaurants and bars.[29] Semiotic neighborhoods and entertainment districts may overlap, but this is not necessarily the case. In Helsinki, the downtown area is the dominant entertainment district. On the rim of downtown, there are clusters of bars and restaurants in a few streets, but no crowd-gathering establishments such as multiplex cinemas. Rather, movie theaters in the downtown rim target selected audiences with interest in art cinema. Secondly, semiotic neighborhoods differ from the mall culture typical to suburbanized lifestyle. Of course, some overlapping features exist. Management in upscale malls has realized the potential of semiotic business, and attracts it to malls. Still, the difference is clear: in malls, the environment is centrally controlled, cleaned, and managed. Outside the limits of the mall is spread a suburban mat of roads and homes. In semiotic neighborhoods, a customer faces the city, in which shop owners do not have control over the streetscape.

Interestingly, semiotic neighborhoods appeared in Helsinki at the same time as they did in global cities, if Saskia Sassen's timing is correct.[30] However, the reasons for expansion must be different: Helsinki's financial sector is far smaller than London's and New York's. Also, its growth in the 1980s took place too late to explain the growth of semiotic business in the first place. Of course, it is possible that the present consumption scene first originated in global cities and then spread to smaller cities. However, some evidence speaks against this explanation. For example, Narotzky dates the growth of design consumption in Barcelona to the 1980s, and links it to the Olympic Games and the democratization of Spain after Franco's regime. Modern design provided distance from the Franco era, and the Olympics made Barcelona a desired tourism destination. Once the locals learned to recognize good design, there was sufficient demand to maintain a local design industry, even though the original impetuses were no longer present.[31]

In Helsinki, development has been evolutionary rather than prompted by Barcelona-like historical events. A more promising starting point is the interaction of consumers, producers, media, and the public sector. First, the expansion of higher education, media-intensive culture, and the welfare state in the 1960s created a mass of cultivated consumers with nontraditional values, and stable earnings that peaked by the end of the 1970s.[32] Secondly, by that time, the

29 Cf. T. Santasalo and H. Heusala, *Helsingin keskustan kaupallinen rakenne* (Helsinki: Helsingin kaupunginkanslian julkaisusarja A 16, 2002) [*The Commercial Structure of Downtown Helsinki,* in Finnish]

30 S. Sassen, *The Global City: New York, London, Tokyo.*

31 V. Narotzky, "A Different and New Refinement: Design in Barcelona, 1960–1990."

32 Consumption of semiotic goods and services indeed grew simultaneously with consumerism in Finland, if we follow historians of consumption. Cf. V. Heinonen, Näin alkoi kulutusjuhla. Suomalaisen kulutusyhteiskunnan rakenteistuminen. In K. Hyvönen, et al., eds., *Hyvää elämää. 90 vuotta suomalaista kulutustutkimusta* (Helsinki: Kuluttajatutkimuskeskus ja Tilastokeskus, 2000), 14–20. [*How the Consumption Fiesta Began: The Structuration of Finnish Consumer Society,* in Finnish].

design professions, as we know them today, were largely in existence to exploit and shape this evolving market, to co-opt public policy, and to supply the newly-built welfare infrastructure with goods and expertise. Third, Finnish design achieved international attention in the sixties, making design a legitimate and even coveted subject of consumption. The end of the seventies was the first time when all these conditions were working simultaneously, creating new practices and structures for both consumption and production. When the news media began to popularize a consumption-centered lifestyle in the eighties, this ideology fell upon a fertile ground that had formed in the previous two decades. Of course, a historical explanation of developments in Helsinki is beyond the limits of this paper. Still, these conjectures suggest that local reasons probably account for the expansion, rather than any single factor, such as the new middle classes or diffusion from global cities, even though both may have played a part in the process.

This paper opens new vistas for research. The concept can be used both as a dependent and an independent variable. For example, we can pose questions concerning the functions of semiotic neighborhoods in cities and the modern market economy, as well as ask what factors account for the birth and recent expansion of these areas. Such analysis also may throw new light on various theoretical arguments about modern consumption. Empirical studies have shown that sign-oriented consumption is largely limited to a few professional lifestyles such as marketing.[33] This paper suggests that these forms of consumption have a spatial aspect as well: this movement towards a society of experience does not treat areas equally, but concentrates in some parts of cities.

Thus, it may well be that cities proceed towards "Disneyfication," characterized by a Baudrillardian postmodern experience in which even having a cup of coffee becomes a path through a specifically designed experience. Such extremes may exist in places such as Las Vegas, London's Soho, and in several places in Manhattan.[34] However, these are extreme cases, and we should generalize from them cautiously. This paper suggests that such developments take place only in a few places. Furthermore, this development is largely partial: in Helsinki, only the downtown area is thoroughly dominated by commercial activities. In other parts of south Helsinki, the lifestyle is more tranquil: enough people live and own homes there to make these areas multifunctional in Jane Jacobs' sense.[35]

By and large, Helsinki's southern neighborhoods have successfully resisted becoming thoroughly commercial. Since the end of 1960s, the City of Helsinki policy has aimed at keeping even the central parts of the town populated.[36] Partly because of this policy, and partly because of the ups and downs of the economy, most parts of south Helsinki have remained populated (but see the Appendix). Consequently, there is enough local demand to keep grocery stores

33 See M. Savage, et al., *Property, Bureaucracy, and Culture.*

34 See G. Ritzer, *Enchanting the Disenchanted World: Revolutionizing the Means of Consumption*; and J. Hannigan, *Fantasy City: Pleasure and Profit in the Postmodern Metropolis* (London: Routledge, 1998).

35 J. Jacobs, *The Death and Life of Great American Cities* (New York: Vintage, 1961/1992).

36 Cf. O. Turpeinen, T. Herranen and K. Hoffman, *Helsingin historia vuodesta 1945* (Helsinki: Helsingin kaupunki, 1997), 155–171 [*The History of Helsinki since 1945,* in Finnish]

and other modestly priced shops in business, which in turn makes south Helsinki an attractive living environment for diverse people. Even today, inhabitants in this area range from upper-middle class to the less fortunate, and from young professionals and families with children to senior citizens, which creates a demand for a great variety of ordinary goods and services. South Helsinki has become neither a shopping paradise, nor an entertainment district, quiet during the daytime, and alive only after dark.

Appendix

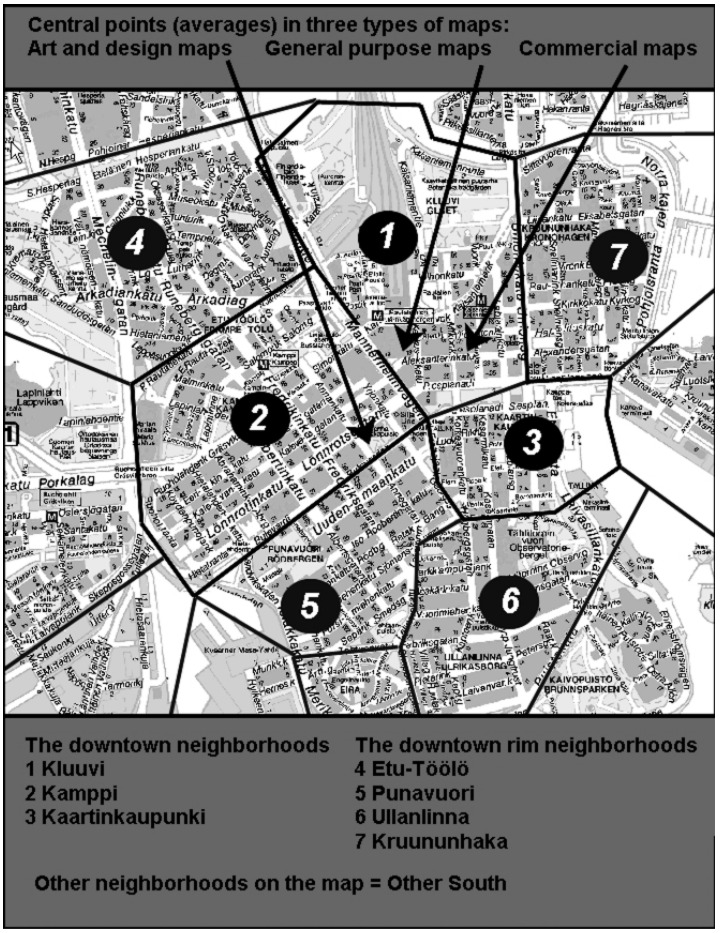


Figure 4
Southern Neighborhoods and City Facts, Helsinki.

In 2000, these south Helsinki neighborhoods had about 56,500 inhabitants and 87,200 workplaces in an area of approximately 6 km^2 (i.e., not including land area with parks, harbors, major traffic areas, and industrial areas). This makes up less than five percent of all inhabited area in the city, while the inhabited area in other town is about 127 km^2 (my estimate). In 1962, more than thirty-one percent of Helsinki's inhabitants lived in the south. In 1997, the figure was about eleven percent.

The downtown area, marked with a black line, consists of Kaartinkaupunki, Kluuvi, and the eastern part of Kamppi. Government buildings and the University of Helsinki's central campus fill the western part of Kruununhaka. Kluuvi and Kaartinkaupunki have very few permanent residents. Adjacent parts of these three neighborhoods also are void of inhabitants. This uninhabited area is about 2.5–3 square kilometers in size. This geographic pattern has its origins at the end of the nineteenth century.[37]

In 2000, the city of Helsinki had approximately 550,000 inhabitants. It is surrounded by two major independent communities, Espoo and Vantaa, but the metropolitan area extends beyond both. The Helsinki metropolitan area has approximately 1.2 million inhabitants. Between the end of the 1960s and early 1990s, practically all growth in the area took place in Espoo and Vantaa. Work and retail trade have followed the population.[38]

A recent Europe-wide statistical analysis of forty-eight metropolitan areas in Europe revealed that, in terms of gross value added (GVA) per capita, Vienna, Paris, Helsinki, Zurich, and the other Nordic capitals follow Brussels and Hamburg at the top. With Dublin, Helsinki tops the list of the fastest-growing cities.[39]

37 As noted by Aario (L. Aario, *The Inner Differentiation of the Large Cities in Finland*); Siipi (J. Siipi, *Pääkaupunkiyhteiskunta ja sen historia*); and S-E. Åström, *Samhällsplanering i Helsingfors, 1810–1910* (Helsinki: Mercator, 1957) [*Town Planning in Helsinki, 1810–1910*, in Swedish].

38 S. Laakso, *Yritystoiminnan alueellinen erikoistuminen pääkaupunkiseudulla*; and I. Koskinen, "Tuleeko keskustasta kulutusparatiisi?"

39 S. Laakso, *The Regional Economy of Helsinki from an International Perspective* (Web Publications 10/03, Helsinki: Helsinki City Urban Facts, 2003). (www.hel.fi/tieke/)

From the Gospel of Efficiency to Modernism: A History of Sweet's Catalogue, 1906–1947

Andrew M. Shanken

Sweet's Catalogue (figure 1), that almost mythic fixture of promotion in the building industry, arose in 1906 in response to what architects called the "catalogue problem." Besieged by thousands of catalogues of irregular size and format, the architect or builder could scarcely keep up with the proliferation of building materials in the emerging national economy, let alone organize and read the trade catalogues generated by a building industry stoked by the emerging field of advertising. Sweet's systemized the chaotic lines of communication between architects, builders, engineers, and manufacturers, regularizing the typography and size of trade catalogues, and binding them in one large reference book with an index. By 1912, when the Architectural Record Company, the publisher that founded Sweet's, sold the catalogue to the F. W. Dodge Company, the idea of the compilation catalogue shifted from an attempt to reign in the unruly business of advertising, to a progressive era attempt to rationalize and manage the larger industry for architects and builders. During the Great Depression and World War II, Sweet's Catalogue File, as it came to be called, again changed, this time in response to European typography and layout, the latest ideas about the display of visual

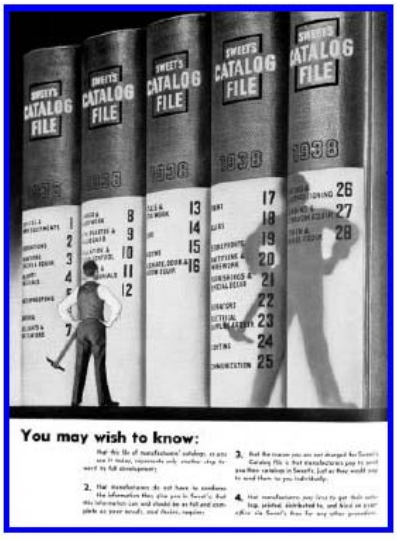


Figure 1
Sweet's Catalog File Advertisement, 1938 (*Architectural Record* 83, June, 1938) 158.

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information, and systems theory. This essay explores the creation and early development of Sweet's Catalogue from 1906 to the end of World War II as a way of revealing the ways in which architects responded to, and were shaped by, the emergence of a consumer culture.[1]

Sweets, F. W. Dodge, and the Beginnings of Consumer Culture

Sweet's grew up with the beginnings of consumer culture, which Richard Wightman Fox and T. J. Jackson Lears locate in the maturation of the national economy, with the attendant growth of national magazines and advertising, and a "new stratum of professionals and managers, rooted in a web of complex new organization (corporations, government, universities, professional associations, media, foundations, and others)."[2] Lears, in particular, situates consumer culture in a shift in ethos. A thoroughly national marketplace, even more than the factory system that preceded it, alienated people from the means of production. Burgeoning bureaucracies plugged the growing managerial class into an impersonal system, leaving its members a narrowing purchase on self-determination. As Lears put it: "... the masses of employees who in a corporate economy could no longer aspire to become their own bosses," found legitimation, even transcendence, in consumption.[3]

Providing shelter for the bureaucracies of the rising service economy changed the scale of operation in building significantly in the late nineteenth century. The new skyscrapers, railroad stations, and other industrial and commercial structures, both individually and collectively, forced the building industry to rationalize. This meant forsaking the intimate and quasi-familial basis of business that prevailed before the advent of the corporation. A new system evolved to accommodate the new scale of operation. Frederick Warren Dodge (1864–1915), a pioneer in building statistics, emerged in 1891 in this context, running handwritten reports on construction projects organized by area, class of structure, and building progress to a small group of subscribers in Boston.[4] Within two years, he moved to New York City and soon his business, finding a quick monopoly in an important niche, developed into the leading construction news service in the nation. Adapting the relatively new system of the library card catalog to news in the building industry, Dodge was able to record each successive phase in the erection of buildings, presenting individual cards to the business offices of builders and manufacturers in an efficient manner for tendering bids and the filing of information.[5]

The change from acting as a local gopher for the building trades to a national news service happened with astonishing speed. As Dodge's obituary in *Architectural Record* pointed out, "the business of contractors" in the late nineteenth century "was more or less local in character, and the demand for building news was likewise

1 Sweet's Catalogue has changed name several times in its history. From 1906 to 1911, it was called *Sweet's Indexed Catalogue of Building Construction*. In 1912, it changed to *Sweet's Catalogue of Building Construction*, becoming *Sweet's Architectural Catalogue* in 1916, *Sweet's Catalogue File* in 1934, and *Sweet's Catalog File* in 1936. After World War II, the single tome proliferated into many annual specialized volumes. I will refer to the entire run with the generic "Sweet's Catalogue."

2 See the introduction to Richard Wightman Fox and T. J. Jackson Lears, eds., *The Culture of Consumption: Critical Essays in American History, 1880–1980* (New York: Pantheon Books, 1983), xi.

3 Ibid.

4 Capsule History of F. W. Dodge and Sweet's Catalogue, courtesy of McGraw-Hill Corporation.

5 Roger W. Babson, "F. W. Dodge: A Tribute," *Architectural Record* 39 (Jan., 1916): no page numbers. Melvil Dewey created the Dewey Decimal Classification System in 1872 while a student at Amherst College. His idea was widely disseminated in 1876, when he published *A Classification and Subject Index, for Cataloguing and Arranging the Books and Pamphlets of a Library*. See Wayne A. Wiegand, *Irrepressible Reformer: A Biography of Melvil Dewey* (Chicago: American Library Association, 1996).

very narrow. Few people, for example, in Chicago or even in New York cared to hear about building operations in Boston."[6] All of this changed very rapidly in the years around 1900. After the panic of 1893, the "general development of large-scale business in nearly all lines of industry" demanded "more efficient and exact trade news than had been available before that time."[7] The simple erection of a skyscraper, for instance, called for a level of organization that only surfaced during times of war. The unprecedented tons of steel, brick or terracotta, piping, glass, and the myriad of materials needed to finish and appoint the interior of increasingly large buildings taxed the manufacturers and distributors of materials, and the builders of the day:

> In order to construct the huge buildings demanded in various large cities, contracting concerns needed to have sufficient capital to specialize on large work of the kind, and building material manufacturers were also obliged to sell goods on a mammoth scale. Naturally all this large-scale business created a demand for construction news which should cover fully all sections of the country where big construction work was being carried on.[8]

The industrial revolution gave rise to a revolution in communication that, in turn, enabled the new scale of consumption. The Dodge Reports, as the news service came to be called, became an essential cog in twentieth-century building in the United States.

Where industry went, advertising followed. The nationalization of advertising closely paralleled the rise of the Dodge Reports. Both grew out of the nationalization of industry and the need for manufacturers to communicate their services or products to a far-flung public. Where Dodge fed the manufacturing end of the building industry, Clinton W. Sweet (1842–1917), a generation older than Dodge, came to the building industry through real estate. Sweet founded *Real Estate Record and Building Guide* in 1868, followed by *Architectural Record* in 1891. With thirty years of journalism in real estate and architecture behind him, he started Sweet's Catalogue to organize the commercial communication of building products for architects, in short, to rationalize advertising in a moment when it presented a particularly noisome threat to the architectural profession.

For architects, who were shedding the remnants of the builder-architect tradition for the Beaux-Arts model of the artist, consumer culture could be shocking. While Mary N. Woods rightly argues that "capitalism ... was the milieu of American architectural practice" in the nineteenth century, architects struggled to reconcile the pragmatic demands of doing business with their aspirations to high culture.[9] Professional ethics prohibited architects from advertising their personal services, an interdiction that created a strong antipathy to advertising in general. In the introduction to the first

6 Ibid.

7 Ibid.

8 Ibid.

9 Mary N. Woods, *From Craft to Profession: The Practice of Architecture in Nineteenth-Century America* (Berkeley, CA: University of California Press, 1999), 167.

Sweet's Catalogue, Thomas Nolan, a Philadelphia architect and a professor of architecture at the University of Pennsylvania, wrote: "... the architect is not tickled to death with the present catalogue and its promiscuous distribution."[10] Canvassing more than three thousand architects, Sweet's learned that the profession wanted the new compilation to "exclude display advertising" entirely, and to "expunge mere 'trade' talk."[11] Sweet's would be lean and informative, a rational tool for business, and not a debased vehicle for promotion.

"The Catalogue Delusion"

The "catalogue problem" did more than inconvenience the architect. It undermined the basic running of an office. Nolan wrote humorously of this "fruitful source of perplexity in every architect's office":

> For a period of a dozen years, every possible method of collecting, sorting, classifying, filing and indexing all the catalogues and circulars of building materials was conscientiously given a fair trial, and after a thorough test, every method was just as conscientiously abandoned. ... Everything was tried, arrangements of shelves, bookcases, pasteboard boxes, filing cases, patent binders, filing cabinets, cases of drawers, indexing schemes and "index-reruns."[12]

The task took on the sense of physical comedy:

> At first all the big books were put together in one place and all the little books in another place; and then all the big and little books were mixed up together, and indexed according to subject. Some had four pages, and some had four hundred pages. Barely two were of the same shape or superficies. The little ones would not stand up, and could not be gotten at when laid flat. Another elaborate system was introduced, and a voluminous cross-index started, but the big books contained too much useless matter, and the little books got lost or mislaid or could not be found just when wanted. Then the writer decided, after much time and expense, that the present system of publishing and distributing catalogues, as far as the architect is concerned, might be rightly termed, "The Catalogue Delusion."[13]

The publisher of Sweet's took care to acknowledge the necessity of trade catalogues. He catered both to the architect and to companies in the building trades, which increasingly held sway over the market: "With few exceptions, the general desire has been 'to improve' and to assist the architectural profession in dealing with the 'catalogue problem.' For the catalogue is a vastly useful piece of trade machinery. It is simply indispensable to the building material firm. It is

10 Thomas Nolan, "Introduction" to *Sweet's Indexed Catalogue of Building Construction* (New York: The Architectural Record Company, 1906), ix. Nolan (1857–1926), who trained at the University of Rochester, and Columbia University under William Ware, also enrolled at the Ecole des Beaux-Arts in Paris, in the Atelier Daumet. In addition to practicing as an architect, Nolan was a professor of architecture at the University of Pennsylvania. See Philadelphia Architects and Buildings at: www.philadelphiabuildings.org/pab/

11 *Sweet's Indexed Catalogue of Building Construction* (New York: The Architectural Record Company, 1906), xii.

12 Thomas Nolan, "Introduction" to *Sweet's Indexed Catalogue of Building Construction*, vii.

13 Ibid., vii.

equally indispensable to the architect."[14] The complete absence of a system, however, created an intractable problem, as catalogues flooded by the thousands into architects' offices: "There comes a point in the process when something must break. Either the architect must surrender to the deluge, or, to save himself, embark [on] the Ark of Indifference to all trade literature."[15]

Sweet's Catalogue did not immediately solve the problem. In 1907–08, attacks on the old system continued, but now couched in terms of the changing role of the architect:

> "SWEETS" was originally launched in the midst of extraordinary conditions. The architect had become, literally, the victim of what has been termed the "catalogue mania." Certainly every firm in the building material world was issuing catalogues, and equally certainly every catalogue printed was immediately dispatched to every architect whose name and address could be discovered by any means. As a result the average architect received several thousand catalogues per annum.... What can the unfortunate architect do with all this literature? Clearly the poor fellow cannot read it, no, not even were he to work at the task for eight hours every day during the whole year.[16]

Architects confronted the explosion of trade literature as the second phase of the industrial revolution further mechanized the building trades and expanded the national marketplace with a profusion of new products. With an almost chastising tone directed at manufacturers, Sweet's propagandized its effort to rationalize trade literature, but the publisher understood the problem with some subtlety, rooting it in the structure of the architectural profession and the character of the architect:

> Any one might have been warned of the situation by regarding the fact that the architect is a particular victim of the catalogue. He is the disbursing agent for a large sum of money. He is few in number and it is easy to reach him through directories and the like. But in a certain personal sense, he is not an approachable man. He is busy, and with his technical training his ears are more or less stopped against the exuberant talk of the enthusiastic salesman.[17]

In spite of the evident disdain for advertising, the publisher dispensed with the usual castigation of consumer culture. "Catalogue mania" derived not from some inherent problem with trade literature or the abstract evil of promotion itself, but rather from a systemic problem, a disjunction between the means of distribution and its target. Architects were peculiar businessmen, part of a still protean profession with a certain haughty disregard for the commercial side of practice, yet as "the disbursing agent for a large sum of money," they capped the pyramid of the building industry. They were a

14 Ibid., xi.

15 Ibid., xi.

16 *Sweet's Indexed Catalogue of Building Construction* (New York: The Architectural Record Company, 1907), vii.

17 Ibid., viii.

hybrid profession, part artist, part manager, with an unstable relationship to the emerging consumer culture. Thomas Nolan understood the problem in purely practical terms that suggests a parallel to the present-day promotion of new prescription drugs to doctors. "The tremendous mechanical activity of our modern days," he wrote, exerted an increasing pressure on the architect, who "is compelled to pay some attention to these demands. He cannot give up his time to the reception of salesmen interested in pushing these novelties. The day is too short."[18] Yet the architect depended on the catalogues to remain informed about progress in the building industry: "The names of building material firms are legion. It is difficult to find any really valid test for discrimination. What course is open to the architect?"[19]

834 Prior Sheet Construction The Berger Manufacturing Co.

THE BERGER MANUFACTURING CO.
Manufacturers of Sidewalk Light Constructions and a General Line of Pressed Steel Building Specialties
CANTON, OHIO

Figure 2
Berger's Raydiant sidewalk lights. From Sweet's Architectural Catalogue, 1917.

18 Thomas Nolan, "Introduction" to *Sweet's Indexed Catalogue of Building Construction*, viii.
19 Ibid.
20 Ibid., vii.
21 Ibid., vii.
22 *Sweet's Indexed Catalogue of Building Construction* (1907), ix.
23 Ibid., ix. Nolan paints a picture a world away from H. H. Richardson's office, with his sumptuous library, friendly tennis games, and the gentile if hard-working atmosphere of a Parisian atelier.
24 Ibid., ix.
25 Ibid.
26 Ibid.

A Rational Solution

The solution was to systemize trade literature, to provide a single source on the model of a phone book or a dictionary. Nolan wrote[20] "...the only solution of the problem must lie in a scientific standard catalogue and index of building materials and construction, gradually developed toward an ideal result by the co-operation of manufacturer and architect."[21] The publisher added that "the catalogue belongs properly to the same category as the directory, or if you please the telephone book ... building material catalogues should not be reading matter, but in reality booklets for reference."[22] Sweet's thus borrowed Dodge's use of the catalogue system for advertising. With some difficulty, he convinced manufacturers to condense their literature radically, dispensing with "pictures of utterly common articles," omitting "literature" and "mere writing," "as an architect has no time in his office for either."[23] They further condensed each individual catalogue to a page or two, regularized the typography, ridding the volume of the competitive visual tactics of advertising, and organized it with several indexes: by company, by type of product, and by geography (figure 2): "Each catalogue in the work is organically arranged in its parts ... every bit of information that is of a particular kind of class is kept together instead of being scattered."[24] Illustrations were to be informational, "and not for the sake of pictures," although many companies included exquisite photography and also art in the form of charts, logos, and sectional cuts through products.[25] Sweet's imagined a scientific book of tables more than a trade catalogue, and fought "to induce some of these manufacturers to give up the publication of irrelevant matter ... to induce them 'to get down' to stating facts, something about their products that could be weighed, or measured, or tested in some way or another."[26] The modern drive towards a scientific or technical manual for architects came partly to fruition. In the first two decades of publication, diagrams of materials and specification charts played an increasingly larger role, both as a replacement for text and as an ornament to the page. Manufacturers redirected the promotional

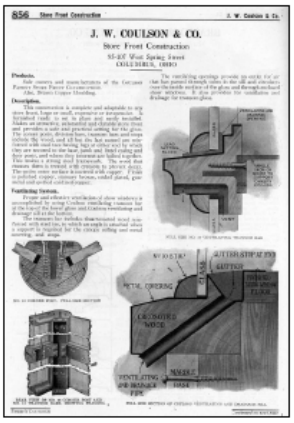


Figure 3
Coulson Storefront Construction, from Sweet's Architectural Catalogue, 1917.

energy suppressed by Sweet's into the aesthetic virtuosity of their diagrams (figure 3). Some companies managed to get around Sweet's rigid structure by including many pages of photographs or drawings of products, as one might find in a Sears Roebuck catalogue, which was a close cousin to the early format of Sweet's, but Sweet's cowed the majority of manufactures into conformity.

Truth in Advertising

The larger project of a technical catalogue for the building trades comes out of two intersecting ideals of the "progressive era," the consumer movement and the drive towards efficiency. By the 1911 edition, both played an overt part in Sweet's ideology. The editor was so taken with the grand social project of the progressive era, in which, he hoped to demonstrate that Sweet's played a part, that he titled his introduction for the first time, "The New Spirit of Efficiency."[27] The essay was a sort of Sweet's manifesto, linking the catalogue to other progressive ideals:

> It does not need any very great amount of perspicacity to see that a new spirit is having what has often been called "a high old time" with many of our traditions. Its manifestations are numerous .... It has set a stamp upon our time so that the age in which we live threatens to be known in the future as the ... "age of inquiry." It is not only that we hear of ... "inquiries" in Washington and Albany and other political centers. There are insurance inquiries, gas inquiries, Standard Oil inquiries and the like. We have interstate commissions and conservation policies and a number of similar innovations .... It is a startling movement, if you will stop to consider it, and it is world wide.[28]

The new spirit emerged, according to the writer, from the will of the people, an "increasingly insistent public demand for efficiency everywhere. This modern note has invaded all fields of activity."[29] Sweet's presented itself as the medium through which the modern magic of efficiency would reach the building industry. The heated rhetoric aligned Sweet's Catalogue with the forces of modernity, sweeping away traditions in the name of pragmatism and efficiency. Far from a lone warrior, Sweet's marched alongside such progressive causes as the inquiries into public corruption and the fight for safe products by consumer advocates. The catalogue, compared to a phone book a few years before, had become part of a reform movement and, in particular, the incipient consumer movements then taking shape.

While the movement for consumer rights and education would not coalesce for another decade or so with books such as *Your Money's Worth* and *1,000,000 Guinea Pigs*, it rose originally on the energies of the Progressive Movement in the early twentieth century.[30] Consumer testing and reform organizations began to educate the public about the hazards of products, casting doubt on

27 *Sweet's Indexed Catalogue of Building Construction* (New York: The Architectural Record Company, 1911), iv.

28 Ibid., iv.

29 Ibid.

30 The best source for the consumer movement is Charles Francis McGovern, *Sold American: Inventing the Consumer, 1890–1940* (Diss., Harvard University, 1993). Stuart Chase and F. J. Schlink, *Your Money's Worth: A Study in the Waste of the Consumer's Dollar* (New York: The Macmillan Company, 1927); and Arthur Kallet and F. J. Schlink, *100,000,000 Guinea Pigs: Dangers in Everyday Foods, Drugs, and Cosmetics* (New York: The Vanguard Press, 1932).

the claims of advertising. One of the most ardent condemnations of dishonesty in advertising came from the advertising industry itself. In 1911, the same year as "The New Spirit in Efficiency," the newly formed Associated Advertising Clubs of America set in motion the first "truth-in-advertising" movement. The AACA proposed legislation that would make any deceptive or misleading representation in advertisements punishable as a misdemeanor.[31] Admen used the campaign to distance themselves from the more unsavory forms of publicity: "loan sharks, real-estate speculators, and mail-order frauds—confidence men on the margins of business respectability." [32] Like Sweet's Catalogue, the advertising industry pitched its campaign to clean up advertising in terms of efficiency and public service. They cast themselves as advocates for the public, not as pitchmen for the manufacturers.[33] They essentially dressed up advertising in progressive clothing, recasting their medium as a form of reform, a solution to the wastefulness of industrial capitalism and its inefficient means of distribution and communication.

Efficiency

Having lambasted advertising for the first five years of its existence, Sweet's Catalogue now couched advertising in terms of inquiry, an elaboration of its focus on information. Inquiry bundled the spirit behind truth in advertising with another progressive ideal, efficiency. Their inquiry, which would take on the tone of an exposé, revealed the inefficiency of the building trades. The traditional arrangement, Sweet's claimed, with "the architect high up and the builder below did not make a splendidly efficient team." [34] Although the writer found no fault with the "esthetic part of the problem," he concluded that "architecture had to be treated more as a business .... Today the architect's office is coming to be regarded as less of a personal sanctum and more of a meeting place and working room of co-ordinate experts." [35] The problem drove to the core of architectural practice, contradicting the prevalent model of the artist-architect. The artist-architect was not part of the *Zeitgeist*, because he had not adopted the efficiency of Frederick Winslow Taylor's theories of Scientific Management. While Sweet's did not name Taylor explicitly, his *Principles of Scientific Management* also was published in 1911, although his ideas were common currency in business for years before its publication.[36]

The manufacturers who advertised in Sweet's had all but given in to the catalogue's demands for rationalization. The editors now implored architects to do the same. "What does this spirit portend for the architectural profession?" The editor began:

> It has really commenced its work, not only in architecture, but in medicine, law and all other professions. The new spirit has directed its attack upon the old kind of professionalism, the kind that is equivalent to prerogative; the species that affects to be erudite rather than common sense.

31 Jackson Lears, *Fables of Abundance: A Cultural History of American Advertising* (New York: Basic Books, 1994), 204; and Otis Pease, *The Responsibilities of American Advertising: Private Control and Public Influence, 1920–1940* (New Haven, CT: Yale University Press, 1958), 72, 145.

32 Ibid., 204–5.

33 Ibid., 205.

34 *Sweet's Indexed Catalogue of Building Construction*, (1911), v.

35 Ibid.

36 F. W. Taylor, *The Principles of Scientific Management* (New York: Harper, 1911).

> There are spiritual lords and lords temporal, but, says the new doctrine, there are also "professional" lords who claim, like the others, to be the possessors of a special privilege. They do not feel bound to account for themselves on the sole basis of efficiency, and it is that that has raised the present revolutionary hue and cry. The architect, for instance, is compared with the engineer, not always to the former's advantage. We are told that the latter rules the world today in conjunction with the scientist, because he has carried his conception of efficiency to the fourth decimal point. He has rid the world wherever he works of a vast amount of purely superfluous material.

The writer knew that a reference to the long-standing competition between architects and engineers would rouse the reader. Architects feared that the public thought of them as too artistic, as elite brokers of culture who lacked the practical frame of mind and acumen to carry out commissions efficiently. Now their own advocate, an increasingly powerful voice in the building industry, accused them of being out of step with the spirit of the age. "The architect of the old type is dead," wrote the editor:

> Nevertheless that will occasion few regrets, because it will be clearly seen that by the changes that have occurred the modern practitioner has been brought into "closer touch with his subject." This is of the very spirit of modern efficiency; it means that the problems of architecture will be treated with greater immediacy, and with greater virility and reality of style.[37]

Architecture had to be "an adjunct of some real necessity," and not a high-minded pursuit abstracted from daily life: "The more it is an integral part of a fiercely utilitarian purpose the better it is essentially. What our architecture needed was that it should be brought into strict subserviency to that useful purpose."[38] The rhetoric easily could have come from Louis Sullivan, who signed the "Endorsement" that prefaced the first two years of Sweet's Catalogue.

The unnamed writer of "The New Spirit of Efficiency" married "truth in advertising" and Taylor to Sullivan, weaving honesty and efficiency together with a lecture on aesthetics, stopping just short of "form ever follows function." "How many of our buildings throughout the country," he asked rhetorically,

> are poor in substance because they are tawdry in decoration. The non-essential has been allowed to kill the essential. It ought not to be difficult to see that a poor building is most often a dishonest building—poor roofing, scant plumbing, in short, a "house of a thousand imitations." All the pestiferous "near" products, "near-oak," "near-silk," "near-metal" dross and tinsel, all of them, threaten to oust,

37 *Sweet's Indexed Catalogue of Building Construction*, (1911), v.

38 Ibid.

> in an unmannerly fashion, all real beauty from the land. An article can not be damned by the charge of cheapness, but it can be by the imputation of unreality and "fake."[39]

This is typical purple prose of the Sullivanian sort. What makes this statement exceptional is the way the author linked the call for an honest architecture, then one of the most important terms in professional discussions, to consumer culture. The architect, he argued, had made strides towards efficiency, but had not gone far enough. "He will have to study the market that lies at his command," not just to avoid the "crime" of "extravagance," but also because "what may be termed the *making of the specification* is so much more complex and important than it ever was that it threatens to relegate the element of design to an inferior position."[40] As of a "new code," efficiency dictated the matter. This amounted to a paradigm shift in the model of the architect: "The architect has become the trustee of the owner in the application of the new science of economic efficiency; and in this humbler spirit he must leave a great deal of his fine baggage behind him. Almost the first of his duties is that of *becoming completely familiar with the modern market.*"[41] Sweet's Catalogue presented itself not as an inert directory to refer architects to manufacturers, but as a symbolic device that would let architects join "the great revolution" of their times: efficiency, and its corollaries, truth and beauty.

Consumer Research

The other element of efficiency that Sweet's shared with Taylor's practice of Scientific Management was a dedication to measurement, of which the charts and diagrams in Sweet's Catalogue were only one manifestation. By 1912, the catalogue, now part of F. W. Dodge, expanded its interest in consumer advocacy by keeping detailed files on products through its Statistical Research Service and the F. W. Dodge Corporation's *Building Statistics*. Alongside these, the *Graphic Review,* an analysis of statistics in the building industry put out by the Statistical Division of the F. W. Dodge Corporation beginning in 1920, became standard sources for specifications and forecasting in the building industry. These services grew directly out of the consumer movement of the 1920s and 1930s, serving as a form of consumer reports for the building industry, accessible to practitioners in need of a purportedly impartial source of information on a given product or material. This service lent credibility to its main enterprise, which, in spite of its efforts to tame advertising into objective information, remained a matter of promotion.

In fact, through the 1930s, Sweet's gradually abandoned its strict guidelines. Manufacturers began to interject more promotional materials into the generic, informational trade catalogues that established Sweet's reputation. Quite possibly, it was on the strength of its consumer research that F. W. Dodge admitted "ballyhoo" back into the Catalogue. By 1935, manufacturers began publishing self-

39 Ibid., vi.
40 Ibid., vi.
41 Ibid., vi.

contained catalogues in Sweet's, complete with front and rear covers splashed with colored logos, slogans, and what Jackson Lears calls "atmospheric" advertising, the sort of appeal that works through a dramatic presentation rather than through the "plain speak" of facts.[42] In 1936, United States Gypsum published a thirty-nine-page catalogue in Sweet's, producing more of a promotional pamphlet than a catalogue. The change altered the reading of the catalogue profoundly. Now a cardstock cover announced the beginning and end of a given pamphlet, each cover being an opportunity to catch the eye of the reader. The size and visual heterogeneity of each pamphlet, and also the visual change from pamphlet to pamphlet, restored much of the promotional quality of trade catalogs in the days before Sweet's rationalized the system.

Figure 4
Isotype showing "How Beer Creates Employment," 1938, from *Public Opinion Quarterly* 2 (Oct., 1938): 664.

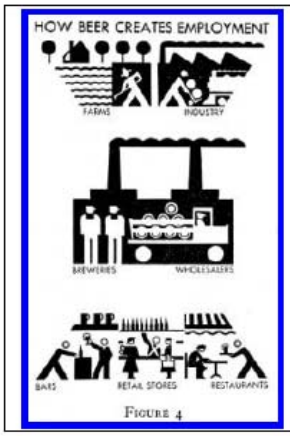


FIGURE 4

Knud Lönberg-Holm

The new organization of Sweet's as a compiler of promotional pamphlets did more than return a promotional spirit to the trade catalogue. In the 1930s, Knud Lönberg-Holm produced what has been called a "quiet revolution" in graphic display in Sweet's and *Architectural Record*, a change that should be regarded as comparable to the initial "revolution" of Sweet's Catalogue in 1906.[43] K. Lönberg-Holm was a Danish architect who emerged out of constructivist and De Stijl circles. In 1924, he immigrated to the United States, where he taught for a year at the University of Michigan, becoming one of the few radical European modernists in the United States. He joined the editorial board of *Architectural Record* in 1927, edited the Technical News and Research Section, and soon became part of the ferment around *Shelter* magazine after Buckminster Fuller took over its publication. Holm, as he was often called, became the director of the Research Department at F. W. Dodge in the mid-1930s, and began reorganizing Sweet's Catalogue along new, explicitly modernist lines.

Lönberg-Holm distilled European ideas on graphic art, including those of Otto Neurath, the Vienna School philosopher and inventor of the Isotype (International System of Typographic Picture Education), a graphic system created for universal communication after World War I that now is so common that we tend to forget its origins (figure 4).[44] The *Record*, for instance, began publishing graphics based on Neurath's ideas in the late 1930s, including an article by Neurath himself (figure 5).[45] The application of the Isotype to architecture was scarcely novel. Neurath himself had been an integral member of the International Congress of Modern Architecture (CIAM), and, as his article in the *Record* demonstrates, he already had tapped architecture as a natural outlet for his system. But Lönberg-Holm synthesized Neurath's ideas with other currents in graphic design, including commonplace advertising strategies, and applied them to the entire publication of *Architectural Record* and to Sweet's Catalogue. The effect on the printed page was enormous,

42 Jackson Lears, *Fables of Abundance: A Cultural History of Advertising in America* (New York: Basic Books, 1994). Lears discusses the plain speech tradition throughout the book.

43 From an interview with the architect Simon Breines, August, 2003. Breines was both a colleague and a friend of Lönberg-Holm.

44 For Neurath, see the catalogue from the exhibition *Graphic Communication through Isotype* (Reading, UK: University of Reading, 1975); also Eve Blau, *The Architecture of Red Vienna, 1919–1934* (Cambridge, MA: MIT Press, 1999).

45 Otto Neurath, "Visual Representation of Architectural Problems," *Architectural Record* 82 (July, 1937): 56–61.

Figure 5
Otto Neurath, Planning using Isotype, from *Architectural Record* 82 (July, 1937)

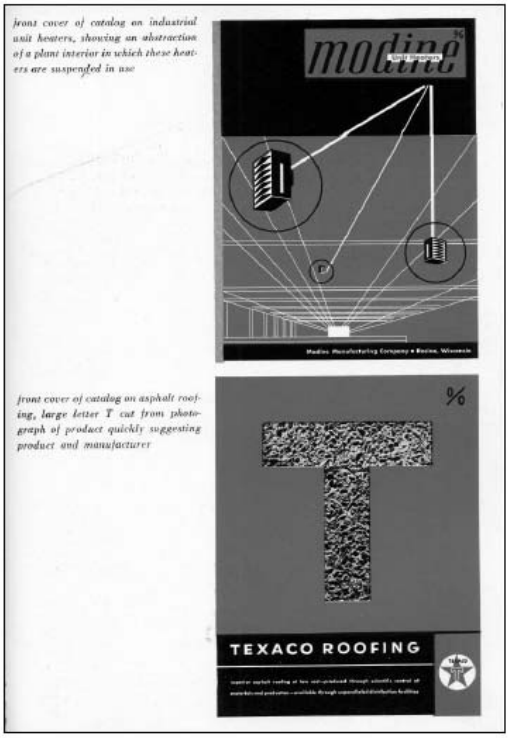


Figure 6
Modern Sweet's Catalog Covers, from Catalog Design. Sweet's Catalog Service, 1944.

transforming a dull, text-based format into a startling fresh *iconic* page (figurer 6), sublimating the text itself to the overall effect. This turned the pages of Sweet's Catalog back into tools for selling, finally reconciling architecture with consumer culture.[46]

In a 1938 report for F. W. Dodge, Lönberg-Holm detailed his ideas for these changes, calling for "maximum readability and pattern," which he defined according to the "mechanics of reading" and the "mechanics of comprehending."[47] The architect-cum-researcher attempted to transform Sweet's according to the latest "science" of graphic display. He wrote of the "visual flow-pattern" and the design of the printed page in terms of the "integration of half-tones, line drawings and text matter" so that the reader would "comprehend the presentation in the shortest possible time."[48] The idea of "readability" emerged from earlier studies Holm had conducted for Sweet's in the mid-1930s. Basing his claims on a new machine called an Ophthalm-O-Graph, which measured "the exact efficiency of one's vision" through photography, he attempted to revise the format of the standard trade catalogue."[49] "Current research," he wrote, "shows that efficient reading is rhythmic reading with a minimum number of fixations and regressions."[50] The eyes, he believed, move across the page in "short jerks," jumping from point to point, "making numerous stops for perception." Using the insights offered by the Ophthalm-O-Graph, Holm began to diagram the plane

46 Holm's work also transformed the *Record*, introducing a new aesthetic to its layout and graphics that soon spread to *Architectural Forum* and *Pencil Points*. Simon Breines pointed to Lönberg-Holm as the main instigator of this change.

47 K. L. Holm, "From Research Department Report, March 15, 1938." The Ladislav Sutnar Papers, Box 10, Folder 5, Design Archives of the Cooper-Hewitt National Design Museum, hereafter shortened to the Sutnar Papers.

48 K. L. Holm, "From Research Department Report."

49 K. Lönberg-Holm, *Catalog Design Standards* (1936), no page numbers. This is an in-house typescript that can be found in the Theordore Larson Papers at the Bentley Historical Library, University of Michigan, Box 1.

50 Ibid.

MECHANICS OF READING
Response and direction

The eyes first examine a page according to the visual dominance of its component parts. The natural reading direction is from left to right and from top to bottom of page. The visual emphasis should promote ease in reading. The most efficient page is one in which the visual flow pattern facilitates the intended mental flow pattern.

A catalog page first appears to the eyes as a picture. The eyes scan the picture according to the visual attention values of its component parts. Attention value is a function of: relative position, brightness, color, size, shape. The point of greatest attention value is the starting point for the eyes.

Catalog users read from left to right

And then the eyes from top to bottom of page over the page like this

The eyes move more easily horizontally than vertically. The natural reader direction conditions the efficiency of the presentation of information (for example relative position of illustration and caption). The primary unit of information should be visually emphasized, and the eyes invited to follow through with minimum effort.

Three typical catalogs are analyzed according to these principles. The analysis has of intensely been subjective. An objective analysis could be made with the OPHTHALMO-GRAPH.

Figure 7
"The Mechanics of Sight," from Catalog Design Standards. F. W. Dodge, 1936.

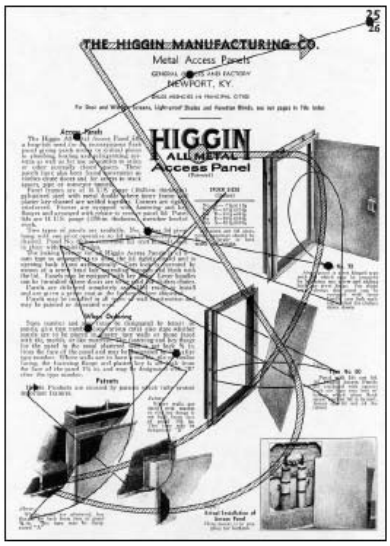


Figure 8
The Higgin Manufacturing Co., parsed by Lönberg-Holm, from Catalog Design Standards. F. W. Dodge, 1936.

of the page according to the "mechanics of sight" (figure 7), and to parse the old Sweet's format (figure 8), revealing the visual chaos of the regularized layout. Applying the new idea of visual efficiency to the catalogue, he theorized a new format based on the proper use of photographs, drawings, Neurath's isotypes, mechanical drawings, and a series of formal qualities such as color, texture, and the weighting of font to create "visual flow patterns."[51] "The function of catalog design," he wrote, "is the arrangement of catalog content and format into design flow patterns which will condition the user's mental flow pattern."[52] The ideas extended the original ethic of efficiency of Sweet's, but now within the context of mid-twentieth-century theories of visuality and advertising, imposing a kind of functionalism on graphic design. It was surely under Lönberg-Holm's direction that Sweet's Catalogue became Sweet's Catalog, dropping the extraneous final letters that impeded "readability."[53]

Soon F. W. Dodge created an in-house service that produced trade catalogues for its clientele, relieving manufacturers of the burden of creating their own catalogues.[54] The dry directory became a smorgasbord of visual delights, as each company once again competed for attention through the design of its catalogue, a change that Sweet's found fit to advertise (figure 1). Alongside the visual change came an important organizational shift. Through the service, Sweet's could now streamline marketing for their corporate clients by combining market research, advertising, and catalogue production and distribution. By the early 1940s, the company had teams of graphic artists, engineers, copywriters, layout and production specialists, and architects in several cities, producing many of the catalogues that went into Sweet's.[55] The service fulfilled Holm's vision of creating "a continuous flow of information" between

51 Ibid.
52 Ibid.
53 Lönberg-Holm may have been emulating Melvil Dewey, who shortened his name from Melville.
54 Because no archive exists for Sweet's, the exact date of its inception remains murky. It seems to have started in the 1930s as a full-service trade catalogue department.
55 *Getting Your Catalog Used* (New York: Sweet's Catalog Service, undated). This undated pamphlet can be found in the Sutnar Papers, Box 10, Folder 5.

buyers and sellers, cutting down the time between the realization of a material need in business and its fulfillment via the catalogue.[56] F. W. Dodge assumed a special position in the building industry, producing, according to Lönberg-Holm, "information forms specialized according to time and place of use, and the integration of such forms into information systems."[57] In an industry in which production and buying had become highly specialized, information too had to be highly attuned the market. He proposed keying pamphlets to particular markets through in-house analysis, "specializing" industrial production and buying in order to streamline the business of communication. The catalogue system "centralized control over all phases of catalogue procedure."[58]

The idea of a system had been implicit in the first years of Sweet's attempts to rationalize information for architects from the manufacturers of building materials. Lönberg-Holm now put the matter in terms of the emerging field of systems theory, which grew in part out of the Ludwig von Bertalanffy's work in biology.[59] Systems theory enabled people to understand complex organizations in nature, communication, economics, and other fields, in part to try to predict and control behaviors within those systems. The war catalyzed the sleepy subject into a matter of national importance, bringing together scholars from various fields and giving them opportunities to explore their ideas in the context of war research.[60] Norbert Wiener, a pioneer of cybernetics, who was at the center of a group at MIT in the 1940s, researched antiaircraft guns during the war. The key problem centered on creating a mechanism that would "communicate" the changing position of an airplane to the antiaircraft gun, a particularly physical example of a feedback loop.[61] Systems theory also was well suited for a purportedly self-regulating system such as the market, the milieu in which Sweet's operated.

It seems unlikely that Lönberg-Holm knew of Wiener's research or of the flowering of systems theory at the time, although his ideas and the language that he used to express them suggest strong affinities. In what might best be seen as a parallel development, Lönberg-Holm envisioned Sweet's Catalogue as the feedback loop between manufacturers and builders.[62] In fact, his idea dated back to 1940, when he co-authored *Planning for Productivity* with Theodore Larsen, another architect from the *Shelter* group who worked briefly at F. W. Dodge.[63] The book was the result of their work on reorganizing Sweet's as a tool for integrating all industry, science, and production. In it they argued for the total reorganization of the building industry to achieve higher standards of productivity, which came with some radical implications. First, efficiency depended on the elimination of obsolescent forms, which the authors understood in terms of a "continuous process," a cycle of research, design, reproduction, distribution, utilization, and elimination; each of which was "subject to production control."[64] The continuous flow of the system was a distant cousin both to Wiener's feedback loop

56 K. Lönberg-Holm, "A New Technique for Catalog Design," an undated flier published by the Research Department of Sweet's Catalog Service, Sutnar Papers, Box 10, Folder 5.

57 Ibid.

58 Ibid.

59 His first work to anticipate systems theory was *Modern Theories of Development: An Introduction to Theoretical Biology*, Trans. J. H. Woodger (London: Oxford University Press, 1933). See Robert Lilienfeld, *The Rise of Systems Theory: An Ideological Analysis* (New York: John Wiley and Sons, 1978), 17. Bertalanffy had attended meetings of the Vienna Circle, which connects him indirectly with Lönberg-Holm through Otto Neurath. Buckminster Fuller also maintained close intellectual connections to Bertalanffy, raising another possible connection to Lönberg-Holm. For Bertalanffy, see Ludwig von Bertalanffy, *A Systems View of Man*, Paul A. LaViolette, ed. (Boulder, CO: Westview Press, 1981).

60 The key figures would assemble around Bertalanffy after the war, including Anatol Rapoport and Kenneth Boulding. Also included in the constellation of systems theory is Claude Shannon's work on information theory; operations research under E. C. Williams in England; and games theory of John Von Neumann. No good general history of systems theory has been written. Robert Lilienfeld, 1.

61 Because of Wiener's work, cybernetics was the first field in systems theory to gain attention. See Norbert Wiener, *Cybernetics: Or, Control and Communication in the Animal and the Machine* (Cambridge, MA: Technology press, 1948).

62 This meaning of the term "feedback" seems to postdate the war slightly, although the *Oxford English Dictionary* cites at least one example from 1943, which suggests that the term, or at least the idea, may have been in currency before the war. As far as I know, Lönberg-Holm did not use the term.

63 K. Lönberg-Holm and C. Theodore Larsen, *Planning for Productivity* (International Industrial Relations Institute, 1940).

64 Ibid., 8.

and to Lönberg-Holm's "visual flow." But in the larger system of production, "a continuous output of new and more desirable buildings thus implies a centralized production control that will permit a continuous elimination of obsolete buildings."[65] The ideas must have disturbed the editors at Sweet's: research emanating from one of the key industries of capitalism—the building industry—promoted a plan that more closely resembled fascist or communist control of industry, even if the economics behind obsolescence might just as easily have come from Keynesian economics. Sweet's refused to publish their report, and the authors turned to a Dutch publisher.[66]

Like the originators of systems theory, Lönberg-Holm and Larsen believed that their program applied to "the development of forms in any field of production."[67] They created a "production index," an abstract chart linking the relationship between production fields (transportation, housing, manufacturing, etc.), "control forms" (services such as administration, finance, and education), man, "animates" (animals, plants, cells), matter (solids, liquids, and gases), and "cosmos" (atmosphere, subsurface structure, the solar system, and beyond). In their view, production fanned out far beyond an artificially closed system of industry to include all forms of matter, seen and unseen, although the index certainly covered the banal as well. The index, they wrote, "will be a common denominator of all the specialized sciences and technologies," bringing "into an operational unity the various specialists in the various fields of production," and supplying "a classification system for the filing of reference data which could be continuously adapted to meet changing conditions."[68] The ethereal, revolutionary language and ideology of *Shelter* met the more earth-bound considerations of industry for greater efficiency.

Lönberg-Holm applied similar considerations to the visual conventions of Sweet's Catalogue, submitting it to the idea of continuous flow. Graphically, this meant the use of color to control reading direction,[69] and the use of size, blank space, line, and shape to control the "visual flow of information."[70] Design also could stimulate a working feedback loop between the page and the reader. The idea opened the door to all manner of graphic techniques, privileging the visual over the textual. The first Sweet's "revolution" began with the exorcism of graphics from the pages of catalogues. The second "revolution" brought it back, bolstered now by theory rather than mere salesmanship. The basic ideas of simplicity and visual flow seem to have come from Lönberg-Holm's interest in Otto Neurath's work on visual communication, and perhaps from the concurrent invention of systems theory, but Lönberg-Holm's interest also intersected with two other important events: World War II and the arrival of the Czech graphic designer Ladislav Sutnar (1897–1976) as the art director at Sweet's in 1941.

65 Ibid., 8.

66 From a conversation with Paul McCofsky, September 24, 2003. McCofsky is an editor at *Metropolis Magazine* who wrote an essay for a recent exhibition on Ladislav Sutnar in Prague: "Ladislav Sutnar—Prague—New York—Design in Action," June 20–Oct. 26, 2003 at the Prague Castle Riding School.

67 K. Lönberg-Holm and C. Theodore Larsen, *Planning for Productivity*, 18.

68 Ibid., 18.

69 "Visual Flow Pattern," undated document in the Sutnar Papers, Box 10, Folder 5.

70 Unlabeled document, Sutnar Papers, Box 10, Folder 5.

71 L. V. Brooks, "An Experiment in Sweet's Advertising" (April 30, 1942), Sutnar Papers, Box 10, Folder 5.

72 The quote comes from *Product Design* (New York: Sweet's Catalogue Service, 1943). It is not signed by Brooks, but the tone is very close to his memorandum of April 30, 1942.

73 Ibid.

74 Ibid.

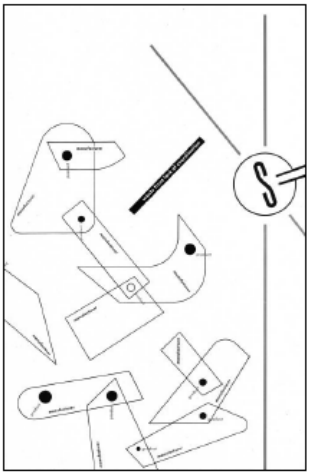
75 L. V. Brooks, "An Experiment in Sweet's Advertising"

76 *Product Design*.

77 This advertisement appeared in *Industrial Marketing* 27 (July, 1942), inserted between pages 40 and 41.

78 L. V. Brooks, "An Experiment in Sweet's Advertising"

79 This advertisement appeared in *Industrial Marketing* 27 (July, 1942): 73.



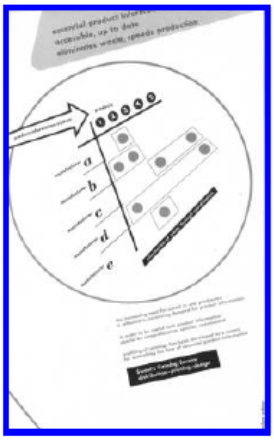


Figure 9 (page 1 & 2)
Sweet's Advertisement
from Industrial Marketing, 1942
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World War II

The war provided a direct model for the organization of information. World War II remains as one of the most sophisticated logistical operations in human history, organizing the flow of people, materiel, supplies, and information across the globe using multiple forms of communication and conveyance. L. V. Brooks, the advertising manager at F. W. Dodge, spelled out the connection in a memorandum to Sweet's district managers in 1942. The war, he began, had created a new era of speed.[71] Planes soon would reach 400 miles per hour. Reconversion, when it came, would involve "inconceivably vast totals of manpower, production tonnages and dollars," which he pointed out, "constitutes an industrial revolution such as the world has never before seen."[72] The failure to find forms of communication to guide this new revolution could have "as crushing an effect on our economy as losing the war."[73] He called for the "immediate manufacturing and distribution of great quantities of needed peacetime products" as "contributions to speedy postwar recovery," as a kind of preparation for reconversion.[74]

What seems like a ludicrous suggestion—to step up domestic production when all of the energies of the nation were focused on war— derived directly from the current vogue for Keynesian economics, which placed a premium on consumption as the engine of the economy. In this belief, he joined hundreds of other advertisers and manufacturers who, by 1943, squarely faced the fear of the return to depression after the war. The most popular theory of staving off depression centered on stimulating vast programs of consumption intended to offset the decline of war production. But Brooks had ulterior motives as well. The anticipated "revolution of production" necessitated "an overhauling" in marketing.[75] The engineer, he argued, once the chief product designer, was being supplanted by "technical specialists," who "devote their entire time to developing new materials and designing new equipment." These "pioneers of industry" need information, he wrote, and Sweet's had to meet their needs.[76] He began by changing Sweet's advertisements, introducing strong diagonals, upsetting static typography, and at times sacrificing legibility for visual appeal. (figure 9)[77] "In trying this experiment," he concluded, "we are consciously violating all past theories of advertising—that you must address yourself to an eleven-year[-old] mentality; that your advertisement should show in three seconds what it is about."[78] The new ads were the work of the internationally-known Czech designer, Ladislav Sutnar, who had been hired in 1941 to lead the Art Department at F. W. Dodge. They introduced an utterly novel aesthetic, especially when compared with the advertisements of their competition (figure 10), which is why Brooks took care to warn his managers.[79]

Figure 10
Advertisement for the ASME Mechanical Catalog, 1942.
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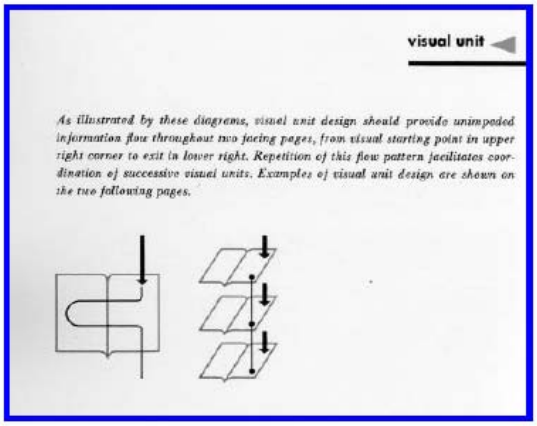

Figure 11 (above right)
Visual Unit, Diagram, *Catalog Design*.
Sweet's Catalog Service, 1944.

Lönberg-Holm and Ladislav Sutnar

The changes in advertising reflected changes in Sweet's Catalogue that Lönberg-Holm had begun years before. With Ladislav Sutnar, he continued to turn the catalogue production service into formidable competition for advertising agencies. They published their work in *Catalog Design*, a modest, spiral-bound book that ran in a limited edition in 1944.[80] The book set down their basic philosophy of information flow, and it graphically demonstrated their principles using examples taken from actual trade catalogues they had created. In addition to reintroducing the use of covers, Sweet's had already popularized the two-page spread, a kind of "centerfold" or "visual unit," as they called it, that made the most of the horizontal format to create "unimpeded information flow."[81] (figures 11 and 12) The same principle applied to the entire catalogue, allowing readers an easy route from start to finish, punctuated by key events that were intended to stall readers on important information and then whisk them away again (figure 13). In one example for the General Industrial Finishes Company, Sutnar tilted images and text into the diagonal to reinforce a zigzag reading pattern. The page drew readers in with some standard text at the top left of the spread, then moved them down, across, and up, repeating the movement on the right side of the spread and then guiding them to the upper right corner, where the finger prepares to turn the page. All three pages created a narrative beginning with the manufacturer's research facilities, followed by their "modern precision equipment," and finishing with photographs of the "extremely varied articles protected by these finishes."[82] The reading process followed the production process, imitating the source of Lönberg-Holm's ideas on the flow of information.

Their work culminated in a series of articles that appeared in *Interiors* magazine in 1947 called "Designing Information."[83] These pivotal articles married Lönberg-Holm's theories of visual flow and organization to the latest graphic design techniques, which

80 K. Lönberg-Holm and Ladislav Sutnar, *Catalog Design* (Sweet's Catalog Service, division of F. W. Dodge Corporation, 1944). The book had a run of 3,000 and was distributed directly by Sweet's to manufacturers, design firms, and advertising firms. Several academic libraries also purchased copies. Sutnar Papers, Box 10, Folder 7.

81 *Catalog Design*, unpaginated.

82 *Catalog Design*, unpaginated.

83 The article appeared in three installments: *Interiors* 106 (Feb., 1947): 95–108; (Mar., 1947): 114–123; and (Apr., 1947): 102–115. These articles eventually would find their way into book form in *Catalog Design Progress: Advancing Standards in Visual Communication* (Sweet's Catalog Service, 1951).

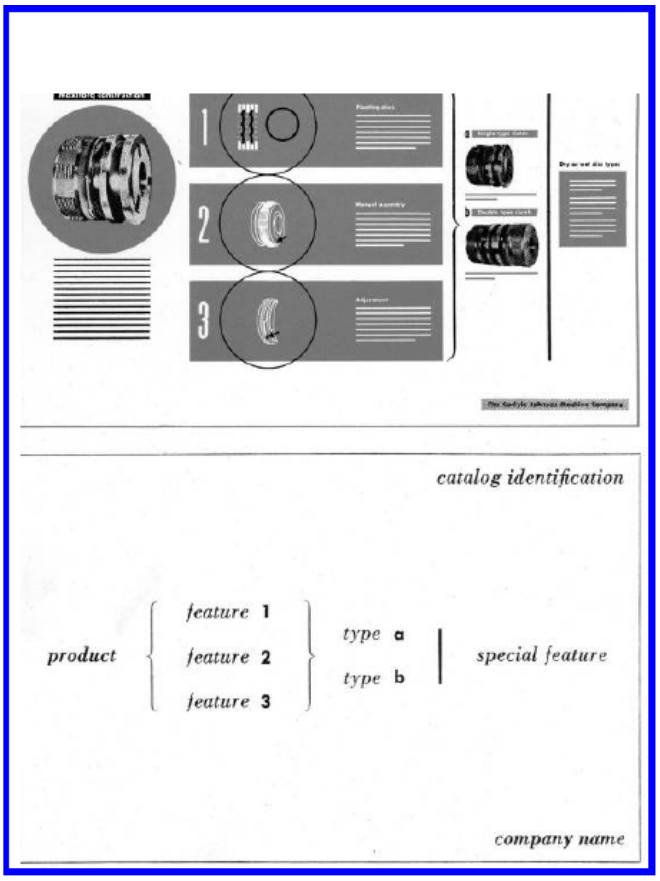

Figure 12
Visual Unit, Example from *Catalog Design*. Sweet's Catalog Service, 1944.

Sutnar knew firsthand from Europe, and to which he had contributed as a leading designer. They laid out all of their graphic design "tricks," showing how to create "visual selectivity" through the use of color, size, font, shading, outlining, blank space, and numerous other graphic techniques (figure 14).[84] The article featured Sutnar's designs from the 1930s and 1940s, including magazine covers for *Fortune*, Sweet's trade catalogues, and his diagrams showing the flow of information in his designs.[85] (figure 15) The three designs for Nupercainal sunburn lotion show how they worked out the idea of visual flow. The first design created a circuitous path that deposited the reader at the bottom right of the page, which "clashed with [the] reading direction of [the] text" at the bottom of the page.[86] The second design simplified the flow, but it still forced the reader to backtrack, making the text less effective. In the final design, Sutnar tilted the text, brand name, and image into a kind of mobile, dangled by the abstracted sun, whose longest ray directs the reader through the image to the text. The final installment of the article extended their ideas on visual flow to books, films, and exhibitions, suggesting its universal application for all visual media. By 1947, the content of

84 "Designing Information," Part I, 96–97.
85 "Designing Information," Part II, 120.
86 "Designing Information," Part II, 120–121.

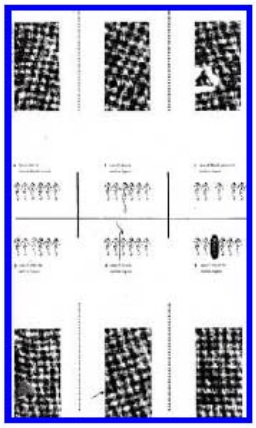

Figure 13
Sweet's Catalogue for General Industrial Finishes, *Catalog Design*.
Sweet's Catalog Service, 1944.

Figure 14
Visual Selectivity from "Designing Information," 1947.
Courtesy of Billboard Publications.

these articles was hardly new. Their importance lies in the fact that they consolidated the scattered material that had come out in limited pamphlets put out by Sweet's, and did so with stunning graphics in a leading design journal. Their ideas, which had been fresh in the early 1940s, had become standard, conventionalized in part through Sweet's catalogues, *Architectural Record*, and other magazines that placed a premium on modern design.

Conclusion

Sweet's Catalogue began as a progressive era attempt to standardize and rationalize information in the building trades. As national advertising emerged alongside a national economy, Sweet's provided a conduit between manufacturers and architects in a chaotic moment of industrial growth. The sober layout, modeled on a directory, chastened the extravagant advertising of the era at the very moment when advertising was beginning to regulate itself through truth-in-advertising campaigns. Yet Sweet's quest for efficiency upstaged its gentle moralism. The ethic of efficiency touched every facet of life in early twentieth-century America, but Sweet's pushed the idea with particular zeal, connecting the efficiency of information with that of building. They were both part of sopping up the excesses of capitalism, a Taylorization of information that would enable the Taylorization of building itself. In time, the catalogue service joined forces with F. W. Dodge, creating a much more complex organization that added research, along with building statistics and records, to the already standard catalogue service. By the 1930s, Sweet's began to compete with advertising firms themselves, liberating the reserved design from the strictures of the progressive era, and creating an in-house catalogue design service that tapped into the leading trends in graphic design. Once again, Sweet's joined the advanced guard, marrying sophisticated theories of information flow to sharp modernist graphics, in particular those of Ladislav Sutnar. The catalogue's graphics changed just ahead of architecture itself, presenting

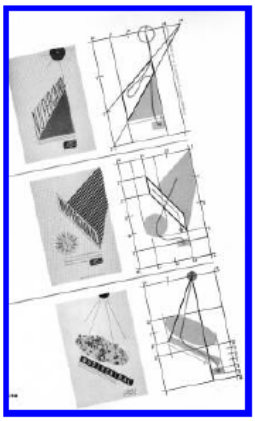

Figure 15
Nupercainal Catalogue,
"Designing Information," 1947.
Courtesy of Billboard Publications.

the architectural profession in the 1930s with a modernist vision of its products before their buildings completely reflected the changes being wrought by the modern movement.

The point is of considerable importance. Magazines, and print media in general, can take chances that architecture cannot. They're cheap, ephemeral, and easy to change from one printing to the next, which makes them more susceptible to experimentation than their more cumbersome three-dimensional masters, buildings. Before the American built environment could be called modernist—before the progeny of Lever House and other unmistakably modern buildings came to dominate urban landscapes—Sweet's Catalogue provided a modernist visual environment constructed (1) of ideas and images that came directly from the same intellectual and cultural sources that were then changing architecture, and (2) of the products that were doing the same. Lönberg-Holm, Theodore Larsen, and Ladislav Sutnar brought together a fertile mix of constructivism, De Stijl, the Bauhaus, American ideas including those of Buckminster Fuller, and the latest ideas on graphic design. It now seems strange that Lönberg-Holm, a radical intellectual and architect, would inject modernism into Sweet's, a servant to the conservative building industry, and more generally to laissez-faire capitalism. But the alliance postdates the well-known co-option of modernist art for advertising at the Container Corporation of America, and it prefigures the corporate patronage of modern architects in the 1950s.[87] In fact, Sweet's efficiency enabled a kind of consumerist emulation in architecture, whereby products—as opposed to formal gestures of design—could attain instant significance and quick exhaustion through overuse. It is difficult to imagine the rapid "triumph" of modern architecture without an administrative tool such as Sweet's Catalog, which is why Richard Neutra called it, with a note of lament, the modern quarry.[88]

87 James Sloan Allen, *The Romance of Commerce and Culture: Capitalism, Modernism, and the Chicago-Aspen Crusade for Cultural Reform* (Chicago: The University of Chicago Press, 1983); and Michele H. Bogart, *Artists, Advertising, and the Borders of Art* (Chicago: The University of Chicago Press, 1995).

88 Richard Neutra, *Survival through Design* (New York: Oxford University Press, 1954), 51.

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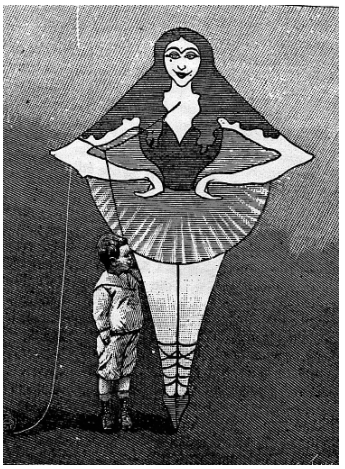
What the Film Archive Can Tell Us About Technology in the Post-digital Era

Michael Punt

A version of this paper was presented at the Netherlands Film Museum as a contribution to the 2003 Archimedia symposium, "Changes and Challenges. Film Archives in the Digital Era: New Concepts and New Policies."

The kinetograph and the cinématograph were not the works of individual genius, but emerged from the popular imagination that converged on a raft of concerns, ranging from the deeply philosophical to the outright flippant, that gave a particular meaning to hundreds of little pre-cinematic devices both invented and rediscovered in the nineteenth century. From what we know of it, that imagination has once again found a dynamic moment in the disorganized turbulence of an ill-defined and confused apparatus—gathered together under the rubric of electronic digital media—ranging from the networked home computer to microwave telephone technology, and "Bluetooth" interspecie communication. Yet, as digital media reaches for infinity and beyond (to quote Buzz Light Year) the cinematic imagination of the twentieth century shows no sign of running out of economic steam in the twentieth-first as, for example, the first *Lord of the Rings* film grossed £560 million plus, and the franchise is expected to generate around £3 billion in twenty years. The cinema, the flagship of the analogue era, has not simply survived, it has prospered in the digital revolution and, arguably, even set the economic and aesthetic agenda for how that technology is exploited as entertainment. So far, so good for cinephiles, but what of the cinema history? Worrying about the archive may seem a dull preoccupation when the barricades appear to be crumbling, but if we avoid the question, it is possible that, in the not too distant future, understanding the latest turns in film and cinema history will be incomplete if we do not preserve evidence of the technological trace of the imagination that has helped shape the reinvented cinema of today. If the intrusion into history of digital cinema has done anything, it has forced a consideration that the emphasis of the archive has shifted from the films themselves to the cinematic imagination in all its manifestations.

Figure 1
Un cerf-volant décoré. *La Nature* 1895.



Of course, cinema history and film archives always have concerned themselves with architecture, costumes, distribution, documents, economics, government policy, legislation, posters, scripts, stills, and technology; but traditionally, the cinematic imagination over the past century has been interrogated primarily through the image. More often than not, this has meant the remains of films that, by a mixture of relentless work and good fortune, have been the preoccupation of archivists, scholars, and fans. As a consequence,

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cinema history (the institutions) and film history (the material strips) invariably collapse into a single study, as perhaps they should. After all, separating the significance of a film (text) from the context of reception seems a conceptual impossibility given the last half century of film studies.

Subordinating the cinematic imagination to the image, however, forces a reading of the cinema, which involves certain losses that, as we begin to think hard about digital cinema and the electrochemical future, may not be sustainable. In particular, the discontinuity between the cinematic imagination as hardware and the cinematic imagination as software, which seems to mark the ways that we talk about the cinema in both the popular and academic domains, is challenged by the erosion of the software/hardware binary in electrochemical media. This paper is the beginning of an attempt to recover some of the continuity between these two cinematic imaginations so that we may begin to understand the past—especially the recent past—in relation to a reconceptualization of the relationship between software and hardware. To explore this further, I want to revisit early cinema and one technology that often is recognized in film history, but almost immediately is marginalized, Reynaud's *Pantomimes Lumineuses,* and to compare it with a twentieth-century medium that curiously also sits on the margins of history: the CD-Rom.

Our understanding of the invention of cinema has been driven almost exclusively by separating the history of the technology from the history of the image. Whether we begin with Javanese shadow puppets, the Robertson's phantasmagoria, or the nineteenth-century magic lantern, the story has been more or less the same: a cultural imperative for particular kinds of images (complete with movement and sound) responded to by entertainers, engineers, and inventors until a satisfactory compromise has been reached between the social demand and the economics of provision. The twentieth-century cinema, as we know it, is consequently seen as an ongoing process of the contingent stabilization of the outcome of these forces. Within this framework, conventional uses—some even would say a language—became established which facilitated the expression of creative imaginations given more or less a free hand. Perhaps less of a freed hand in the profit-driven side of cinema—the movies—and arguably more in the artistic expression of artist/filmmakers. Either way, it is the films—that is the software of the cinema that is considered to be the primary trace of human consciousness. What is excluded from this kind of history is the popular and individual imagination that is sustained by technology as hardware, and the act of engaging with technology (collectively and individually) as an extension of consciousness. In order to include this, it is necessary to revisit some basic questions about the relationship between technology and culture.

The processes that give rise to a particular technology might be difficult to account for but, by definition, it is never just "there" as part of nature—it has to be a product of human agency and, as such, should be open to explanation. This often has proved more difficult than we imagined, and aside from the convenience of technological determinism, we have resorted to ideas such as "invention" and "genius," along with determining accident, dreams, and good luck to help us out. On closer examination, however, these are simply excuses to ease the discomfort caused by inadequate attempts to explain how a technology comes into the world (let alone what happens to it afterwards). A discomfort which is not ameliorated when it quickly becomes apparent that, by and large, we are living in an accidental world in which the dominant technological solutions to overcoming the hardships of nature are seldom, if ever, the best. For example, heavier-than-air flight using fixed-wing structures has become a means of mass transportation that now involves a network of discrete industries, each of which enforces the deflection of the initial popular impulse to travel independently of the constraints of the earth. Almost without exception, any advanced technology that we think of becomes cumbersome and excessively elaborate when apparently minor problems are met with increasing complexity. With good reason, historians of technology have black boxes, kluges, and autonomous technology in their explanatory tool kit.

In a similar way, the massive inefficiency of theatrical exhibition that all but bankrupted Hollywood on several occasions during

Figure 2a
Mario Cobianchi Circling the Leaning Tower of Pisa, published by the *Record Press* in 1912.

Figure 2b
An illustration of a proposal for remote controlled Flight Using Television, in *Berliner Illustrite Seitung* in 1928.

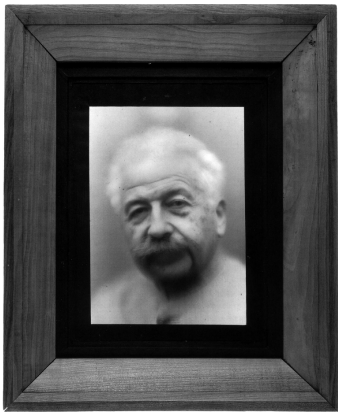
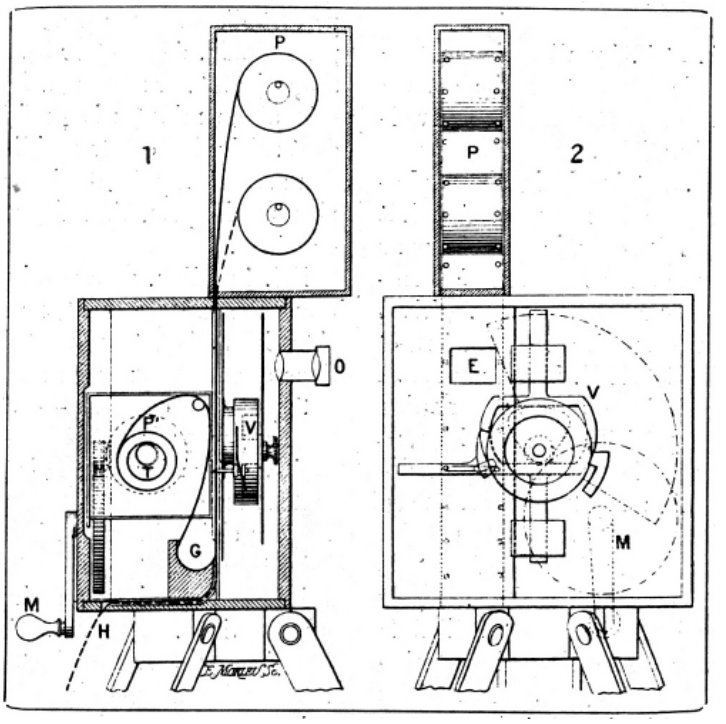


Figure 3
An attempt at 3D photography by the Lumière brothers using nine superimposed photographic plates [the Lumière brothers: Louis and Auguste]

Figure 4
Drawing of the Cinématographe.
La Nature June 1895

the last century can be seen as the consequence of the insistence of screening the image by early promoters. This may have had as much to do with the apparently insatiable public appetite for actively and collectively participating in technology (by paradoxically consuming it as a spectacle) than a natural link between the cinema and theatre or screen entertainment. Some people have suggested that the cinema of the twentieth century, with all its real estate, might be a deflection of the technological imagination that drove the invention. Thomas Elsaesser has argued that the Lumière Brothers' *cinématographe* was the outcome of an attempt to match their commercial imperatives with their obsession with stereoscopy and the third dimension, rather than the pursuit of photographic realism. As he puts it, "[to this] ... scheme of counterfactual history, one could now add the 'dog that did not bark' theory of film history, where stereoscopy would have been, for almost a hundred years, the sort of clue partly missed when trying to reconstruct the prehistory of cinema." [1] Add to this the Lumières' obsession with carbon chemistry and their poly-dimensional approaches to experiments with three-dimensional and color photography, the *cinématographe* begins to take on the character of a technology whose meaning in relation to entertainment is shaped not by its inventors, but in the course of its entry into a particular public arena and appropriation by audiences and exhibitors.

The folk version of the history of the cinema excludes these and other possibilities, in part because, in the first place, scientific



1 Thomas Elsaesser, "Louis Lumière—The Cinema's First Virtualist," in *Cinema Futures: Cain, Abel, or Cable,* Thomas Elsaesser and Kay Hoffmann, eds. (Amsterdam: University of Amsterdam Press, 1998), 59.

naturalism dominates our understanding of technology; and in the second, teleologies are a convenient and valuable shortcut to the present for most film academics not especially interested in the finer grain of early cinema history. However, this convenience tends, among other things, to lead us to make a number of fundamental errors by prioritizing the relationship between science and technology, and uncoupling software from hardware. This, together with a cultural predisposition to favor the visual, leads us almost inexorably to see the destiny of cinema technology as the handmaiden of the moving photographic image with integrated, synchronized sound. Based on a discussion of the image and realism, the cinema's first decade almost universally is regarded as a period of the aesthetics of astonishment and attraction, followed by a century of narrative integration. The moving image subordinates the technology, and becomes the representative of the cinematic apparatus. The shock effect (or otherwise) that it had on the audience is regarded as an image-driven effect rather than the other way around. As Gunning has insisted, "The audience's sense of shock comes less from the naive belief that they are being threatened by an actual locomotive than from an unbelievable visual transformation occurring before their eyes, parallel to the greatest wonders of the magic theatre." [2]

Revisiting the evidence from the standpoint of a history of technology or the history of "parascience," rather than the history of cinema, however, it is doubtful if the transformation occurring before the audience's eyes was unbelievable or magic theatre. Full (scientific) descriptions of the *cinématographe* had been in the public domain from at least as early as August 1895, and similar devices had been featured in popular science journals in the previous years. (Indeed, it is fair to assume that anyone sufficiently interested to pay to be astonished by the *cinématographe* hardly would have missed some of the hundreds of diversions and experiments that are said to inform the prehistory of the cinema). In the context of the popular preoccupation with telepathy and psychical phenomena, it is doubtful there was an illusion at all, much less a direct confrontation with the assertions of natural science. As some of the advertising suggests, the apparatus is a "membranous" medium (in the parapsychic sense) through which another plane—one that is both continuous and discontinuous with this world—can be accessed. In this interpretation, the "cinématographe séance," taken as an ensemble of hardware and software, confronts not realism but the expectations of scientific naturalism by presenting the believable as inexplicable—despite explanation—in exactly the way that G. A. Smith and the raft of mesmerists, telepathists, and clairvoyants did. Whether genuine or fraudulent, they offered the audience not tricks or illusions, but compelling demonstrations of an extended reality, or at the very least a set of metaphors to begin to discuss what such a reality might be like and to give contemporary form to the idea that scientific naturalism was only one explanatory system among many.

2 Tom Gunning, "The Aesthetics of Astonishment," *Art & Text* 34 (1989), 35.

In that arena in Britain in the mid-to-late nineteenth century, there was a characteristic convergence of an active curiosity about the uncanny as an alternative to the exclusivity of natural science, and a fascination with technology in theatrical entertainment. As the century drew to a close, increasingly the Society for Psychical Research (SPR) was confident that telepathy was a legitimate means of interaction between sensitized people (or those for whom the filters of reality were impaired). Public demonstrations of telepathy ranged from the scientifically controlled experiment to the "turn" in a variety show. The former stage medium and one-time secretary to Edmund Gurney of SPR, G. A. Smith began making films in Brighton some time after he was exposed as a fraud.[3] Although it was discovered that Smith was using a code, this did not reflect on other mediums who were thought to be genuine. His exposure, like many others, was not taken to mean that telepathy did not exist, but simply that, in this case, G. A. Smith was not (and never claimed to be) a true medium. However, in a climate of what can only be called "show trials," each fraudulent medium was exposed by the press, and the position of the SPR relative to science was gradually undermined. As a result, the struggle for the definition of reality, at least in official circles, was secured by scientific naturalists. However, the authority of science was not socially universal, and while the academy and the great and good appeared to see the swing of evidence away from psychical phenomena, this was not the case in the broader public domain. Subsequently, Smith open an amusement park at Anne's Wells that included the paraphernalia of theatrical spiritualism including the magic lantern. Apparently impressed by the demonstrations of the *cinématographe* and Robert Paul's work, he also began making films in 1896. From the amusement park, he distributed what apparently were called "living pictures" to exhibitors; the titles of which included ghost subjects such as: *The Corsican Brothers, Faust and Mephistopheles, Photographing a Ghost* and the *Gambler's Wife*.[4] The way that Smith embarked on film production not only reflects his early involvement with stage telepathy and clairvoyancy, but also is suggestive of the public appetite for what might be called technologies of the paranormal, despite the vigorous scientific skepticism.

The assertion that was at the root of the antagonism between naturalism and extendedness became one aspect of the cinematic imagination, only to dissolve into debates about realism when the Society for Psychical Research lost its way[5] and the peripatetic cinematic séance began to court the urban white-collar market. It soon became "lodged" in the real estate of the natural world in cinemas in the UK, and Nickelodeons, and cinema chains elsewhere.[6] As the cinema ensemble adopted an increasingly positivist interpretation, its earlier concern with the animate was subsumed in a scientific discourse of artificial life. As others have remarked, this leaves academic film studies blushing as the economic engine

3 R. Pearsall, *The Table Rappers* (London: Michael Joseph, 1972), 131. Also in Roger Luckhurst, *The Invention of Telepathy* (Oxford: Oxford University Press, 2002), 73.

4 E. Barnouw, *The Magician and the Cinema* (Oxford: Oxford University Press, 1982), 89.

5 B. Inglis, *The Natural and The Supernatural: The History of the Supernatural* (Bridport, UK: Prism, 1992), 412.

6 R. Abel, *Ciné Goes to Town* (Berkeley: University of California Press, 1994), 30.

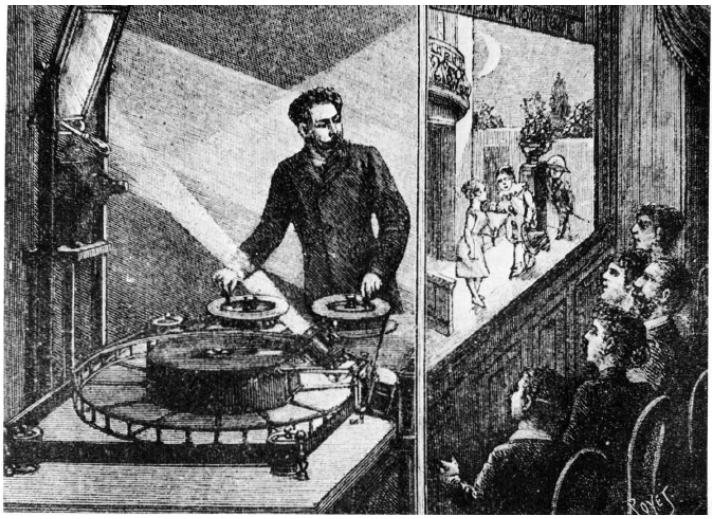


Figure 5
Illustration of Reynaud's Théâtre optique.

Figure 6
Theatre praxinoscope.

of contemporary cinema, animation, is all but invisible in the film industry's bibliography. In retrospect, this neglect seems almost inevitable given that no less than Hugo Münsterberg (arguably our first theorist) insisted that spiritualism *was* mysticism, and that "phenomena" do not and never will exist.[7] In handing over hypnotism (and the hypnotic effects of experiences) to psychiatrists, the cinema became subject to a further integration with positivism in which the animated film could only be accounted for in its narrowest possible definition, that is: giving the appearance of life. In contrast, a technological history of the cinematic imagination comprises a galaxy of little machines with names invoking its earliest definition; to give life, to quicken, to vivify. The list is too long to recite in full, but the generally acknowledged steppingstones from *animatographe* to *zoetrope* nearly all contain references to life or the supernatural. They form the catalogue of technological metaphors for artificial life that atrophied as their usefulness *as metaphors* declined.

One exception to this etymology—all the more curious since it is thought to most clearly foreshadow the cinema—is the praxinoscope, whose name derives from two Greek words *praxi* ("act") and *scopein* ("see"). Based on the *zoetrope* ("wheel of life") the praxinoscope was patented in 1876 or 1877 by Emile Reynaud, a teacher of natural science, and subsequently developed in a number of forms; the "Praxinoscope Theatre," "La Toupie Fantoche," and a projection praxinoscope, patented around 1882. This formed the basis of the *Theatre Optique,* which opened at the Musée Grévin in Paris in the Cabinet Fantastique on October 28, 1892, and lasted for 12,800 performances attended by half a million visitors. The strips that formed the basis of the animated part of the show were hand-painted images on a flexible band (gelatin, glass, or "Crystalite"—there is some uncertainty). Reynaud himself operated the apparatus from behind a translucent screen framed by a proscenium arch, manually driving the band past the mirrors as well as changing the magic lantern

slides that provided the "backgrounds" for the action. (Earlier, he had used both steam and electricity to drive the bands but, it seems, preferred to use his own energies rather than machines). It was a seamless presentation in opulent surroundings, complete with music written especially for the performances and scored for the orchestra to ensure that the image and sound always were perfectly synchronized. The show was hugely successful but famously, before his death in 1918, he destroyed all but two of his picture bands—one of which was *Autour d'une Cabine*.

> This is what Brian Coe has to say about Reynaud:
> The praxinoscope was very popular, especially in the theatre form, and Reynaud followed up an idea covered by his first patent—the projection praxinoscope. ... All three models of the praxinoscope were demonstrated to the Societe Francaise de Photographie in 1880.

Had Reynaud's achievements ended with the production of these delightful toys, he would have earned his place in the history of the moving picture—but he did not stop there.

> Coe concludes by honoring Reynaud as:
> ... being the first person publicly to present animated moving pictures on a screen by the use of long, transparent bands of images. However, his pictures, delightful though they were, lacked the realism which could only come with the successful analysis and reproduction of movement by means of photography.[8]

As I have suggested above, it is not at all certain that realism was what was so appealing about the *Pantomimes Lumineuses*. It seems much more plausible that, given the significance of the machine in the ensemble, a cinematic imaginary that was much more ambiguous towards realism could be found in the Musée Grévin. Reynaud could have used photography, and indeed made two photo-scene bands in order to save time (but only when he was under enormous pressure to provide new stories). In 1899, at the moment when he was at his most popular and production was most stressed, Gaumont began screening actualities as part of the performances in the Musée Grévin theatre, and according to Richard Abel, at the same time other fixed sites opened up in Paris to complement the existing sites run by the Lumieres, Pathe, and Méliès.[9] Reynaud would have seen these on his way to and from the theatre, but this sort of cinema was clearly not the entertainment that Reynaud (or his audience) envisaged. He advertised his performance at the Musée Grévin as *Pantomimes Lumineuses*,and although it used a drawing of what seems like a "live" dancer, and the actual séance involved a back projection system, most members of the audience would have had a clear idea of the technological arrangement involved since Gaston Tissandier,

7 B. Inglis, *The Natural and The Supernatural*, 13.

8 B. Coe, *The History of Movie Photography* (Westfield, NJ: Eastview Editions, 1981), 37.

9 R. Able, *Ciné Goes to Town*, 15.

had published a descriptive account in *La Nature* in 1882 under the title "Le praxinoscope de projection," (p. 357). Given the public fascination with technology there could be no mystery especially since, by 1888, an illustration, engraved by Louis Poyet, detailing the apparatus also formed part of the publicity for the show. (There is a reference to this as early as 1880, but this seems unlikely).

In short, there was no mystery, no magic theatre, or smoke and mirrors—and no photographic realism, except as a later and temporary expedient. There was an identifiable operator, the concealed star of the show, whose manipulative and inventive skills met the audience's desires and expectation at the interface of a screen: a membrane between two intelligences, neither of which were at that moment totally committed to scientific naturalism. The *Theatre Optique* was not telepathy to be sure, nor is there any evidence to suggest that it pretended to be. But by not disavowing apparatus, the operator and the evidently manufactured image and cued live musical accompaniment provided a perfect diagram of Alberti's famous view of the world and its representation: the double pyramid as a schema for telepathic interaction. The *Pantomimes Lumineuses* was neither realist nor naturalist, nor was it anti-naturalist, it was the cinematic imagination in which the technological hardware and software were not differentiated, and which was ambivalent in its advocacy of the necessary and sufficient conditions for life as positivists understood it.

Such counter-history spun around an apparently minor player might seem to be something of a self-indulgence. After all, we have the cinema we have: *Harry Potter, James Bond, Lord of the Rings, Daredevil,* and we have a cinema of resistance (or cinemas of resistances). It may seem that a distinction between a cinema of attraction or a cinema of quasi-naturalism may be a fine hair to split, or a differentiation between an aesthetics of astonishment or an aesthetics of the disembodiment may simply be the rhetoric of academia; but history does matter if only to the extent that the history that we have shapes our interaction with the present that we understand ourselves to be experiencing. "There are times," wrote Raymond Williams, "when there is so high a tension between experience and description that we are forced to examine the descriptions, and seek beyond them for new descriptions, not so much as a matter of theory but as literally a problem of behaviour." [10] Without this tension, however, the distinction between the lived and the articulated collapses, and we resort to the quasi-anecdote.

I wish that I had understood it so clearly when, in 1995, I published a pessimistic account of the future of a brave new medium—the CD-ROM—based on a survey that I conducted. It was the response of a disappointed artist. Putting it in the vernacular jargon: having consumed (and I confess produced) the vaporware of CD-ROM, as a new creative and revolutionary medium, I now was faced with the reality of the technology as "shovelware": the spark

10 R. Williams, *The Long Revolution* (New York: Columbia University Press, 1961), 73.

Figures 7a, b, c
Stills from *Mike Does Baywatch*,
(video/60 mins, 1996). ©2003 Michael Punt.

of the post-Gutenberg era, had turned into an ugly dump for undigested data. Still a little sore that the revolution had not happened, and the vaporware was still filling the ether, a year later I set out to make a video on the basis of that survey. I called the film *Mike Does Baywatch,* and apart from that moment of intertextual comedy in the title, it carries all the traits of my own history of cinematic resistance; that is it lasts for sixty minutes, nothing much happens, the camera does not move, and it sits malevolently in the cassette waiting for electromagnetic atrophy.

The film shows me on the left of the screen sitting at a computer examining a pile of CD-ROMs, trying to make them work, while on the right there is a VCR and television monitor playing a version of *Baywatch.* It was one of those projects that obeyed strict ground rules: a continuous shot lasting the length of the television program comprising the unrehearsed, but familiar, action of surveying CD-ROMs. I had hoped that the telephone might have interrupted me or the cat, which lived under my desk lamp, might have strolled in for its fifteen minutes of fame, or some of those things that seem to frustrate you when you need to be left undisturbed might have added interest. Alas, not on this occasion; all that happens is that there are many deep sighs of frustration, much throwing of discs and, on a number of occasions, the computer crashes and has to be restarted. The gap between the description of CD-ROMs and the experience is too painfully set out to be interesting and, as a consequence, few people (if anyone) have ever watched it.

The research that inspired the film came from a laser disc project that I was invited to join by Thomas Elsaesser at the University of East Anglia, and later in Amsterdam in 1992. By that time, I had taught for nearly a decade the first B.A. Interactive Arts course to be validated. My students had sent the first image through Transpac, and I had participated in major exhibitions of "electronic art." Consequently, I had something of an advantage as I watched the emergence, ascendance, and hesitation of CD-ROMs in the marketplace. I noticed almost from the outset that the cinematic imagination was implicated in CD-ROMs. To begin with, Sony and Matsushita, among others, having felt that they lost out in the Betamax/VHS battle, bought into Hollywood partly in the expectation that the significant back libraries would be essential if their format was to become the industry standard. Second, 1994–1996 was the centenary of cinema, and everyone was a little self conscious of it. Finally, the individualistic fan discourse of the movies provided a glamorous vision of rugged individualism that was essential for the promotion of the "tele-cottage" industries that were emerging in response to a collapsing manufacturing economy. As it became clear that there was a gulf between the descriptions I was reading and the reality of the experience—particularly as it contrasted to the cinema—I wondered what was going on between the apparatus and the imagination.

Driven by the insight that film theory and cinema theory were unequal guests at the same feast, I wondered if the future of the CD-ROM as an emergent medium was blighted because it was so entrenched in a poorly articulated theoretical and historical context. For a variety of reasons (which I listed), by the mid-90s, it was obvious that, if the medium survived, it would be as a data storage technology. But what was even more puzzling was that, as a medium, it was in the process of becoming as much an orphan of history as Reynaud's *Theatre Optique.* In the shadow of its failure to fulfill its early promise, it is easily forgotten that, after its period of emergence as a file system standard in 1986, CD-ROM technology was regarded as a medium of political liberation, particularly as an escape from the media oligopolies, as typified by Hollywood, that controlled the access to mass audiences. In the early years, virtually anyone who felt that they had something important to say recognized that here was a platform on which to organize information in ways that could circumvent the in-house politics and ideas of the media industry. Secondly, an emerging interest with interactivity, based largely on an accelerating diffusion of the personal computer, encouraged many of us to think about new formal informational structures as alternatives to those that two decades of Althusser, Barthes, Braudel, Derrida, Foucault, and Lacan (to name a few from France in alphabetical order) had taught us to treat with suspicion.

As the expectations among an artistic left for the CD-ROM as a new democratic publishing medium stalled around the issue of distribution, proposals for new kinds of information design in libraries, museums, and art galleries received enthusiastic support from the establishment accountants bent on reducing overheads at the expense of experience. However, those with a cultural investment in the artifact, comprising the artistic avant-garde and the reactionary traditionalists, treated such ideas with suspicion, remembering, for example, the intellectual benefits derived from their own freedom to browse among real things and let the accidents (or the power of attraction of the relevant, depending on which side of the psychoanalytical fence you sat) happen. Given such strange bedfellows and contradictory attitudes to a possible medium, CD-ROM was almost entirely discussed in the press as a technology that would change the way we lived while, at the same time, large-scale commercial developers were at a loss to know what to use it for. As I wrote in 1994:

> Exciting new culturally transforming telematic technologies may have captured the popular imagination for brief moments, but new entertainment patterns and preferences have not immediately followed this fascination and they have been consigned to the margins—which can often mean art and academia. Virtual reality, interactive television and particularly CD-ROM, have shown signs of "hyperbole fatigue" as the technologically led expectations of producers have been unfulfilled. Despite the now extensive list of

Figure 8
Illustration from Broderbund's *Just Grandma and Me.* ©Broderbund, The Learning Company, and Edmark Software Help.

> titles published, running into tens of thousands world wide, CD-ROM remains relatively small compared with other publishing media, and there is a general agreement among commentators that the best products are "childware," (with Broderbund's Living Books taking the prizes) but that it has yet to find a media specific way of catering to the "grown up" market.[11]

The reason for the success of Broderbund obviously lay in their access to distribution, but more important, was the design concept that Mark Schlichting presented at Siggraph in May 1993. There were three key design principles for their products: no manuals and no reading to make it work, all instructions had to be spoken onscreen—no waiting not even for a second because children would not wait even that long before clicking again, and no wrong answers to the onscreen questions.

1. Nobody wants to read the manual—software should work with nonreaders (children three years old and up). Interface testing must be done with naive users. Kids don't need to be able to read to use—a Living Book "agent" comes onscreen, and gives spoken instructions.
2. Nobody wants to wait—this is critical for acceptance by kids. Some original CD titles flopped because they were just too slow. Tests showed that, if the delay was more than a second, kids would click again expecting a response—sometimes less than a second.
3. Everybody wants to be in control. There are no "wrong answers" in Living Books—this keeps it fun.[12]

What was so exceptional about this design approach was that it proposed a user-led scheme for a media platform that was situated in a history of technology. As we know, the custodians of this history have tended to be engineers concerned mainly with the processes and sequences through which technical problems were resolved, and seldom noticed what happened after the invention left the workshop, and even less what happened after that.

Technologically, the CD-ROM was understood as a stage in the rehearsal of fascinating engineering solutions concerned with data warehousing and compression. Some of the consequences of these solutions were later carried over to other storage media including DVD with exceptional success. Half a megabyte of data was spectacular in the 1990s, storage capacity has since increased exponentially on a two-year cycle, so that we are reaching a tetra-byte standard on the home computer and, we learn, there are 250 megabytes of data stored for every man, woman, and child on earth (about 300 books-worth of data which means most of it will go unread). Consequently, its technological redundancy was guaranteed while its media potential was overlooked, but for the

11 M. Punt, "CD-Rom, Radical Nostalgia," *Leonardo* 28:5 (1995): 388.

12 For a full description, see www. siliconvalley.siggraph.org/text/MeetingNotes/LivingBooks/html.

odd insight from exceptional artists working almost alone in the field, and perhaps Schlichting's almost throwaway holistic analysis that saved Living Books. For example, Broderbund's Living Book *Grandma & Me* supports three languages: English, Spanish, and Japanese. Everything on a page is interactive—clicking on a character results in spoken dialog. The ability to store lots of high-quality speech is one of the biggest advantages of using CD-ROM.[13]

If, earlier, we had looked at the *Theatre Optique* more closely in our cinema history, we may have spotted an equivalent in CD-ROM. Both point to an underexplored trajectory of machines in which the software and hardware are almost undifferentiated. This may be a condition that we must get more used to recognizing as electrochemical technologies become more biological. It may not be too much to suggest that the problem of the CD-ROM and history outlined here foreshadows a problem of human memory that becomes ever more insistent as technologies are developed in response to a cultural infatuation with history.

The CD-ROM now is the preferred method for backing up data, both personally and commercially. Its platform is nearly as universal as the overhead transparency, so that it can be used in teaching, and of course it is used to store all that music downloaded from the Internet. Moreover, smart software now catalogues all that saving and storing, and automatically "burns" it on another disc. It has become a "data dump" for shovelware which may not sound like success for a technology that was going to change the way we bought, stored, read and thought about books, films, and art. But cheap, high-density storage media in which the hardware and the software are undifferentiated means that we are less and less obliged to remember anything. Put more poetically, it also means that, unless you are responsible for a film archive, you never have to decide what to forget.

The technological discontinuity between the nineteenth century and twentieth century, with all that steam, levers, and gears which seems to have been replaced with electricity, solenoids, and "chips" may be a trick of periodization. However, viewed electrochemically, we not only make clear the circular repetitions because the hundreds of little optical toys that are forgotten and recovered from the nineteenth century in cinema history are duplicated in the proliferation of little digital memory devices from reminder alarms, PDAs, memory sticks, phones, digital cameras, library catalogues, Web pages, etc. of the twenty-first. Digital storage systems also repeat some aspects of the fascinations with the paranormal as an antagonism to the scientific naturalism of an earlier century when we learn (sometimes through high-profile show trials) that discarded files in the PC wastebasket are recoverable by a simple keystroke in the forensic laboratory: every thing leaves a trace, nothing is ever lost, and, given the motivation, dead data always can be resurrected. In this history of technology and counter-science, the invention of

13 See www.siliconvalley.siggraph.org/text/MeetingNotes/LivingBooks/html.

the cinema is not especially important—it is merely the crease in this particular Rorschach test which reveals the cinematic imagination as infinitely extendible, and the past in every detail always is available to the present.

Conclusion

Revisionist histories of the invention of the cinema have, if nothing else, made room for a subject effect in the shaping of cinema technology. There is much more work to be done with regard to the invention of the cinema, and until we can properly account for Reynaud and the host of other "toys" and precursors to the *cinématographe*, without infantilizing the nineteenth century audience, or dismissing great engineers and philosophers as lone figures who did not impact on a wider public, we cannot fully claim to understand the films of the first decade of the cinema—films which, for many viewers, become more puzzling and complex with every viewing. To be sure, part of the fascination with the early cinema is that it is such an evasive topic insisting at every turn that another factor must be added into the equation if we are to answer some of the historical questions that it poses. Perhaps, unfortunately, the questions posed by the first decades and the wrangle over the cinema of attraction or a cinema of quasi-naturalism, or an aesthetics of astonishment versus an aesthetics of the disembodiment, will remain a wrangle because our data is incomplete. This may be the best lesson that the story of the story of cinema can tell. This may be the point where, as cinema does or does not go digital, as academics we can be proactive.

This incompleteness of early cinema history derives from three main causes: the first is that, until recently, the history of technology has been allowed to become established outside the core debates about the function of history and, as a consequence, technology has been endowed with a spurious autonomy, and its "subject effect" has been largely discussed in terms of a sociology of its impact. The second is that the hypersensitivity to the image (and including sound as one of its attributes) in film studies has skewed the discussion toward realism (and antirealism), and all but obliterated the significance of technological solutions in relation to dominant philosophical problems that were prevalent in popular literature. In particular, a consideration of the resistance to scientific naturalism in the last half of the nineteenth century which gave social meaning to the raft of technologies that are affiliated with the cinematic imagination has been recast as a story of infantile engineering incompetence. One consequence of this is that animation, the engine of Hollywood—the one that actually keeps the cinemas open—is all but invisible in the film industry's bibliography. Finally, the methodological convenience of separating the history of hardware from the history of software diminishes the impact that a widespread excitement caused by paranormal phenomena had on the cinematic imagination in the 1890s, and dispatches some significant data to

the margins. In particular, the necessary ideological intolerance of scientific naturalism was not symmetrical with the inclusiveness of its archenemy, spiritualism—or its strange relation, technology.

For some of us, the CD-ROM was a disappointment. It promised such creative liberation and, apart from some brilliant exceptions, has delivered so little that has been socially transforming. In truth, there were, and will continue to be, some spectacular uses of the medium by filmmakers, artists, and designers, but insufficient to suggest a need for an explicit archival policy just to preserve the best. This, in my view, does not close the debate since, as I have suggested, the separation of hardware and software becomes increasingly unsustainable as we review the history of the audio-visual, and contemplate the future of the coming electrochemical, and electrochemical/biological media. From this perspective, it seems impossible to explain what contemporary Hollywood offers without a full understanding the subject effect—empowerment, irony, resistance, etc.—that electrochemical technologies such as personal computers, CD-ROMs, DVDs, and video cameras bestow on the kinds of people for whom the cinema started out as a technology of extension, and will sustain the momentum of a cinematic imagination to the extent that they will spend £3 billion on a raft of artifacts in the next twenty years to maintain the idea that there is far more to life than what we know. Whatever else we may do about digital cinema, and whatever it becomes, we should attend to archiving the past, especially the recent past, in relation to a reconceptualization of the relationship between software and hardware.

The Bicycle, Cross, and Desert

Andrew Weed

Photos were produced by exposing Kodak Technical Pan 120 mm/25 ASA film in a Hasselblad 500C with a 50mm Carl Zeiss lens and Hasselblad polarizing filter for 1 second at F32 on a tripod by A. Weed. Negatives were enlarged to 17.25 x 17.25" and printed on 24 x 20 inch Ilford paper by Michael Lundgren.

I ride my bicycle for transportation and pleasure in the Sonoran Desert. The formal silence of the desert brings clarity to objects and pedaling brings clarity to perception. On a bicycle, thought can deepen into contemplation. I become less of an observer and more of a participant. The bicycle does for my mind what the camera does for the photograph. It provides a frame of reference, a lens, a process of looking that determines what is seen.

I had noticed the cross before, in the Sonoran and other deserts, keeping vigil at roadside shrines. Now I began to notice this simple indicator of human form in unexpected common objects. Questions arose: Is it an accident that a post is the same weight as the mark on its sign? Do telephone poles need horizontal bars? Fascinated with the proportion of the cross, I made these photographs, hoping to show the beauty I find in simple common objects.

Revealing what I found fascinating about the cross and common objects made decisions about the overall format critical. Dividing the medium format camera prism into 16 squares, I selected a 3:5 ratio of object to photograph plane with the cross intersection in the center. While excited with this composition, I found the overall format still lacked vertical balance. Extending the bottom edge of the format achieved balance and helped to show the relationship between the seven objects.

Discovering unexpected relationships and translating them with words is commonly called poetry. The German language makes a clear distinction between translating with words: *Übersetzung* and translating with form: *Umsetzung*. I would suggest that translating these relationships with form is design.

Format showing prism divisions.

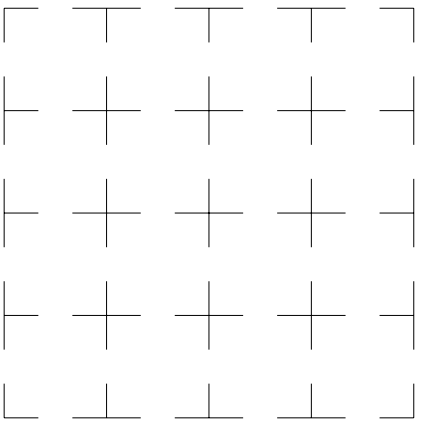


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Figure 1
North Royce Road north of
West Roberts Road, Sonoran Desert.

Figure 2
Ranchview Road at Sierra Vista Road,
Sonoran Desert.

Figure 3
State Route 285 south of Toyah Creek,
Chihuahuan Desert.

Figure 4
East Mossy Rock Drive west of South Price Road, Sonoran Desert.

Figure 5
Arizona Avenue at Pecos Road,
Sonoran Desert.

Figure 6
State Route 347 at Maricopa Road,
Sonoran Desert.

Figure 7
North Drifter Pass Road at Wrangler Road, Sonoran Desert.

Visualizing the Vague: Invisible Computers in Contemporary Design

Sara Ilstedt Hjelm

Figure 1
This internet fridge from LG Electronic has a computer integrated in the front door. Except from internet surfing and usual software, the computer can also be used to leave messages between family members, and for recipes. But it does not keep track of the food and order it home as one would imagine.

Introduction

Design is a powerful tool in getting us to accept new ideas and things. In the past, this tool has been used to introduce new products and technologies as safe, familiar, and even invisible. But design also can be used in a critical or subversive way that challenges the prevailing norm. Because product design often operates within tight economic parameters, there have been few opportunities for designers to use their skills for critical projects.

During the last decade, the concept that computers should be "invisible" has influenced much IT development and research. But technology as such, and computers in particular, are too problematic to be hidden away. Instead of hiding computer technology, we should use the power of design to visualize and express the complex issues it raises.

This paper will outline the background behind the concept of an "invisible computer," as well as present some historical references in connection with the introduction of new technology. The idea of hiding something problematic will be discussed, drawing on ideas from psychology, design theory, and sociology. The idea of double invisibility from feminist theory also will be used as a tool to criticize invisible computers and to point out other available options.

From Radio Piano to Internet Fridge

When radio was new and people were reluctant to recognize the benefits of this new technology, its developers did a lot of creative thinking to find ways to convince people to buy it. Radios were advertised as healthy, fun, and educational. "Radio teas" were advocated as the new and fashionable way of meeting friends and family. But radio programs were scarce, and the radios themselves where bulky and difficult to use. To make the product more socially acceptable, the radio was made invisible; that is, it was concealed inside another well-known and traditional fixture in the home. The "radio piano" was a piano case with a radio hidden inside its case. A loudspeaker was integrated into the body so, in order to listen to the radio, the top of the piano had to be opened. In the evening, the family would gather around the piano, and listen to an enlightening or entertaining program.[1] This presented a compelling domestic image.

1 Adrian Forty, *Objects of Desire* (London: Thames and Hudson, 1986).

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Figure 2
This radiopiano from the 1920s is an example of how radios were hidden in other products in order for the consumer to find it more fitting in the home. Other examples are radios that were put into armchairs and grandfather clocks.

Today, information technology is integrated in the home, and the concept of the "invisible computer"[2] is widespread. LG Electronics, one of the largest producers of electronics and powered appliances in the world, has moved into the promising area of "smart homes" with a product called "Internet fridge."[3] Internet fridge is a refrigerator with a computer hidden inside the door and the screen on the front panel. The computer is supposed to serve as a center for family information and logistics. Needless to say, the radio piano never was a success, for the Internet fridge, it remains to be seen.

How plausible actually is the idea of making computers invisible? And what role should aesthetics and design play in the development of smart homes?

Will all our hidden and integrated information technology just become another radio piano? The radio piano represents more of a humorous example than a warning to product manufacturers. If new smart home appliances are just a little more innovative than that, they might succeed. Of course, one could argue that we should know better almost a century and many design theories later. But what does it mean to hide powerful technology in order to make us accept it? And how will this domestic environment penetrated by reactive computers affect us?

Visions of the Future

Leading researchers present various strategies for technical and conceptual development of computer technology for the home. Mark Weiser from Xerox Parc first coined the phrase "ubiquitous computing."[4] Weiser foresaw how computer technology gradually will diminish in size, spread out, and become an invisible part of out everyday life. He envisioned a world of "calm technology"[5] in which our windows would become large screens displaying information in the background, or perhaps even the soothing sound of raindrops whose frequency indicates the number of emails waiting to be read

2 Donald Norman, *The Invisible Computer: Why Good Products Can Fail, The Personal Computer Is So Complex, and Information Appliances Are The Solution,* (Cambridge, MA: MIT Press, 1998).

3 Screenfridge (www.electrolux.com/screenfridge).

4 Mark Weiser, "Some Computer Issues in Ubiquitous Computing," *Communications of the ACM* 36:7.

5 Mark Weiser, "The Computer for the 21st Century," *Scientific American,* 265:3 (1991): 94–104.

in our computer. The walls of a smart home can become transparent or opaque as needed, and can quickly adapt themselves to mood or function. Nicholas Negroponte, the founder of MIT's Media Lab, advocates the use of "intelligent agents," a kind of digital butler that does all our work while we relax.[6]

Philips Design's project, "Visions of the Future,"[7] was one of the first to present domesticated information technology in well-designed and nicely packaged scenarios. Their core idea is to make IT appliances for social and emotional communication. According to Philips's head of design, Stefano Marzano, the home of the future will resemble homes of the past more than the homes of today. Technological gadgets will be gone, and a beautiful painting on the wall also will serve as a television and computer screen. The decorative object on the table will be a communication station, and the powder compact a mini-computer.[8]

Donald Norman explores the "Ubicomp" concept in his book *The Invisible Computer,*[9] and develops scenarios for an intelligent, reactive, and serving environment. The term was slightly changed in the EU research program "The Disappearing Computer," [10] which includes universities and organizations from all over Europe participating in sixteen imaginative research projects.

In the "smart home" industry, IT companies have adapted to reality and are aiming primarily at the large and wealthy '40s generation (the so-called Baby Boomers) that soon will become old and invalid.[11, 12, 13] Products being offered focus on "safety services," that is to say alarms of different kinds. These networks of sensors are concealed in the walls and appliances in the home, and are not subjected to any form of conscious design.

The idea that the computer will become invisible and disappear partly has its origin in Heidegger's observation about tools.[14] When we use a tool and become familiar with it, we no longer "see" it. The tool becomes "invisible"; a natural extension of our hands and mind. But Heidegger does not mean that the tool literally vanishes because, in that case, we could not use it. He refers to the phenomenon of things that are so well known that we no longer notice them. That is something different to actually *hiding* computer technology in walls or other products.

Product Design and New Technologies

Within product development and advertising, design is commonly used to disregard chronology and semantics. New, unsettling objects can be made to seem old and familiar or, vice versa, something old can acquire a new, "modern" look. The success story of the twentieth century is intimately connected to objects, and industrial design is like the soft padding around these objects. This explains our willingness to allow all of these objects into our homes and our arms, and also the reason why we abandon them for better and newer ones. At the beginning of the twentieth century, Peter Behrens started work-

6 Nicholas Negroponte, *Being Digital* (London: Coronet, 1996).

7 *Vision of the Future* (Bassum: V+K Publishing, 1996).

8 Stefano Marzano, "La Casa Prossima Futura" (Available at www.smart-homes.nl/abstracts/casa.html).

9 Donald Norman, *The Invisible Computer.*

10 The Disappearing Computer (Research initiative within EU IST [Information Society Technology] FET [Future Emerging technologies] program. See www.cordis.lu/ist/fetdc-ob.html.

11 Ehem (www.ehem.com/ehem/),

12 Hej Huset (www.vattenfall.se/hejhuset).

13 Sensel (www.sensel.se/).

14 Heidegger, *Being and Time* (Translation of *Sein und Zeit*) (New York: State University of New York Press, 1997).

Figure 3
Archiac radio

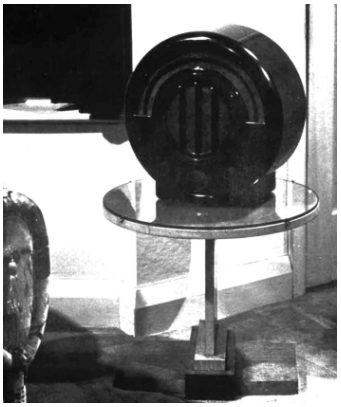

Figure 4
Utopian radio
Adrian Forty remarks that products usually go through three stages of design: the archaic, the supressed and the utopian. Here we see examples of the described basic grammar in the design of radios.

ing for AEG (Allgemeine Elektrische Gesellschaft), a company that primarily produced electricity and had begun to enter the consumer market. The problem for many electricity companies at the beginning of the last century was that usage was divided unevenly during the course of the day, and that it is difficult to store electricity. There was a peak during the morning, but then during the day consumption fell to almost zero, and rose to its maximum during the evening hours. In order to meet this changing demand, the companies had to have the same output capacity at every hour of the day and night. Obviously, this was not profitable, so many shrewd people were wondering how to increase demand for electricity during the day. One of the most successful solutions turned out to be kitchen appliances. The electric stove, mixer, toaster, washing machine, kettle, heater, and iron, to name just a few popular products, were developed in quick succession. Behrens designed electric kettles in three different materials and in ten different styles in order to satisfy every taste. Soon, electrical stoves and kitchen appliances started to appear in kitchens everywhere.[15]

A similar development occurred in all new technologies. The radio, for example, was developed around the beginning of the twentieth century, but was perceived as being too difficult and dangerous to use in the home. Radio manufacturers resorted to different strategies to overcome this. One was to change public opinion using advertising and "radio events." Another was to use design to make the radio more acceptable. Radios could be built into traditional wooden cabinets, or concealed in a grandfather clock or even in an armchair. But it was not before the radio found its rounded, utopian form in Bakelite that it became a product icon.[16]

In 1932, we could read in *Svenska Slöjdföreningens* magazine that:

> The radio as a cultural phenomenon is still very much in its formative stages. The chaotic lack of style in radio broadcasts has slowed down innovation within the industry. As far as the appearance of these devices is concerned, it can be noted that they have still not become an item of furniture that fits naturally into a room. The average radio with its built-in speakers still uses forms reminiscent of an oversized, clumsy table clock.[17]

The development of radios went through three design phases: the archaic, the suppressed, and the utopian. This has appeared so often in industrial design that they might be said to form a basic design grammar.[18] We can see the same development today within the field of smart homes. Broadband and IT technologies are entering our homes through a wide range of applications. From the first stages of crude technology and archaic solutions, they now have entered a stage of suppression. The products should not be seen at all.

15 Adrian Forty, *Objects of Desire.*

16 Ibid.

17 Red Lasse Brunnström, *Svensk Industridesign — en 1900-talshistoria* (Stockholm: Norstedts, 1997).

18 Adrian Forty, *Objects of Desire.*

Design and Semiotics

Is it logical that we will build technology only to hide it? The radio armchair was never a hit, and the clock radio did not have its breakthrough until fifty years later; and then it was the clock that was built into the radio, not the other way around. Every period and every technology needs to develop its aesthetics in an organic relationship with its own time. Hiding technology also means that we put aside and naturalize something very complex and problematic. Product design and aesthetics is what literally *expresses* the product. The product can be read as a text that conveys a number of semantic messages. On the denotative level, it tells us what it is and how to use it. When we analyze it, we can detect the connotative levels where issues about culture, identity, and context are buried. In his book *Mythologies,* Roland Barthes[19] explains the way myths work and the power they have on the way we think. Using many examples, Barthes shows how seemingly familiar things signify all kinds of ideas about the world. As Forty remarks: "Unlike the more or less ephemeral media, design has the capacity to cast myths into enduring, solid and tangible form so that they seem to be reality itself." [20]

One such myth is that household work nowadays is fun, easy, and efficient compared to the old days when housewives were chained to the kitchen. Household appliances are considered to have freed women to do paid work, and have made housework fun and fast. Housework seemingly does itself, with the contemporary homemaker only supervising the work. Household appliances were advertised as the "solution to the servant problem." But in fact, a range of studies[21] shows that women spend *more* time doing housework today that in the twenties. This is explained by higher standards in cleaning, cooking, clothing, and personal hygiene. Eighty years ago, shirts and underwear were at most changed after one week of use; today we rarely wear the same garment more than a day. So instead of sending laundry away to a cleaning lady once a month, the washing machine is on every day.

Hiding or Not Hiding—That Is the Question

Making or not making technology visible is a long-debated issue in industrial design and architecture. One of the main criticisms by the modernists at the beginning of the twentieth century was the inconsistent use of material, styles, and ornamentation during the previous century. The American architect Sullivan coined the expression "Form Follows Function," claiming that function was superior to form. Honesty in form, function, and material was another widespread motto. This meant that no material or function should be hidden behind something else, but clearly and honestly presented in the final design. But this was mainly a *theory* of aesthetics. In reality, most modernistic buildings hide all of their support structures under smooth surfaces.

19 Roland Barthes, *Mythologies* (Paris: Seuil, 1970).

20 Adrian Forty, *Objects of Desire.*

21 Ellen Lupton, *Mechanical Brides—Women and Machines from Home to Office* (New York: Princeton Architectural Press, 1993).

There are many reasons for hiding something. One is that it is ugly or untidy. At the Centre for User-Oriented IT Design (CID), at the Royal Technical University in Stockholm,[22] a study was made on five families that were asked to take pictures of ugly and attractive things in their homes. Most of the ugly things were technical appliances such as stereos, television sets, personal computers, bundles of cables, and light switches. We also might hide something because it reminds us of something unpleasant, or because we do not want to deal with it right now. In a therapy situation, the psychologist tries to unravel the client's memories and feeling that he or she has repressed into the subconscious. The main idea is that such subconscious material still affects the client even though he or she is unaware of it. Problems generally appear less frightening if we just look at them. Another reason for hiding something is that we do not want *others* to find out about it. It might cause problems or challenge our own position. Power often is concealed, and therefore is less obvious and harder to criticize.

A Modernist Revival?

The idea to remove physical signifiers is not new. Since Plato, the material world has had a subordinate position in the Western mind. For Plato, "form" was the creative force that manifested itself into the soulless flesh. The concept or idea always was superior to the real world object.

The aesthetic confusion and artistic debates prevalent during the early twentieth century led to a revival of these ideas. At a "Deutsche Werkbund" congress in 1911, the German design prophet Hermann Muthesius claimed that form was superior to matter:

> Much higher than function, material and technology is the FORM. If the FORM didn't exist we should still be living in a barbarian world.

The kind of forms Muthesius advocated were abstract, "essential" shapes and a standardized production system. In the audience were the young architects that would shape modernism: le Corbusier, Mies van der Rohe, and Walter Gropius. With them, decoration was banned from architecture and design, which would be made of simple geometric forms and clean, white surfaces. The idea was to make the signifier as invisible as possible so that the true idea—the FORM—would show through. This did, in fact, deny the material aspect of their work, and laid the ground for a building industry that became careless about material and sensual experience. In Sweden, modernism became more pragmatic and politically allied with the young social democracy, than the modernists in central Europe. In spite of that, they were just as aesthetically neoplatonically oriented as their German colleagues. In the 1931 book *Acceptera*, Swedish design theorist Gregor Paulson, architect Gunnar Asplund, and their

22 Beaudouin-Lafon, et al., "InterLiving Deliverable D1.1," "Cooperative Design with Families, 2001," "InterLiving Deliverable D2.1," and "Technology Probes for Families, 2002" (Centre for User-Oriented IT Design [CID], Royal Technical University, Stockholm).

friends advocated an ethically based aesthetic, with honesty in form, function, and material, as well as a self-evident form. This book has been enormously influential in Swedish design and architecture, and is clearly echoed in Monö (1997), when he disappointedly remarks about a line on a handle: "... from a semantic point of view this is false. It has been placed there purely for decoration."[23]

The idea to take away the references from products in order to make them more justified soon became a general modernist aesthetic. It culminated in the high modernism of the seventies, with its austere concrete buildings and black box design.

But taking away the signifier from things does not make them more spiritual. A raw concrete building with identical windows is not experienced as honest and true, but as impersonal and boring. What the modernist did not think of was how we human beings tend to interpret meaning into *everything*—including a white surface. From this perspective, the idea of making computers invisible by removing the visual signifiers appears to be a continuation of modernist ideas.

Criticizing Ubiquitous Computing

Augustin Araya[24] has analyzed the technological thinking that underlies "ubiquitous computing" using Heidegger's idea about technology as "conditions of possibility," and explored how technology reveals itself to man. According to Araya, Ubicomp changes the surrounding world to become not a separate entity, but an extension of ourselves. Constantly responsive, subjective, movable, and reproducible, it changes according to our needs and fantasies. This leads to two observations; one is that Ubicomp can be seen as a way to obliterate "otherness" in parts of the surrounding world by penetrating it with computer technology. The second is that Ubicomp obscures "otherness" in parts of the surrounding world in such a way that we are not aware of it—everything apparently is normal. Araya describes this phenomenon as "double invisibility":

- The penetration of computer technology in the environment becomes invisible.
- The effects they cause are invisible to us because we cannot see them.

This reminds us of the double invisibility[25, 26] in feministic theory

- The dominating culture becomes invisible because it is the natural, self-evident normality above interests of gender, class, and others.
- A culture in opposition becomes invisible because it gets less room in the public space and appears as vague, indistinct, and temporary.

23 Rune Monö, *Design for Product Understanding* (Trelleborg: Liber förlag).

24 Augustin A. Araya, "Questioning Ubiquitous Computing," *Proceedings of the 1995 ACM.*

25 Maria Uden, *Women Technically Speaking* (Thesis, University of Lulea, 1990).

26 Louise Waldén, *Genom symaskinens nalsoga* (Stockholm: Carlssons förlag, 1990).

By applying the theory of the double invisibility to Ubicomp, the suggestion to massively penetrate the world with invisible computer technology appears as a way to normalize, naturalize, and reify computer and information technology. The invisibility creates a power position where it is nearly impossible to criticize or change the prevailing system. Feministic theory also points at possible ways to act: to make relative the self-evident and to visualize the vague.

Product designer and writer Anthony Dunne[27] argues that mainstream industrial design uses its powerful visualization capabilities to propagandize desires and needs designed by others, thereby maintaining a culture of passive consumers. He suggests that design research in the aesthetic and cultural realm should draw attention to the ways products limit our experiences, and expose their hidden social and technical mechanisms to criticism and discussion. Central to Dunne's and partner Fiona Raby's work is a consideration of the imperceptible electromagnetism that surrounds us. From the "natural radio" emitted by the sun to the radiation leaking from appliances, Dunne and Raby attempt to visualize the invisible. In a series of conceptual design proposals, they criticize and visualize aspects of electronic culture that very rarely have been dealt with within product design.

Visualizing the Vague

Design is a powerful tool that allows values and cultural codes to be materialized into factual objects, thereby making them a "natural" part of the world. Design also can be used to criticize and deconstruct such values, but because design finds itself operating within a commercial framework, this rarely occurs. In the design of computer and IT artifacts, there usually is very little time for explorative and critical aesthetics. Product design is supposed to make an attractive and (at best) user-friendly product to increase sales.

In the light of the discussion in this paper, merely making computer technology invisible seems a dubious approach. Information technology is too problematic and powerful to be domesticated and hidden behind, or in, a familiar appliance. An environment penetrated by invisible computers most likely will affect the way we perceive ourselves as subjects in relation to an objective environment. It also appears as a way to normalize, reify, and naturalize computer and information technology, thereby making it a natural fact more than a cultural phenomenon. Every period and every technology needs to develop its aesthetics in an organic relation to its own time. Instead of hiding computer technology, we should use the power of design to visualize and express this complex issue. This is an important task for design research within the aesthetic and cultural realm.

27 Antony Dunne, *Herzian Tales* (London: Royal College of Art, 1999).

Culture and Design: A New Burial Concept in a Densely Populated Metropolitan Area

Kin Wai Michael Siu

According to the traditions of the Cantonese, as well as the inhabitants of most other Chinese provinces, after one has passed away, it is believed that one's body should be laid to rest underground, and that one's spirit will live forever in another world. Due to the insufficient supply of cemeteries in Hong Kong, where the majority of the population is Cantonese, the Hong Kong government has encouraged people to use cremation, and to place the cremated ashes into the niches of columbaria. Although this method (or government policy) gradually has become more acceptable to the Hong Kong residents in the recent years, some still reject it since it contradicts Chinese traditional and cultural beliefs and preferences. In addition, although columbaria save space, they have some disadvantages and limitations. For example, the demand for niches is large and increases every year. This results in a policy that still is not sustainable, contrary to what the government claims.

This paper is based on a research and design project. It discusses cultural and social changes in Hong Kong by reviewing traditional beliefs and values of the Cantonese concerning death, illustrating the urban environment of Hong Kong, and examining how people have changed their views and preferences about burial methods. It then reviews the limitations of current burial methods, and proposes a more user-centered—that is, respectful of Hong Kong people's cultural needs and preferences—and sustainable solution: *Invisible Niche*. Finally, it discusses the possibilities and current difficulties in implementing this sustainable environmental and product design in societies similar to Hong Kong's.

Research and Design Project on Burial Methods

A research and design project was carried out in Hong Kong in 2001, and the final stage of generating design ideas was completed in 2002. Discussions with private funeral service providers and related government officers regarding the possibility of implementing the ideas have been conducted since 2002.

The project was co-supervised by designers and engineers from the School of Design and the Industrial Centre at The Hong Kong Polytechnic University. Design students from different areas,

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such as Design, Culture and Theory, and Environmental Design, initially were involved in the project. Their involvement served as an industrial internship with professional designers and engineers.

The project was stimulated by some newspaper reports on the management problems of cemeteries and columbaria in Hong Kong. For example, some descendents did not, or were unable to, care for their ancestors' graves and columbaria after several generations. There also was severe traffic congestion in burial areas on some traditional ancestor worship days (for example, the Ching Ming (*Qing Ming*) Festival and Chung Yeung (*Chong Yang*) Festival). Finally, there are few suitable sites for building new cemeteries and columbaria because of the limited amount of available land in Hong Kong and because of objections from residents to proposals to set aside land in their districts for such uses. After a background study, several site visits, and casual discussions with people visiting the graveyards and columbaria, the preliminary goal of the project was defined, that is, to improve the environmental design of current cemeteries and columbaria in Hong Kong, specifically with regard to solving problems of maintenance and congestion.

The first stage of research activities included (a) a literature review and background study of burial culture, and the development of burial policies; (b) interviews with government officials and representatives of related associations, such as those from nonprofit and commercial providers of cemetery services; and (c) field visits to public and private cemeteries and columbaria.

After the first stage of investigation, the research findings indicated that current burial policy and methods cannot satisfy the cultural needs and preferences of the people Hong Kong. In particular, the so-called better policy—cremation—is not a sustainable solution for Hong Kong's urban environment. The original project aim was then modified: to propose a user-centered—that is, respectful of the Hong Kong people's cultural needs and preferences—and sustainable solution. The original project activities continued, but the study on the spatial and temporal dimensions of Hong Kong's burial culture was extended, and an analysis of the data was presented to interested funeral service providers and government officials.

Finally, a new government policy for sustainable cemeteries and a new concept in sustainable environmental and product design, the *Invisible Niche,* was proposed. This involved putting the ashes of the deceased after cremation into degradable urns to be buried underground. The ashes will enrich the environment. After the ashes have completely decomposed, the land will be ready for more ashes. Thus, the space for cremated ashes is unlimited. The most important point is that the ashes will be underground, which is in accord with the beliefs and attitudes of the Chinese toward death. That is "Returning to the earth and being at peace."

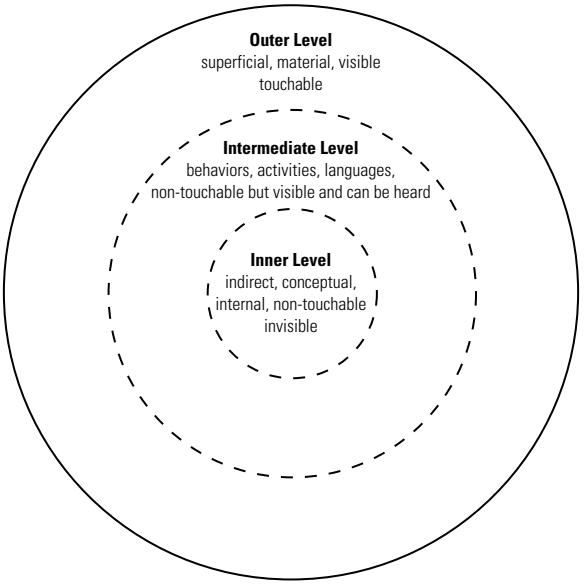


Figure 1
Dimensions of culture.
All figures and photographs courtesy of the author.

The Spatial and Temporal Dimensions of Burial Culture

It is difficult and complicated to understand the culture(s) of a country or a group of people, because culture is related not only to physical objects but also to abstract personal beliefs, needs, wants, and preferences.[1] Talking about Chinese cultures, Xingliang He points out that culture has both a spatial and temporal dimension.[2] Each spatial layer of a culture represents the specific structure and characteristics of that culture at a specific point in time. If the spatial dimension is the cross-section of culture, then the temporal dimension is the longitudinal section of it. Different temporal layers illustrate different structures and characteristics of a culture in terms of time.

The spatial dimension can be further understood as three levels of structure: an outer level, an intermediate level, and an inner level. (fig. 1) Compared with the two former levels, the inner level is intangible and invisible. Although this level is difficult to understand, it can be reflected through the intermediate and outer levels of the spatial dimension.

The inner level of the spatial dimension of culture affects not only how people make decisions and "act" (the intermediate level), but also the design of physical objects and systems (the outer level). Conversely, the physical object and systems also influence and change people's behavior and ways of thinking.

Traditional Ways of Thinking of Death and the Selection of Burial Methods

Chinese (in particular, Cantonese) traditional beliefs, atitudes, and ways of thinking about death affect how most Hong Kong people select burial methods (including burial activities and physical objects). Early Chinese mostly believed that human beings were a combination of the spirit and the body.[3] When one passed away, his

1 Jiang-Feng Chen, *Man and Heaven are One: Concepts and Chinese Cultural Traditions* (Beijing: Sheng huo, du shu, san lian shu dian, 1996); Rebecca S. Y. Ng and Shirley C. Ingram, *Chinese Culture in Hong Kong* (Hong Kong: Asia 2000 Ltd., 1989); Han-Ming Shao, ed., *Spirit of Chinese Cultures* (Beijing: Shang Wu Yin Shu Guan, 2000); Kin Wai Michael Siu, "The Mid-Autumn Festival Lantern in Contemporary Hong Kong," *Design Issues* 14:3 (1998): 19–27; Jian-Zhong Wan, *Taboos and Chinese Cultures* (Beijing: Ren Min Chu Ban She, 2001).

2 Xingliang He, *Chinese Nature Gods and Nature-Worship* (Shanghai: Sheng Huo, Du Shu, Xin Zhi San Lian Shu Dian, Shanghai, 1992).

3 Wei Huo, *Traditional Funeral Rites and Ceremonies of China* (Chengdu Shi : Sichuan Jiao Yu Chu Ban She, 1998); Li-Zhu Wang, *The Study on the Ancestor Worship of Yi Tribe* (Kunming Shi: Yunnan Ren Min Chu Ban She, 1995); Ji-Jun Xu and Yun-Ao He, *Funeral Customs, Rites, and Ceremonies of China* (Hangzhou: Zhejiang Ren Min Chu Ban She, 1991).

or her spirit remained alive. Under this concept, people thought that there should be "homes" for the spirits. This marked the origin of graves, known as "tombs" in Chinese. Most Chinese also believed that the spirit would return to the heavens, while the body would return to the earth. After the deceased person's body was buried in the ground, he or she would be rid of the misfortunes and vexations of the living world. By having a good rest under the ground, his or her spirit will be purified and return to the heavens and bless the person's descendants. Thus, most Chinese still maintain the traditional way of thinking about and referring to death: "Returning to the earth and being at peace." The importance of this way of thinking for Chinese people is reflected by how seriously they take the process of selecting places to construct tombs. The Chinese believe that the location of tombs and the direction they face will affect the fate of their descendants. For example, in the past, the Chinese believed that the construction of the emperor's tomb was a matter relating to the movement of the universe. Until now, the layout of a cemetery still is an important part of *feng-shui,* that is, the direction of the tombs, the pattern in which they are arranged, the situations and positions of mountains, the flow of rivers and the growth direction of trees.

The three levels of the spatial dimension of traditional burial culture can be understood, as follows:

Table 1

Three levels of the spatial dimension of traditional burial culture

Inner level	Beliefs and preferences: • Human beings are a combination of the spirit and the body • When a person dies, his or her spirit remains alive • When a person dies, his or her body should be laid underground to rest, and his or her spirit will live forever in another world • After the deceased person's body is buried in the ground, he or she will be rid of the misfortunes and vexations of the world: "Returning to the earth and being at peace" • Proper burial is a sign of respect for the deceased • By having a good rest under the ground, the deceased's spirit will be purified, return to the sky (heaven), and bless the descendants The location and direction of a tomb affects the fate of the deceased person's descendants
Intermediate level	Behavior and activities: • The deceased is buried in the ground. • Serious consideration is taken when selecting places to construct the tomb, taking into account, for example, the direction in which the tombs face, the arrangement and pattern of the tombs, the positions of mountains, the flow of rivers, and the growth direction of trees
Outer level	Physical design objects and systems: • Cemeteries (tombs) • Constructions of the tombs • Physical objects used in the funeral rites, and routine offerings (for example, in special festivals and memorial days)

Changes in Social Needs and Culture

As mentioned above, culture has a temporal dimension. This means that the three levels of the spatial dimension of a culture will change over time. In Hong Kong, as in many modern cities on the Chinese mainland, underground burial has become very expensive, and is inconsistent with the needs of urban development because space is limited in dense urban areas. In order to save space in the building of cemeteries and to reduce construction and maintenance fees, the government has encouraged people to adopt an alternative method: cremation, followed by placing the ashes into the niches of columbaria. Although this government policy received a fairly negative response at first, this method in fact has become increasingly acceptable to the people of Hong Kong. Moreover, under the influence of modern culture, many people (especially the younger generation) want to simplify the traditionally very complicated burial process (funeral rites) in order to minimize the inconvenience it involves. According to interviews, one of the key preferences and concerns of respondents in handling burial activities is "convenience." Thus, cremation, niches, and columbaria have become common and appear to be well accepted in terms of method and designs.

Figure 2 illustrates the influences and changes in the burial culture of Hong Kong. The modern way of life and other external factors have affected the traditional burial culture (that is, all three levels of the spatial dimension). The influences and their changes are continuous transformations: the outer level influences the intermediate and inner levels continuously, and vice versa. For example, social changes (modern urban life) caused people to change their prefer-

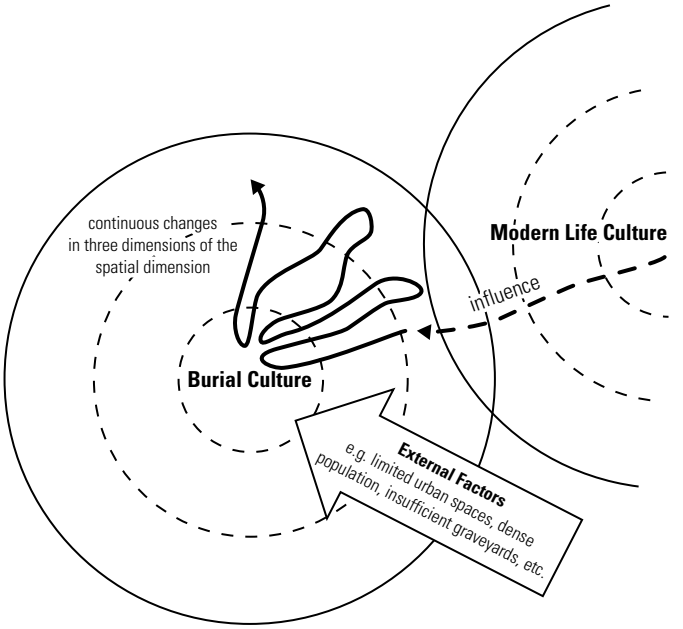


Figure 2

ences to the "simple" and "convenient" (the inner level), and more and more Hong Kong people accept and prefer it. Further, burial activities have become simpler, and this has led to an increased acceptance of the methods of cremation and placing the cremated ashes into the niches of columbaria. In addition, the increasing influence of new foreign and local cultures (for example, lifestyles, religions, and new knowledge) and external factors (constraints and changes in the economy and in lifestyles) continuously accelerate these changes and reinforce the results. The details are shown in the following table:

Table 2

Changes in the three levels of the spatial dimension of burial culture

Inner level	New beliefs and preferences: • Urban lifestyles and needs: busy, simple, efficient, convenient; for example, accessible location of cemetery or columbarium • Human relations: individualism or isolation • Economic concerns • Relatively low status of senior relatives Intermediate level
Intermediate level	Key changes in behavior and activities according to changes in the inner level: • Cremation • Simple funeral rites • Relatively less consideration of traditional customs and routines
Outer level	Key changes in physical design objects and systems according to the changes in the intermediate and inner levels: • Niches • Columbaria • Objects used in simple funeral rites

Areas Not Satisfied

In Table 2, the intermediate and outer levels of the spatial dimension of burial culture are modified according to the changes at the inner level. It is clear that these changes have been widespread across Hong Kong during the past several decades. Some people, especially members of the young generation, do not like the traditional burial method of laying a relative's body under the ground. They prefer to follow the current government policy. However, these changes at the intermediate and outer levels of the spatial dimension of burial culture do not represent satisfaction and settlement at the inner level. Some people point out that the choice is one "between a rock and a hard place."

In fact, land is the most expensive commodity in Hong Kong. It is too expensive for ordinary people to buy private land for a grave nowadays. Most of the time, people expect the government to provide cemeteries. (The cost also is very high compared with that for a niche in a columbarium. Sometimes people have to

wait a long time, and many of the cemeteries are located far away from urban areas. For the past few decades, the amount of land that they government has provided for cemeteries has decreased rapidly. Even those prepared to endure the delay and long distances involved in using the traditional underground burial method are required, according to the new government policy concerning public cemeteries, to remove the remains from the ground (that is, dig out the bones and put them in urns) no longer than seven years after the date of the burial. This policy makes people feel that it is complicated, inconvenient, and troublesome to select the traditional underground burial method. Moreover, some people believe that removing the deceased's remains from the ground after burial is impolite and disrespectful. Furthermore, if there are any customary or *feng-shui* mistakes that are made during the digging out process, this may cause misfortune. Thus, many people prefer to select the cremation method—not because they really prefer to do it, but because they have no other reasonable choice. Therefore, the changes mentioned above do not mean that the inner level of the spatial dimension of burial culture has been totally replaced or erased. In fact, the beliefs and preferences (for example, "Returning to the earth and being at peace") listed in Table 1 have not been satisfied.

A New Concept of Burial Method

After carefully (re)considering Chinese cultural needs and social changes in Hong Kong, we have proposed a new concept of burial method, the *Invisible Niche,* to the Hong Kong government and to the people and organizations interested in providing funeral services (figures 3–6). The key idea behind this new policy and design is that, instead of placing the cremated ash into the niches of columbaria, the ashes of the deceased will be put into newly designed degradable urns, and buried underground. In this way, the ashes ultimately will enrich the environment. After the ashes have completely degraded, the land will be ready to absorb more ashes. In other words, the space for cremated ashes is unlimited.

Moreover, we have proposed that individual epitaphs be set up inside the cemetery for every deceased person. The relatives of the deceased can carry out funeral rites and mourning. Ten years (or a better proposed duration) after the burial, the individual epitaphs will be replaced by carving the name of the deceased into the monument in the cemetery, which is a sign of honor and eternity. This replacement will minimize the accumulation of epitaphs, and result in the cemetery being sustainable. Our findings indicate that, in Hong Kong, most of the later generations of descendants pay less attention to such matters, and visit their ancestors' burial places less frequently than previous ones. In addition, a significant number of the younger generation study, work, and emigrate to other countries and seldom return. When the older generation staying in Hong Kong dies, this means that there will be no one visit the ancestral burial

Figure 3

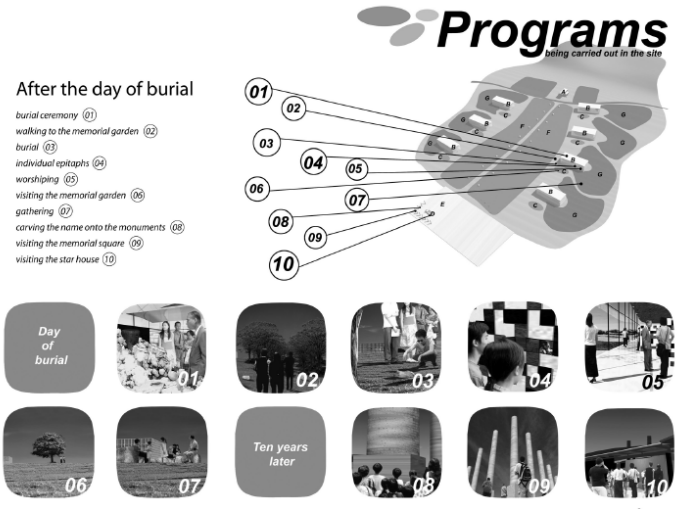
Blessings from the ancestors underneath.

According to Chinese traditional thinking, once someone has passed away, it is believed that his/her body should be laid underground to rest, and that the person's spirit will live forever in another world. The body will degrade and combine with nature. However, nowadays in Hong Kong, due to the insufficient supply of land for graves, most of the dead are cremated and their ashes are placed into the niches of columbariums.
According to research, the demand for niches is large and is increasing every year.
More columbariums need to be built to meet the demand. However, this is not a sustainable solution due to the insufficient supply of land in Hong Kong and because residents object to the building of columbariums near their homes.

Invisible Niche:
A sustainable solution for the increasing demand for niches

"Invisible Niche" is a new concept for a cemetery. The cremated ashes of the deceased would be put into a degradable urn and buried underground. After the ashes have totally degraded, the land would be ready to receive more ashes. The concept offers several advantages: The space for cremated ashes is unlimited. Also, the ashes will enrich the environment. Furthermore, and crucially, the ashes would be buried underground in accordance with the traditional Chinese belief towards death: "Returning to the earth and being at peace." In Chinese: 「入土爲安」.
Individual epitaphs would be set up inside the cemetery for every deceased person. The relatives of the deceased could conduct funeral rites in front of the epitaphs. After ten years of burial the individual epitaphs would be removed in a ritual ceremony, and the name of the deceased carved onto a monument in the cemetery, which is a sign of honor and eternity. The rite is to pay the highest respect to the ancestors. With this rite, we also hope to lessen the sorrow of the people and lead them to a more positive way towards the leaving of their family members or friends. To promote a more positive attitude towards death is another mission of the cemetery. Besides the comfortable green environment, "Star House" will be an important part of achieving this mission. It is a place to exhibit information on the dead who have made great contributions to Hong Kong.

Figure 4



places and worship there. This is another reason why the number of cemeteries and columbaria lacking maintenance has increased, as indicated at the beginning of this paper. Since the government finds it difficult to trace the owners and lessees of the sites, and yet cannot neglect the need to maintain them, the government finally will be left with the burden. In addition, the proposed concept of the rite does not neglect the action of paying the highest respect to the deceased ancestors. We thereby hope to lessen the sorrow of the surviving relatives, and lead them to a more positive way of taking leave of their family members and friends.

Figure 5

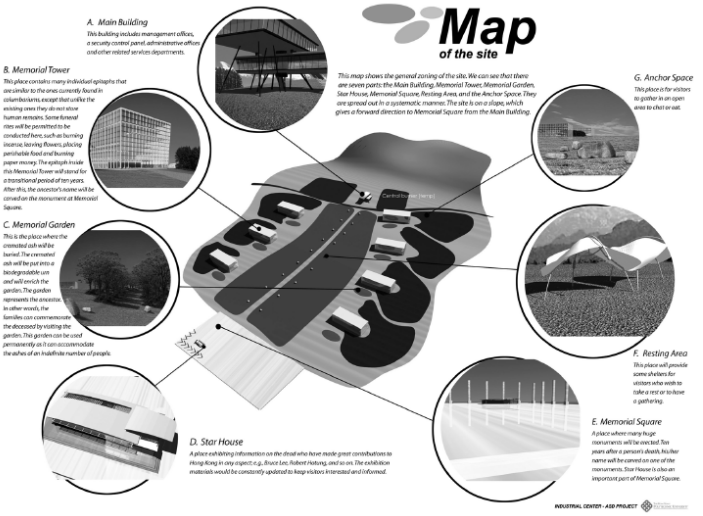
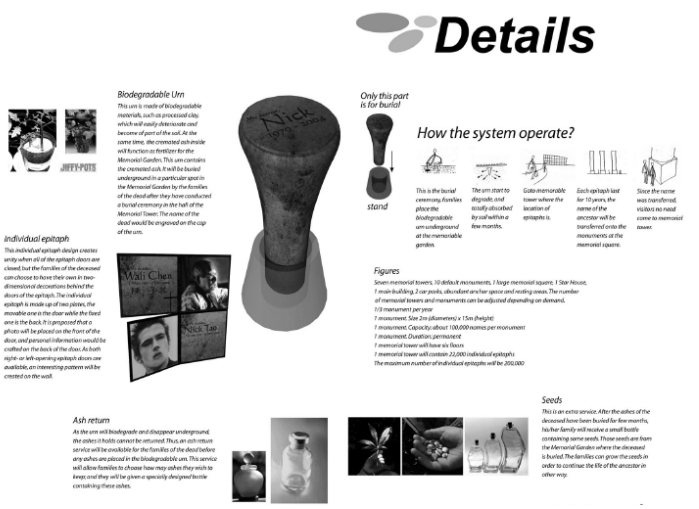


Figure 6



(Re)considering the Cultural and Social Factors in Design: Possibilities and Difficulties

As the funeral services providers and government officials that were interviewed observed, the concept of the *Invisible Niche* respects Chinese traditions and cultures. It is important and innovative in its sustainability and, in particular, is suitable for urban life in densely populated cities—cities that hunger for land. However, when we asked whether the concept could be implemented, the feedback was quite discouraging.

The funeral service providers pointed out that the initial cost to a funeral service provider to implement the concept is very high. The major reason is the cost of land. They indicated that they are businessmen. If the government can subsidize the cost of land and

provide clear directions and a preference for the change, they will consider implementing the new concept. The main point they made was that the government needs to take the first step.

As for the government officials, they agreed with the funeral services providers that the proposal is a breakthrough in the sustainability of the land used for burial purposes. However, as they also pointed out, the current available lands still seem able to serve the needs of Hong Kong people (at least for now). When asked whether they have considered traditional Chinese (that is, Cantonese) cultural preferences such as "Returning to the earth and being at peace," they did not respond to the question directly. Instead, they agreed that, on the one hand, satisfying such preferences is quite important. However, they emphasized that, on the other hand, the government has spent several decades convincing Hong Kong people to use the cremation method. The method still seems quite applicable. At this stage, they do not have any long-term plans to make changes. The government also is not under great pressure or feels an urgent need to make any changes. At least, at this moment, not so many people have voiced their preferences to the degree that the government has to put the matter up for discussion and consideration, although they agreed that there is a long waiting list for gravesite applications.

In fact, when we review the general practice of the government, such a response is not strange. First of all, most policies, plans, and designs always lack a long-term view, especially when the matter under consideration is difficult to quantify. And the policies, plans, and designs regarding public matters often are conceived of in a piecemeal fashion, simply to solve immediate problems.

Today, we quantify everything. However, we seldom consider what goes into the quality of life. Harvey and Raban criticize the modernist and rationalist idea of focusing only on large-scale, metropolitan-wide, technologically rational, and efficient urban plans, but of seldom considering traditions, local histories, individual wants, needs, and fancies.[4] In short, when we look around our city, we are seeing an unbalanced trend in which current designs aim at a high degree of (superficial) usability, but seldom consider social, cultural, and ideological satisfaction.[5] In our current rational, functional, and developmental society, policymakers and designers seldom give serious consideration to simple but fundamental questions of everyday life if these questions and their answers are not easy to quantify.

The most unfortunate thing is that we are forced by the supposedly better or improved designs to accept something that goes against our original and fundamental (traditional and cultural) beliefs and preferences. For example, the policy discussed above, regarding "cremation and the placing the cremated ashes into the niches of columbaria" was accepted because people had no other choice. In turn it brings and misleads us to a situation in which we seldom (and seldom think to) ask: Have our initial cultural beliefs and preferences been totally changed? If not, have they been satis-

4 David Harvey, *The Condition of Postmodernity* (Oxford: Blackwell, 1989); Jonathan Raban, *Soft City* (London: Hamilton, 1974); see also Kin Wai Michael Siu, "A De-Historicized City Planning and Design" in Yan Chi Jackie Kwok, ed., *(Re)-Discovering Design: A Critical Consideration of the Hong Kong Culture of Design* (Hong Kong: A Better Tomorrow Workshop, 1997).

5 Patrick W. Jordan and William S. Green, *Human Factors in Product Design: Current Practice and Future Trends* (London: Taylor and Francis, 1999); and Kin Wai Michael Siu, "Chinese Red Packets: Reflecting Changes of Cultures and Relations," *Popular Culture Review* 11:2 (2000): 5–15.

fied? If not, why do we ourselves still accept or force other people to accept such superficial designs?

Clearly, it is too idealistic and impractical to simply maintain "traditional" things without considering new societal needs. Regarding the concept of the*Invisible Niche,* there still may be room for improvement. However, the critical points for the success of the *Invisible Niche* are (a) its serious (re)consideration of the Chinese way of thinking of death: "Being laid underground to rest" and "Returning to the earth and being at peace," and (b) that this design satisfies this kind of thinking. In a broader perspective, the project experience also tells us that considering traditional cultural needs and new societal needs may not necessarily involve a contradictory outcome. If we seriously try, we can achieve a win-win outcome that satisfies both kinds of need. Of course, there still is a long way to go, because our city's policymakers and designers still need time to clarify in their minds what is meant by the "quality" of life, and especially how it relates to the spatial and temporal dimensions of culture.

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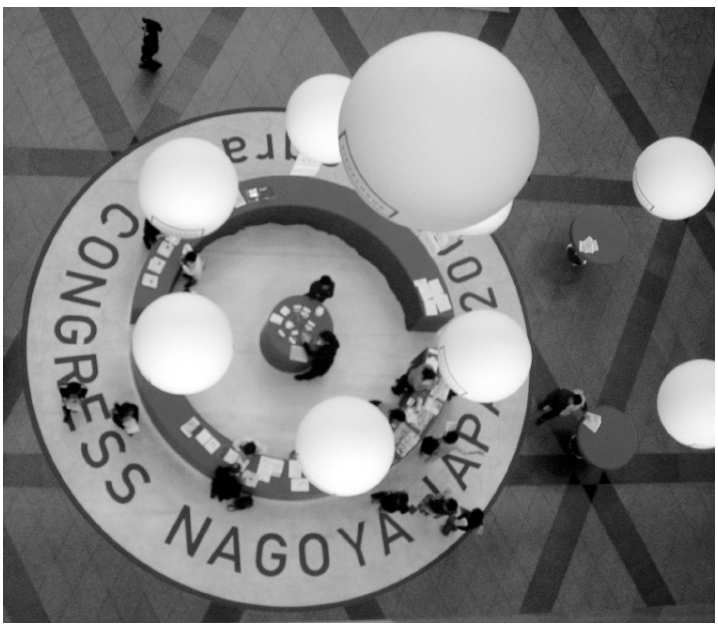
Conference Review

Icograda 2003 Congress Visualogue: A Visual Dialogue Between Designers

Gitte Waldman, Trysh Wahlig, and Robert Zolna

Eighty percent of Japan is covered by mountains. Steep mountains. In traditional painting, they often are depicted rising from a mist, with no visible paths leading up from the base. Representing divine worlds, serving as destinations for pilgrimages, and symbolic of the spiritual journey towards enlightenment, mountains have been important for Shintoism and Buddism since the beginning of Japanese civilization. The practice of meditation, often described in the West as a departure from the physical for a spiritual world, in a sense often is grounded in the physicality of a mountain. Mandalas in India and Japanese "kakejiku" scrolls are used as meditation tools, representing a graphic mapping of the paths up a mountain to enlightenment, and allowing meditators to ascend a mountain without leaving their tatami mat.

For the identity of the Icograda (International Council of Graphic Design Associations) 2003 conference, called "Visualogue" and held October 7–12 in Japan's fourth largest city, Nagoya, a mountain was used as a graphic identity to represent the journey to



Registration, Icograda 2003.
Photo by Gitte Waldman

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the goal of "quality of information," which was this year's theme. An evocative, visual mnemonic steeped in cultural specificity, the graphic identity expressed, and in some ways stood in contrast to, the conference title, rooted as it is in Western languages (the Latin *visus,* or sight, plus the Greek *dialogos,* or "through words"). Organizers defined "Visualogue" as "an index for a new method of dialogue"—a visual dialogue "most appropriate to graphic designers."

By "quality of information," the ideal at the summit of the mountain, the organizers meant not only legibility, but also quality in the sense of tactile, textural, and allusive aspects of design that can subtly color and transform information design into an experience that is at once surprising and deeply affecting. Three paths were inscribed onto the mountain graphic to lead designers on a pilgrimage towards the goal: creating work infused with clarity, creativity, and joy. These three qualities define "quality of information," and formed the subthemes and organizational channels of the presentations. In this age of colocation, lossless duplication, and avatars; it seems fitting that not only are there multiple paths, but that a contemporary designer can conceive of traveling on all three at once and, in fact, may need to do this in order to create compelling, quality work.

In his opening keynote presentation, Richard Saul Wurman championed following the path of clarity. Increasing legibility and understandability of complex information, he stressed, is the ethical responsibility of graphic designers. Wurman grounds his projects in personal needs, identifying information areas that he personally finds confusing and then proceeding to make sense of them for himself and others. For him, helping people bushwhack their way through the thicket of statistics and numbers that without design remain useless, misleading data is a designer's moral necessity. Presenting several spreads of his upcoming book on healthcare in the U.S., he offered a sobering reminder that a lack of clarity about some topics can have deadly consequences. While undeniably advanced along the path of clarity, the absence of the other two paths of quality in his work, most notably creativity, was not lost on the audience.

A few European and American presenters gave soul-searching presentations questioning what lay at the top of the summit; what exactly "quality of information" entails, and whether it is worth striving for, or even if it's the right mountain. In an argument for increasing powerful visual communication that makes use of the visual language artists have developed and taps into personal motives of expression and connection, Stefan Sagmeister reached beyond the notion of client and message to urge graphic designers to find their sense of purpose, and touch their audience by creating an experience beyond the commercial confines of the design world. He talked about his goal of "touching people's hearts" through a presentation that melded graphic design with art practice: one piece in the

spirit of Van Gogh involved using razor blades to slice the message into his flesh. A similarly searching Neville Brody rushed through a slide show of his firm's luscious visual design to spend the greater part of his presentation lamenting the clichéd, trite look of much contemporary graphic design, and the lack of a political effect or moral imperative in his own past work and generally in the field of graphic design at the moment. He predicted that, in the near future, work that is based on following the "rules" of good design, without a point of view from the designer, will be automatically generated by software, and not considered "design" at all. Designers, as interpreters and thinkers, have more to offer: "We could have been artists," he said. "We chose to go into design because there is a greater audience we can reach in this medium."

To the Western designer's explicit questions: "Why are we on this journey?" and "What is at the summit?" the Japanese seemed to answer "It's about the journey." Featured Japanese talks focused on the paths of creativity, and humor/joy, with audiences packing the halls for feasts of color and form from Eiko Ishioka, Naoto Fukasawa, Masaki Fujihata, and other celebrated Japanese graphic and media designers. Through their choice of presenters, it was apparent that, for the Japanese organizers, information design is not segmented by application or material into the traditional divisions based on choice of medium: presentations reflected the crosscurrents of three-dimensional design, space design, print design, motion, and sound. Part of creating quality information is finding the right medium, and the right collaborators to convey the message: understanding Marshall McLuhan's maxim that "the medium is the message" implies a responsibility to not let the medium take over, but to work out of the communication needs of the message in carefully and thoughtfully choosing the best and most effective medium with which to deliver it. Eiko Ishioka, a featured designer, moves easily from graphic to set to costume design, describing her role as an "actress" who is calling forth emotion with her stage costumes, sets, videos, films, and stage sets. In contrast to Ishioka's work, informed by the context of stage and film, Naoto Fukasawa, another featured presenter who comes from industrial design, spoke of his medium: products that communicate as quiet companions in our everyday lives. Fukasawa gave a presentation about gaining inspiration by quietly looking around him to appreciate and find the often overlooked quality and texture that can inspire product design, or "staring blankly" as he travels through Tokyo. He described good design as one that "dissolves" into behavior. For Fukasawa, great design—graphic, spatial, or product—is about supporting, celebrating people's behavior, and invisibly becoming part of their environment.

The "visual dialogue" brought together design from such disparate fields to examine how the paths to the elusive quality of information are defined, what paths might be more natural for different design fields and cultures, and some different values and

attitudes towards what lies at the summit—what "quality of information" really means. As mentioned earlier, the conference title "Visualogue" is a combination of the words "visual" and "dialogue." In addition to being about the intercultural and inter-media exchange of ideas between designers, some presentations pointed to the give and take between designer and audience as a dialogue, expanding the notion of communication to include the active participation of the viewer in their cultural, social, and gender-specific contexts. Katherine McCoy, speaking at the second day's panel discussion, presented examples of communication messages that were tailored for specific audiences by using culturally understood codes and graphic conventions local to that group. One example was a condom advertisement meant for a relatively small audience in inner cities: in a message that would be lost on most of the mainstream population, the package had the police radio three-letter code for "death" printed on the packaging as a reminder of the consequences of not using one.

Humorous presentations were an area where the questions of audience dialogue and the role that cultural differences play in communication were highlighted most. As audiences sat with headsets on, listening to simultaneous translation of presentations with jokes, it became clear that great humor, rooted as it is in the play with audience expectations and norms, often requires a familiarity with those customs and traditions in order to be effective. Seymour Chwast showcased thirty years of his work in illustration to the delight of the Americans in the audience, exhibiting work that played with oppositions of content and graphic conventions. In one particularly poignant series, he used a decorative, pre-civil rights era illustration style to depict scenes charged with racism and sexism. For full effect on the viewer, his biting commentary on American culture and politics required a deep understanding of American social history and the associations of historical graphic conventions. Likewise, the impact of Japanese humor probably was lost on many of the Western audience members. In what seemed at first a quaint cultural marker, Shigeo Fukuda placed a small bonsai on a table near him during his presentation. In a surprising move at the end of his presentation, he ripped off a branch, put it in his mouth, and tore it in two with his teeth. Anyone who has pruned and cared for bonsai over the years, or who knows the culture of respect and care the long-lived plants are given in Japanese homes, was shocked at this gesture. In a second surprise, he offered branches to the audience, telling us it was a candy plant.

With extensive local and national government funding and involvement, the conference marked Japan's and host city Nagoya's place in the international design community, and showcased design sensibilities that are local to Japan. The conference environment and materials left no question about which culture lay at the base camp. Upon arrival, each conference attendee received a beautifully

designed, bilingual, three-ring-bound conference guide tabbed with information on the conference and concurrent education symposium and public forums. Marked on the front with the graphic elements of the Japanese Hinomaru flag, the simple two-color motif red circle on white was carried through all the environment, print, and interactive design of the event. Infused with a particularly Japanese attention towards detail and texture (the inside matte paper contrasted sensually with the high-gloss section dividers and cover), the conference designers brought a sense of delight to the practical aspects of getting one's bearings, meeting people, finding talks, and even eating meals. From luscious die-cut maps (included in the conference package to specially printed, playfully worded chopstick packages provided with the lunches of Japanese onigiri, no detail was ignored. Even the planning of staff interactions had a particularly Japanese sensibility: during busy times, conference workers were posted at escalators as human signs to direct attendees.

With all of the expression of cultural specificity and boundary crossing of design cultures through graphic, media, and environment design, one line that was firmly preserved was that between traditional and upstart design; the "high" and "low." Although widely featured in America bookstores and museum stores, new art and design inspired by Japanese pop culture including cartoon characters, manga, and anime wasn't represented in any of the conference presentations. Much of the Japanese audience consisted of students, who had traveled from around the country and been given a considerable entrance fee discount to attend. The contrast of young people both at the conference and in Nagoya, with their buttons, t-shirts, and bags, highlighted the absence of this vernacular, youthful design.

Nowhere was the contrast more apparent than in the official conference posters. The exquisite set of posters, designed by Japanese members of JAGDA (the Japan Graphic Designers Association, Inc.), depicted Japanese symbols of peace, unity, and longevity. The look and feel was in keeping with the sensibility of the traditional Japanese scrolls and screens in terms of craftsmanship and beauty. Although featured on the Website in advance of the congress, we found only one set of posters hanging at the conference: they were in one of the lecture halls, next to the exit, in a corner. They were easy to miss, which I had, until one of our group pointed to where they hung and expressed an interest in purchasing a set. Trysh and Gitte asked the organizers, searched the booths of books for sale, and the "poster" exhibition downstairs (which consisted mostly of paper and printer vendors hawking wares); but no one had any idea of how we might get our hands on a set. Somehow, despite being specifically commissioned for the event, they were unavailable, and no one outside of our group seemed to notice or care. Commenting on the masses of Japanese students, with their printed bags and T-shirts, someone in our group said, "The T-shirt is the new Poster."

Just as ex-pats living abroad often decorate their homes with a nationalistic fervor they would never allow themselves in the context of their home country, culture can become about historic clichés, defined as only that which has been validated by tradition: qualities that can be at odds with creating information design that is surprising and touching, expressive of personal creative interpretations and responses to the flow of contemporary events, and speculations about what could be. Cultural influences are broadening to include design from around the world, making the notion of work that is simultaneously culturally specific, full of allusions, humor, texture, and reference, and yet also contemporary and increasingly problematic. The fact that the conference posters had gone unnoticed by the Japanese students attending in favor of forms that spoke more directly to their experience in the world left us thinking that the challenge and contradiction of information design is that it be intercultural, yet still possessing a "quality-rich" dialogue infused with humor and capable of touching people's hearts.