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Reflection

Why a Culture of Design in France Never Took Off

Stéphane Laurent. Why a Culture of Design in France Never Took Off. *Design Issues.* Volume 28, Number 2 (Spring 2012) pp. 72–77.

Introduction

Design is constantly changing; hence, attempts to construct design theories are challenging. Nonetheless, there is a long tradition of reflection on the act of designing that considers the nature of design knowledge and how it is applied. Among the first to write about this subject were Nigel Cross and Donald Schön, both of whose work has continued to be a touchstone for further reflection. In 1992, Adrian Snodgrass and Richard Coyne introduced in this journal the idea of design as a hermeneutic practice, characterizing it as an open and interpretive activity. Now twenty years later, Marcus Jahnke responds to Coyne and Snodgrass' earlier article by addressing the hermeneutic theory of French philosopher Paul Ricoeur, which he argues will strengthen the hermeneutic perspective on design practice by shifting the emphasis from interpreting what already exists to what he calls "the poetic practice of creating new meaning." Schön's seminal book *The Reflective Practitioner* remains a touchstone for Jahnke, and he seeks to amplify Schön's studies of designing by introducing Ricoeur's notion of the hermeneutic spiral, which he believes will help researchers to understand how designers process the many complex elements that make up an open design project.

Claudia Mareis' article is also concerned with design philosophy, especially the concept of tacit knowledge that was introduced by Michael Polanyi, the Hungarian-British scientist, economist, and philosopher. Besides Polanyi, Donald Schön is a point of reference as well as is Pierre Bourdieu and his concept of *habitus*. Mareis acknowledges the inclusion of tacit knowledge in many theories of designing but argues that it is not a natural phenomenon; rather, it arises from a sociocultural context and new methods of design research are required to understand it.

Whereas Jahnke and Mareis consider design from the point of view of theory, Anthony Crabbe is concerned with how design operates in a specific milieu, the developing world. Through three case studies, he shows that design situations in developing countries are multifaceted and argues that successful interventions require the careful consideration of many factors that are not necessarily obvious. Tension may arise between the well-meaning intentions of aid agencies and the disadvantaged people in whose communities they seek to be effective. Crabbe highlights three different kinds of design projects and shows how they relate to the principles of the Natural Step, a strategy for successful aid assistance.

Crabbe addresses the issue of how tensions can arise between the local and the global around specific projects, while Christine Guth considers the globalization through the circulation of a singular image, the print called "Under the Wave of Kanagawa" by the Japanese *ukiyo-e* printmaker, Hokusai. Guth demonstrates how the wave image takes on multiple meanings as it moves around the world. Its compelling visual qualities, she states, have been readily adapted to different contexts from museums to companies that make skateboards and sneakers. The point about globalization that both Crabbe and Guth address in complimentary ways is that there may be varied responses to a situation or a commodity. In their own ways, both authors contribute to the ongoing discussion of how different groups of people produce meaning in a globalized world.

Elizabeth Guffy's article on Jim Crow signs in the segregated South introduces a previously hidden yet highly significant topic to design history—the systems of public signs that marked the segregated spaces, whether bus waiting rooms, drinking fountains, or toilets, for whites and blacks. Today we think of public signage as universal and assume that everyone has the same rights to make use of public space; but while the American South remained segregated for years after the Emancipation Proclamation, signs designating segregated public spaces denoted entirely separate wayfinding strategies whose misunderstanding might have dire consequences.

Design history is addressed in different ways by several other authors in this issue. Stéphane Laurent, a French design historian, laments the slow development of awareness in France of design as a subject of public discourse. He cites as one cause, the long-standing distinction between major and minor arts, concluding that design in France still has to overcome the historic stigma of belonging to the latter category.

In her review of the most recent Design History Society conference in Barcelona, where the theme was "Design Activism and Social Change," Grace Lees-Maffei reflects on the difference between design activism and design reform. She reviews a number of the papers that were presented at the conference as well as Henk Oosterling's keynote speech and seminal texts by Alastair Fuad-Luke and Tony Fry in order to consider the key question of how activism and reform differ. In her conclusion, she emphasizes the way that design has changed, even in the past twenty years, noting that today many practitioners as well as design historians and theorists feel compelled to embrace design activism as a way to combat the overwhelming problems that we all face.

Jonathan Mekinda's review of Katerina Ruedi Ray's *Bauhaus Dream-House* continues the engagement with history by showing how the author has adopted a revisionist approach to Bauhaus studies by focusing on the school as an institution rather than on the

things that were made there. By coincidence, Bertrand Goldberg, whose exhibition Maura Lucking reviews here, was one of the few American students to study at the Bauhaus.

Returning to the opening theme of this editorial, the idea that design is constantly changing, Carl DiSalvo reviews an edited volume, *Digital Blur: Creative Practices at the Boundaries of Architecture, Design and Art* that brings together papers from a symposium on interdisciplinarity that was held in Edinburgh. Presentations by practitioners are combined with several essays that both document disciplinary practice and argue that disciplinarity should end. Rebecca Dalvesco points to new directions in design in her review of the Hyperlinks exhibition at the Art Institute of Chicago, in which the exploration of transdisciplinary design methodologies was a central theme.

What the range of articles and reviews in this issue of the journal shows is that design reflection moves simultaneously in various directions, seeking on the one hand to nail down principles that might be widely relevant and on the other to account for the constantly changing configurations of activity that mirror a world that itself is in a constant state of flux.

Bruce Brown
Richard Buchanan
Dennis Doordan
Victor Margolin

Bernd Meurer, 1935-2011

Bernd Meurer passed away December 17, 2011. He was the most inspiring colleague I met, making me think in new terms, in new categories, in new ways—always broader, always deeper. He had an exceptional ability to see the large patterns behind the smallest events. He would not talk about transportation, but about public mobility; not about architecture, but about space; not about the design of things, but about the design of tasks as the designer's central problem. He was an exceptional combination of a philosopher—current with the most sophisticated European thinkers of the last 50 years—and a consummated craftsman, loving and knowing a wide range of materials and processes, and the technologies that go with them. Insight and tenacity took him to work tirelessly during many years and to create the Laboratorium der Zivilisation, from which he launched intriguing and inspiring events, amongst them *The City as Process (Die Prozessuale Stadt)*, *The Future of Space (Die Zukunft des Raums)* and *The Revision of Use (Revision des Gebrauchs)*, in which I was lucky to take part. This was my first professional contact with Bernd, after a few informal encounters where we found out that we could really understand each other. I owe to Maldonado the first contact with Bernd, who after getting in touch with me in the early 1990s thought he and I had many things to share.

Formed at the Design School of Ulm, Meurer grew well beyond it, not inheriting from Tomás Maldonado his responses to design problems, but the critical, vigilant and well-informed attitude, always learning, always growing, always challenging himself and his own assertions.

For his retirement party from the Design School Darmstadt, he organized a small event, that he called *"The Art of Doubt*." He confessed to me that he had failed, not really being able to put doubt at the center of the table for the talks of the invited speakers. He himself, instead, was not afraid of his own doubts and always saw them, in final analysis, as strengths, as possibilities to move beyond existing certainties that can become barriers or filters that prevent development. In that way he saw good architecture. Referring to three buildings which he discussed in my edited book *Design and the Social Sciences*, he wrote: "The three examples show how former certainties have been replaced by what Ulrich Beck and Anthony Giddens have described as self-produced uncertainty, and how doubts—or shall I say freedoms—may become form." And in his book, *The Future of Space*, he wrote: "The space which we experience as living space is space of action, orientation and communication. The 'Future of Space' means the design of space, a process which takes place in the respective present and is never completed."

I will miss him endlessly. He helped me grow as very few people had. It is a privilege to have been close to him. He deserves the last words in this brief homage to him and his impressive mind. He wrote in *Design Issues* 17, No. 1: "We experience the world we live in through action, and through action we change it. Change implies creation or design… Action implies grasping, doubting, negotiating, deciding, altering, and creating. Doubt is a prerequisite for creativity… Design must be liberated from the one-dimensional mode of thought that focuses on solving tasks, and instead must be seen as the constant creation of new tasks."

Jorge Frascara
Padova, December 2011
Professor Emeritus
University of Alberta, Canada

Bernd Meurer was Professor of Design at the Fachhochschule Darmstadt (Faculty of Design), as well as founder and Head of the Laboratorium der Zivilisation - Akademie Deutscher Werkbund.

From 1960 to 1968, he was Research Architect and Assistant Professor at the Hochschule für Gestaltung Ulm. In 1965-66, he was Visiting Assistant Professor at the Research and Graduate Center of the Texas A & M University's School of Architecture in the USA. Thereafter, he worked building and heading the Holzapfel Projekt Institut (Freudenstadt) and the Projekt Co' (Ulm). From 1973 until his retirement, he was Professor of Design at the Fachhochschule Darmstadt. From 1982 to 1986, he taught at the Faculty of Humanities and Philosophy of Philipps Universität Marburg. In 1991 and 1992, he was Visiting Professor at the State University of California at San Jose. In 1994, he was Visiting Professor at Musashino University in Tokyo. He was a member of the Deutscher Werkbund, of the City Development Council of Darmstadt and of the Scientific Committe of the Istituto Europeo di Design at Cagliari, Italy.

He published, among others, the following books: *Kritik der Alltagskultur* (A Critique of Everyday's Culture, with Hartmut Vincon), 1979; *Industrielle Aesthetik* (Industrial Aesthetics, with Hartmut Vincon), 1983; *Der Rechte Winkel von Ulm* (The Right Angle of Ulm), 1987; and *Die Zukunft des Raums*/*The Future of Space*, 1994. Some of his latest publications are: "The Birth of Contemporary Design," in *History of Industrial Design*, Milano, 1991; "Modernité - l'école d'Ulm - la création réflexive," in *Design, miroir du siècle*, Paris, 1993; "Il traguardo" in *Laboratorium der Zivilisation*, Milano, 1993; The Transformation of Design, in *User-Centred Graphic Design*, London, 1997; and Social Sciences and Design Innovation, in *Design and the Social Sciences, Making Connections*, London, 2002.

Three Strategies for Sustainable Design in the Developing World

Anthony Crabbe

Introduction

The difference between contemporary and past views of "sustainability" is that the term currently references an immense project, first internationalized in the early 1980s through the United Nations leadership of a World Commission on Environment and Development. The commission's 1987 Brundtland Report, *Our Common Future*, applied the notion of sustainability to all of the following: the international economy, global population, food security, species and ecosystems, energy, industry, urbanism, oceans and space, and peace and security.[1] Note that this understanding of sustainability subsumes even those notions of natural and human "ecology" that designers like Victor Papanek started to urge their colleagues to address in the early 1970s. Also interesting is that the term "sustainability," is never used in Papanek's *Design for the Real World*,[2] and it is mentioned only eight times en passant in William McDonough's 2002 environmental design tract, *From Cradle to Cradle*.[3] The larger scope of the UN definition then makes it hard to think of "sustainable" design as anything other than one component of a holistic plan for global survival that involves a host of specialized disciplines beyond design.

Viewed in this context, it is hard to identify a short list of criteria for sustainable practices in any discipline, particularly in a "cross-disciplinary" one such as design. Nevertheless, this paper takes a modest first step by reviewing a small subset of sustainable design-and-make projects that are part of the global project of sustainability, in order to identify and comprehend their strategies, and where possible, to evaluate the efficacy of these strategies from the grand perspective of sustainable development. The only set of overarching sustainability metrics I consider in this review is the "Natural Step," proposed by K-H Robèrt et al.,[4] which comprises four measures they acknowledge as open to refinement and not directly applicable to every issue raised in the Brundtland Report.[5] Otherwise, this review is not consciously predicated upon theoretical notions of either design or sustainability. I have selected three case studies as vehicles for what might be termed a phenomenological investigation of differing approaches to "sustainable" design practice.

1 Gro H. Brundtland, chairman, Report of the World Commission on Environment and Development: Our Common Future (UN, 1987), http://www.un-documents.net/wced-ocf.htm (accessed January 9, 2011).

2 Victor Papanek, *Design for the Real World: Human Ecology and Social Change* (New York: Pantheon Books, 1971).

3 William McDonough and Michael Braungart, *From Cradle to Cradle* (New York: Northpoint Press, 2002).

4 The Natural Step Foundation, http://www.thenaturalstep.org/the-system-conditions (accessed January 8, 2011).

5 John Holmberg, Ulrika Lundqvist, Karl-Henrik Robèrt, and Mathis Wackernagel, "The Ecological Footprint from a Systems Perspective of Sustainability," *International Journal of Sustainable Development and World Ecology* 6 (1999), 17-33.

Beyond the 1980s, at a time when 2% of the world's population now owns 50% of its wealth,[6] and half of the world's individuals live on less than US$2 a day,[7] there are tens of thousands of organizations in the developed world charitably offering their design and development expertise to help neighbors in the developing world create products and systems for providing basic needs such as water, fuel and housing.[8] In this context, the term "sustainable" applies not only to responsible and effective management of resources, but also to the preservation of life. Non-governmental organizations (NGOs), charities, and social businesses currently follow a number of sustainable design strategies, including the following three:

1. Charitable strategies: Using developed world know-how to design products and systems that can be charitably distributed in developing world communities.
2. Networked strategies: Enabling developing world communities to work collaboratively with international networks in designing and developing their own products and systems for both personal use and communal income generation.
3. Social business strategies: Harnessing artisanal design-and-make skills to create self-sustaining social businesses in developing world communities that can sell their products in both local and export markets.

Strategy 1 is the simplest and quickest way to deliver products and systems to countries without the manufacturing or market infrastructure to introduce, for example, medicines, machinery, or telecommunications and IT products and services—items that could not be introduced as a result of following either strategy 2 or strategy 3. However, unlike strategies 2 and 3, strategy 1 is sustainable only as long as developed world communities remain supportive of charitable causes. Both donors and recipients alike are concerned that strategy 1 runs the risk of sustaining a culture of both financial and political dependency in developing world communities.[9] Strategies 2 and 3 may then be seen as endeavors to improve the capacity of recipients to manage their basic needs independently, and even profitably. In this regard, they score better under most current sustainability metrics—for example, under the "fourth principle" of the Natural Step, a set of principles, each derived from four proposed "system conditions" of nature, shown in Table 1.

Infrastructure and investment are the most important factors determining which of strategies 1, 2, or 3 is the most appropriate to local need. For example, in India alone, there are between 1.5 and 3 million NGOs operating mostly on life-sustaining projects.[10] However, the booming Indian economy is now a major exporter of the machinery used for water, sanitation, fuel, and building

6 David Brown, "Richest tenth own 85% of world's assets," *Sunday Times*, December 6, 2006.

7 World Bank, 2008, http://web.worldbank.org/wbsite/external/topics/extpoverty/0,,contentMDK:21517391~menuPK:336998~pagePK:64020865~piPK:149114~theSitePK:336992,00.html (accessed February 11, 2011).

8 World Bank, NGO Research Guide, 2006, http://library.duke.edu/research/subject/guides/ngo_guide/igo_ngo_coop/ngo_wb.html (accessed February 10, 2011).

9 R. L. Stirrat and Heiko Henkel, "The Development Gift: The Problem of Reciprocity in the NGO World," *Annals of the American Academy of Political and Social Science* 554 (1997), 66-80.

10 IndianNGOs.com, http://www.westgodavari.org/NGO/WHATISNGO.asp (accessed February 11, 2011).

Table 1 | Natural Step System Conditions and Principles of Sustainability

The Four System Conditions *In a sustainable society, nature is not subjected to systematically increasing:*	**Reworded as The Four Principles of Sustainability** *To become a sustainable society we must:*
1. concentrations of substances extracted from the earth's crust	**1.** eliminate our contribution to the progressive buildup of substances extracted from the Earth's crust (for example, heavy metals and fossil fuels)
2. concentrations of substances produced by society	**2.** eliminate our contribution to the progressive buildup of chemicals and compounds produced by society (for example, dioxins, PCBs, and DDT)
3. degradation by physical means	**3.** eliminate our contribution to the progressive physical degradation and destruction of nature and natural processes (for example, over harvesting forests and paving over critical wildlife habitat)
4. and, in that society, people are not subject to conditions that systemically undermine their capacity to meet their needs	**4.** eliminate our contribution to conditions that undermine people's capacity to meet their basic human needs (for example, unsafe working conditions and not enough pay to live on).

Figure 1
Hippo Water Roller.
© Hippo Water Roller Project, Fourways, 2055, South Africa (This image is the product of a previous relationship with Hippo Water International, with which the Hippo Water Roller Project is no longer associated).

industries in the developing world. By contrast, troubled states like Southern Sudan or Timor-Leste have scarcely any industrial infrastructure, or a collapsed one. As the world's tenth largest economy,[11] India is then far better placed than many other nations to independently address sustainability problems, and the kind of assistance that communities there may require is likely to be very different from that required in less technologically developed and politically stable nations. Designers, then, must be aware of both the political and economic context of the area for which they are designing—factors that are not perhaps as clear in principle 4 of the Natural Step metrics as in other metrics or agency views.[12] The following sections examine the detail of each of the three identified design strategies (i.e., charitable, networked, and social business) by reference to case studies featuring, respectively, Imvubu Projects, the Legacy Foundation, and Traidcraft.

Case Study 1: Charitable Design

The Hippo Roller is a water collecting device designed and manufactured in South Africa in 1992 and manufactured and distributed since 1998 by a local social enterprise, Imvubu Projects.[13] As indicated in Figure 1, the design solution is to adapt a 90-liter water barrel into a roller that can be pushed to a distant water supply, such as a stream, into which it may be immersed and filled. The barrel cap is then screwed back on and the barrel is pushed or hauled home using the rigid hooped handle fixed to the barrel axis—an operation that requires far less mechanical work than carrying filled water containers, and enables the carrier to transport five times the volume of water on each trip. Around 30,000 of these cleverly designed products have been distributed to date, including exports to other sub-Saharan African nations lacking the technology base found in South Africa, which would enable them to rotationally mold their own rollers. Since the manufacturing cost of the Hippo is around $80, it is unaffordable even to most users in South

11 Wikipedia, http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal) (accessed February 12, 2011).

12 Volker Beckmann and Martina Padmanabhan, "Observability, Measurability, and Data Availability" in *Institutions and Sustainability: Political Economy of Agriculture and the Environment - Essays in Honour of Konrad Hagedorn, Beckmann and Padmanabhan*, eds,. (Berlin: Springer, 2009), 353-57.

13 Janine Erasmus, "Tapping into Ingenuity," MediaClubSouthAfrica.com, July 1, 2008, http://www.mediaclubsouthafrica.com/index.php?option=com_content&view=article&id=549%3Atapping-into-ingenuity010708&catid=42%3Aland_news&Itemid=51 (accessed May 15, 2011).

Africa, and so its distribution is almost entirely dependent upon foreign gift aid and sponsorship, organized principally through the Africa Foundation and UNICEF. The efforts of these two organizations have recently been supported by an American-based NGO, Hippo Water International, which has helped sponsor a redesign carried out by a San Francisco sustainable design consultancy, Project H. The new design splits the original unitary rotomolded barrel into two parts to allow nested stacking during transport.[14]

On the face of it, then, the Hippo is an outstandingly successful, locally developed product—a simple, robust solution that helps desperately poor people meet an essential survival requirement. However, any fuller measure of its sustainability would reveal difficulties, of which Imvubu appears well aware: First, it is a product that can be neither manufactured nor afforded by its users, who are accordingly made dependent on charity coming from other countries and organizations, which do not have a neutral view about the exchange rates for gift aid, as Stirrat and Henkel point out.[15] Second, if Hippo is distributed in areas where local water supplies can sustain only limited populations, its greatly increased efficiency may contribute to the over-exploitation of those supplies. Water management is a global issue not sufficiently transparent in the third principle of the Natural Step, because the gradual redistribution of water around the planet is a natural process, irrespective of human contributions. Freshwater depletion is a problem serious enough to threaten the well-being of every nation on earth, evidenced by population migrations and conflicts over the sharing of common water resources, such as those which helped trigger the Six-Day War of 1966 between Israel and its neighbors.[16] Third, it is not clear what recycling system is in place to manage Hippo Rollers at the end of their lives.

From this case study, designers might take away the following lessons:

1. They must judge whether a design solution like the Hippo is worthwhile, not just on the basis of the short-term need it addresses, but also on whether it is sustainable in the long term. On the first basis alone, few could doubt Hippo is a very worthwhile project. But on the second basis, a design solution that results in long-term dependency on gift aid cannot be the best solution, however pressing the immediate need (as suggested by Principle 4 of the Natural Step system).
2. The designer cannot be too reliant on metrics such as Natural Step if they lack clear measures for complex issues as important as water management.
3. The designer is unlikely to be capable of conducting a prospective assessment of the sustainability of a design proposal without the assistance and collaboration of

14 R. L. Stirrat and Heiko Henkel, "The Development Gift: The Problem of Reciprocity in the NGO World," *Annals of the American Academy of Political and Social Science* 554 (1997): 66-80.

15 Project H Report, http://projecthdesign.org/projects/hipporoller.html (accessed May 2, 2011).

16 G. H. Jansen, "The Problem of the Jordan Waters," *World Today* 20, no.2 (1964): 60-63, http://www.jstor.org/pss/40393582 (accessed April 24, 2011).

Figure 2
Legacy lever press in use.
© Legacy Foundation, Ashland, OR 97520, U.S.A.

others more expert in the field. This reality emphasizes something already well understood in design circles: The issue of sustainability increasingly demands that design teams be multi-disciplinary,[17] and that they be capable both of prospectively identifying sustainability issues and of continuing to monitor the environmental impact of their chosen solutions.

Case Study 2: Creating Local Design-and-Make Networks

The collection of firewood places enormous physical burdens on impoverished women (the principal labor force worldwide), drawing them farther away from their dependents for longer periods. It degrades the principal local source of hunted and gathered food, leads to mass soil erosion and local climate change, and if unchecked over wide areas, threatens the planetary carbon cycle. The U.S.-based Legacy Foundation is dedicated to alleviating this problem by promoting the manufacture and use of fuel briquettes made close to home from local agricultural and urban wastes. Legacy recognizes that the solutions offered by their system are restricted to the preservation of local forestry and the easing of labor demands on wood gatherers. The briquette system does not alleviate the problem of carbon emissions from biofuel combustion.

Unlike Imvubu Projects, Legacy has a philosophy aimed at involving locals in every aspect of their solution—from the design and build to selling surplus briquettes as an additional source of income. The foundation encourages its beneficiaries to take charge of every aspect of the system, using the Internet as its principle means of global communication, not only to disseminate information, but also to recruit volunteers and instructors. The Legacy website, www.legacyfound.org, not only sells modestly priced instruction manuals in pdf form, but also publishes details of local modifications for the appraisal of members across the world. Where these modifications evolve into proven new designs, they are added to the stock of instruction manuals; thus, any innovating user can emerge as a designer and guide within the global user community. In this regard, the Legacy approach may be seen to "score" much better than the Hippo case in terms of Natural Step 4, which is about improving people's ability to support themselves.

However, many of the products showcased in the Legacy literature appear far less cleverly designed than the Hippo Roller—particularly its main briquette press, which is a lever-type made from wooden planks illustrated in Figure 2. The press design is intended to be one that could be made in any community that has rudimentary carpentry resources, thus allowing for independence from any external agency. The briquette mold tool comprises a wooden plunger that is forced by the lever into a length of plastic waste pipe that has holes drilled in to vent liquids during the pressing process. The design allows sufficient plunger travel to

17 *Multi-Disciplinary Design Education in the UK: Report and Recommendations from the Multi-Disciplinary Design Network* (London: Design Council, 2010), 16-18; http://www.designcouncil.org.uk/Documents/Documents/OurWork/MDnetwork/MDNetwork_FinalReport.pdf (accessed September 4, 2011).

make with each pressing a moist biomass briquette of around 20 x 3.5cm, with a cured density in the range of 0.2 - 0.4g/cc, depending on the mix of grasses, leaves, woodchip and paper to hand. This is a much lower density than the 1-1.3 g/cc achieved by commercial screw or hammering piston machines, which produce briquettes having combustion characteristics similar to wood,[18] and therefore the thermal efficiency of the hand-pressed briquettes is 25-30% lower.[19, 20]

Commercial machines also extrude briquettes continuously, whereas the lever press is a single-action device requiring the biomass to be packed into the pipe tool by hand and then the briquette pushed out by hand before the pipe can be reloaded. Accordingly, the production capacity of the lever press is less than 10% that of a small motorized briquette press.[21] These factors make the highly sustainable Legacy strategy far less attractive than it might be, as I know from personal experience of an on-going project initiated by a local NGO in Timor-Leste. There, the environmental threat is particularly acute because the principal wood fuel is Mangrove root, taken from coastal swamps that are the nurseries for most of the fish caught locally. Barbequing fish and other foods on Mangrove wood fires is endemic to the local culture. Locals believe the wood gives a special flavor to food, and they are expert in judging its burning characteristics. Given the bulky nature of the available agricultural waste and the low compression of the lever presses built for the project, the briquettes needed to contain at least 50% waste paper to perform as indicated by Legacy literature, which meant the mix was better suited to urban than rural use. So although the locals had no difficulty recognizing the benefits of the Legacy system, its optimal performance required close support from the NGO personnel.

Among the suggestions to consolidate this project in Timor-Leste are plans to reformulate it more as a social business, raising capital through a $2 subscription and using it to import cast iron No. 12 meat grinders from China, for a cost of around $15 each for the minimum volume of 200. These screw grinders are extremely robust and simple to maintain, and they can be either hand-cranked or motor-driven via a belt running on the crank wheel. The grinder mechanism operates exactly like a screw-type briquette machine, producing continuous extrusions that can be broken off from the die. Work in the laboratory shows that the grinder is capable of compressing mixed biomass without sawdust or paper to densities close to 1g/cc. The oils expressed from common weeds (e.g., *Jatropha gossipifolia*) are a far more calorific fuel than mangrove wood, and they can be used as binding agents when the mold is heated and the briquettes torrefied, as is done with commercial machines.

18 P. D. Grover and S. K. Mishra, *Biomass Briquetting: Technology and Practices, UN FAO GCP/RAS/154/NET Field Document* 46 (Bangkok: Regional Wood Development Progamme in Asia, 1996), 5-9.

19 Owen McDougal, Seth Eidemiller, and Nick Weires, "Biomass Briquettes: Turning Waste into Energy," *Biomass Magazine*, November 23, 2010, http://biomassmagazine.com/articles/5148/biomass-briquettes-turning-waste-into-energy (accessed April 12, 2011).

20 Joel O. Chaney, Michael J. Clifford and Robin Wilson "An Experimental Study of The Combustion Characteristics of Low-Density Biomass Briquettes," Nottingham University report in *Engineers without Borders*, 2010. www.ewb-uk.org/system/files/Joel+Chaney+report_0.pdf. (accessed April 12, 2011).

21 Jason Dahlman and Charles Forst, "Technologies Demonstrated at Echo: Briquette Presses for Alternative Fuel Uses," *American Society of Farm Managers and Rural Appraisers* (2002), http://www.wcasfmra.org/biogas_docs/Horizonal%20Biogas%20Digester.pdf (accessed April 10, 2011).

Such suggestions could then feed back into the Legacy loop of self-sustained design and development; but, the change of design strategy that involves importing and adapting catering machinery requires an initial voluntary capitalization and a business model markedly different from the system developed around the self-build lever press. The lesson here is that even a relatively small modification to part of the product design supported by a Legacy type of network can significantly alter the nature and ethos of that system and can turn an independent community venture into a business one. Thus, the cost of the product becomes subject to market forces, which can make it less affordable to community members and allow those with more capital to profit at the expense of those who have less.

Case Study 3: Design for Fair Trading

The third case study involves an approach that actually promotes the capitalist business model as a way to alleviate poverty through profitable development of local craft skills. The system is promoted by the U.K. Christian foundation Traidcraft, which started in the 1970s to pioneer what is now well-known as a "Fair Trade" system; it has subsequently spread far beyond craft to include commodity and other forms of production. In terms of its craft products, Traidcraft seeks to enable low-income communities, isolated from the global marketplace but whose members have design-and-make skills, to engage with that market by setting up small private or social businesses. Traidcraft claims its system is sustainable in two ways: First, it creates work cooperatives in low-income communities that are isolated from wealth-creating opportunities. Second, it uses indigenous design-and-make skills not only to make traditional products, but also to transform local waste into secondary products, some having a value as great as the primary one—an approach commonly known today as "upcycling." Examples are bowls made from recycled magazines, and a wash-bag made from discarded tires, illustrated in Figure 3. As Figure 3 also shows, Traidcraft (like Legacy) has harnessed the power of a sophisticated technology—the worldwide web—to publicize and market these technologically unsophisticated products.

Traidcraft has gone a step further in presenting its products to a global consumer market through its web store. This strategy naturally places its products alongside those of other stores (e.g., www.myecostore.co.uk), which sell what appear to be nearly identical types of product. However, a key difference between the Traidcraft web store and say, My Eco Store, is that Traidcraft are able to exploit the narrative potential of a website to clarify exactly which overseas enterprise is designing and making each product, and how any profit from the purchase benefits that enterprise and the community it supports. The Traidcraft web store is also

Figure 3
Traidcraft webstore page for recycled tire (tyre) washbag.
© Traidcraft, Gateshead.

Men's Recycled Tyre Washbag

Code: 67920
Country of Origin: India

Fair Trade Producer Details: Bhopal

Bhopal Rehabilitation Centre was established in 1985 following the Bhopal gas disaster, with the aim of assisting in the rehabilitation of victims. Many local people are still suffering from the long-term after-effects. Traidcraft Exchange funded a number of training programmes at BRC, and introduced the organisation to Traidcraft plc in 2002.

More details

clearly linked to the foundation's site, which gives more information about its aims, its constitution, its trustees, collaborators, and so forth. None of this information is available on the My Eco Store site. Thus visitors might presume its products are still made in similar communities, but be left wondering where the designs originate and whether the craftspeople are, in fact, working under the direction of others more closely connected to the retailer—in other words, wondering whether the craftspeople work just like other outsourced laborers contracted by transnational companies to work in worse conditions and for less pay than would be acceptable in the contractor's home nation.

Although the "ethical" credentials of Traidcraft appear impeccable compared to many of its competitors in this field, it is worth observing that the sustainability pitch used for its up-cycled products is scarcely different. Of course, upcycling is not an activity restricted to developing world artisans; the approach is prevalent among designers of every rank in the developed world as well, from Frank Gehry to design students. An interesting feature of such up-cycled goods is the recurrence of certain design types, such as the recycled tire chair and tables illustrated in Figure 4. Because these designs are not trademarked and originate primarily in India, they are presumably designs appropriated by disparate workshop enterprises all over the subcontinent and exported using standard marketing methods that favor the distributors far more than the designers and makers.

This possibility raises questions about the extent to which the manufacture and marketing of this type of up-cycled product helps meet the founding objective of Traidcraft, which is to close the global poverty gap—or as their website heading says, "to fight poverty through trade." The craft production of up-cycled consumer goods certainly provides employment, which is

Figure 4
Recycled tire (tyre) furniture.
© Kitsch-U-Like, reproduced by IGreenSpot.com.

sustainable as long as the demand remains high in local and fickle international consumer markets. However, whether the skills acquired through such work will enable those workers to graduate from being very low-cost artisans to being better paid ones is not easy to predict. Since any poverty "gap" is bound to be relative measure, the concern remains that if a social business relies on making and marketing products that are made affordable by the very low cost of the labor used to manufacture them, then the design-and-make skills being fostered are still very low-value ones.

For their part, the companies wearing the "eco badge" to promote products like the tire furniture illustrated in Figure 4 might reasonably claim they are doing their bit to sustain the planet's resources. Because tires have been notoriously difficult to recycle, adapting their remarkable mechanical properties to other uses appears a clever design strategy, which was being promoted by environmental groups and government agencies long before the appearance of the kind of furniture illustrated in developed world marketplaces, as evidenced by the 1995 report of Viridis.[22] However, given the findings of such reports about the veritable mountains of scrap tires accumulating as global car ownership increases, the present volume of up-cycled tire goods would have to grow many thousands of times over to keep pace. In addition, the fact that recycled tire furniture can be more expensive than original tires (especially when designed and made by developed world businesses, such as Tread)[23] raises questions about how much value can be added to up-cycled products before the cost of the waste supply is driven up, threatening the primary incentive to up-cycle it.

Accordingly, anyone persuaded to purchase up-cycled goods on environmental grounds may be judged to be making a purchase that is more symbolic of good intentions than it is supportive of

22 A. B. Hird, P. J. Griffiths, and R. A. Smith, "Tyre Waste and Resource Management: A Mass Balance Approach," Report from Viridis to U.K. Dept. of Trade & Industry and other agencies (1995), 7-8, http://www.massbalance.org/downloads/projectfiles/1352-00077.pdf (accessed May 9, 2011).

23 Tread, http://www.notonthehighstreet.com/tread (accessed May 11, 2011).

sustainable design and manufacturing practices. This assumption could present quite a dilemma for Traidcraft. In addition to up-cycled goods, their inventory also includes traditional garments, as well as consumables like cooperatively grown wine, where the ethical endorsement applies to traditional craft production for fair pay in acceptable working conditions. Giving similar endorsement to their range of recycle-reuse products may then create some confusion about whether it is the design of the up-cycled products that is being endorsed, when in fact, the producers appear to have followed rather than led in terms of design and innovation.

Conclusion

Sustainable design is one small part of an immense global project. The three case studies selected reveal that it is difficult to assess differing sustainable design strategies without acknowledging the great complexity of the global project and the current lack of an overarching set of sustainability metrics that meets the needs of all involved. Natural Step has here been used simply as a first step in trying to assess the sustainability of the three design strategies examined. It has proven useful in exposing some of the difficulties inherent in the Imvubu Projects strategy, but it has also exposed shortcomings in its own method of identifying "natural conditions."

The Legacy Foundation approach seems to be the one that best meets sustainability criteria. Yet its inclusive, devolved approach might come with a price: that the isolated poor might not be as well-equipped as external agencies to design and develop the objects and systems that best meet their own immediate needs. Traidcraft has approached this problem from the other end, where citizens of developing countries involve themselves in free market capitalism and use their profits to increase their capacity to design and make products more sophisticated than they would be if their design-and-make ambitions were restricted to using only the most rudimentary technology and skills. However, because of the enormous capital gap between developing and developed manufacturing nations, the ambitions of the artisanal collectives supported by Traidcraft tend toward the production of "me too" products—ones that lack design originality and an independent brand identity demarcating them from less sustainable competitors. This situation raises some questions about how far up the economic ladder such collectives can climb.

There can be little doubt that the three organizations examined here have developed design strategies that provide invaluable support for needy communities in the developing world. Therefore, any limitations in the sustainability of the design practices noted in these case studies can be viewed positively as ones that offer opportunities for continuing analysis and improvement.

The Local and the Global: Hokusai's Great Wave in Contemporary Product Design

Christine M. E. Guth

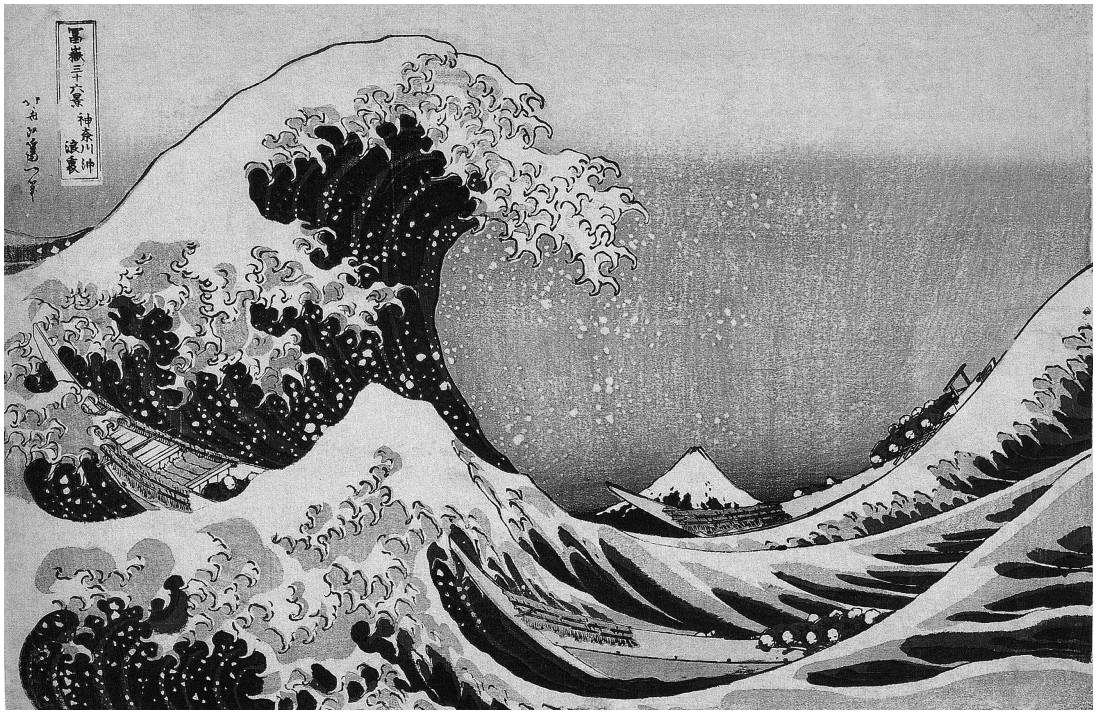


Figure 1
Katsushika Hokusai, "Under the Wave off Kanagawa," color woodcut, 1831.
® Trustees of the British Museum.

Hokusai's woodcut, "Under the Wave off Kanagawa" (Kanagawa oki no namiura), originally published in 1831 in the series *Thirty-six Views of Mount Fuji* (Fuji no sanjûrokkei), is recognized around the world.[1] (Figure 1) Arguably Japan's first global brand, "The Great Wave," as it is commonly known, has been widely adapted to style and advertise merchandise, including home furnishings, clothing and accessories, beauty products, food and wine, stationery, and books. Most of the goods that trade on its celebrity status, however, are neither manufactured in Japan nor primarily dependent on the commodification of the Japanese aesthetic or locale. This essay examines the mobilization of "The Great Wave" to promote and sell mass-produced goods in the first decade of the twenty-first century, throwing light on the ways that this highly adaptive graphic design can mediate between the local and the global without necessarily referencing Japanese tradition.

1 On its Japanese reception history, see Christine M. E. Guth, "Hokusai's Great Waves in Nineteenth-Century Japanese Visual Culture," *The Art Bulletin* 93, No. 4 (December 2011): 468-85.

A Fluid Brand Identity

Despite the outsized visual authority it commands, "The Great Wave" does not communicate a uniform set of meanings. The motif is not popular primarily because it expresses some unique Japanese aesthetic sensibility, although desirable qualities associated with that country may be ascribed to it. Hokusai's view of a giant, white-capped, cresting wave, with three small boats struggling to cut through it, and the perfectly conical form of Mount Fuji in the distance has undeniable dramatic power, but the visual qualities that make it so compelling might be read in many, often contradictory, ways inflected by local contexts. For instance, in its country of origin it is seen as a wind-driven wave, while Euro-American viewers often identify it as a tsunami. Paradoxically, commercial uses of the wave for the most part encode an outlook in which it figures as a positive countervailing force to late industrial modernity, and one that can be managed through human effort. This interpretive fluidity is central to its mediating value in contemporary product design.

In her elaboration of what she calls the "production-consumption-mediation (PCM) paradigm," design historian Grace Lees-Maffei has underscored the need to examine mediation of design objects—their marketing, advertising, and exhibition—both synchronically and diachronically. It is important to take into account, she writes, "the degree to which mediating channels are themselves designed and therefore open to design historical analysis."[2] This mediation is particularly pertinent to the study of "The Great Wave" because both designers and consumers might build differently on the symbolic complex that has cumulatively formed around it. Consequently, to assess the variety of representational practices in which it has become implicated and the effect of the meanings these practices produce on the creation, understanding, and use of the goods on which it figures today requires taking into account its reception history.

"Under the Wave off Kanagawa" originated as an inexpensive woodcut, of which some 5,000 to 8,000 impressions were issued during the artist's lifetime. Because it was a commercial product made for a popular market and not a unique work of art, in Japan it has long occupied a relatively low place in the artistic hierarchy *vis à vis* painting, calligraphy, and the decorative arts. The global success of anime and manga, whose enthusiasts hold Hokusai in high regard, has contributed to a reevaluation of "The Great Wave," but the image still does not enjoy the same canonical status at home as it does abroad. Its recognition as a masterpiece of world art in Europe and America is bound up with the role that Japanese woodcuts, and Hokusai's in particular, are assigned in the development of European modernism.

2 Grace Lees-Maffei, "The Production-Consumption-Mediation Paradigm," *Journal of Design History* 22, no. 4 (2009): 351.

Because of the Great Wave's local, non-elite origins, contemporary Japanese graphic designers have been far less enthusiastic than their Euro-American counterparts, at least domestically, about embracing Hokusai's wave for branding and marketing merchandise. The motif figures on Sony's Nintendo DS and on luggage customized by the Tokyo designer Hideo Wakamatsu. However, as these two examples illustrate, when it is used, it tends to be for goods aimed at the international market, where the design more likely carries connotations of alterity.[3] Yet a niche market does exist in Japan for brand-name imports that deploy the motif. This receptivity suggests that external brand endorsement—aligned with the European propensity to see the original design as a form of high art, even if ironized—can serve to overcome any down-market stigma that might otherwise attach to the great wave. Paradoxically, when featured on fashionable foreign products, the motif becomes a marker of local distinction.

Masterpiece Merchandise

Museums are leading purveyors of Great Wave merchandise. Paper dioramas, *tatebanko*, are on offer at Tokyo National Museum; enameled teaspoons made in Japan are at the Guimet Museum in Paris; and paper stereoscopes manufactured in the Netherlands at the Fitzwilliam Museum, Cambridge. The British Museum has a particularly large range, including T-shirts, tea towels, plates, mugs, watches, and clocks. The Victoria and Albert (V&A) Museum sells in its museum shop a print combining rabbits and the Great Wave, by the Japanese-American artist team, Kozyndan. The Metropolitan Museum of Art has a product line that through the years has expanded from reproductions and paper goods to include scarves, refrigerator magnets, and luggage tags. The intrinsic spectacularity of the wave gives it the agency to transform even these commonplace things into something that communicates the authority of the museum. Despite this authority, the wave remains an externally applied decoration that affects the products' perceived but not their actual performance. Igor Kopytoff has observed that when objects enter the museum, they undergo a process of "singularization" and "terminal decommoditization:" They are effectively deactivated as freely circulating commodities.[4] Objects in the museum nonetheless continue to participate in the market in other ways. This process of "museumization" increases the value of analogous works still in circulation by creating unique object value. The potential for museum masterpieces to be adapted for use in the design of commercial goods further complicates this narrative. Impressions of Hokusai's "Under the Wave off Kanagawa" can be "formally decommoditized" in museums, but by their replication and adaptation in secondary forms, they "remain potential commodities."[5]

3 The Nintendo DS is one of many uses of the motif available from www.designer-daily.com/hokusais-great-wave-is-everywhere-4697 (accessed October 27, 2009). Wakamatsu sells through a retail shop in San Francisco and also makes it available online at www.hideostore.com (accessed May 31, 2011).

4 Igor Kopytoff, "The Cultural Biography of Things," in *The Social Life of Things: Commodities in Cultural Perspective*," Arjun Appadurai, ed. (Cambridge: Cambridge University Press, 1992), 80-83.

5 Kopytoff, "The Cultural Biography of Things," 76.

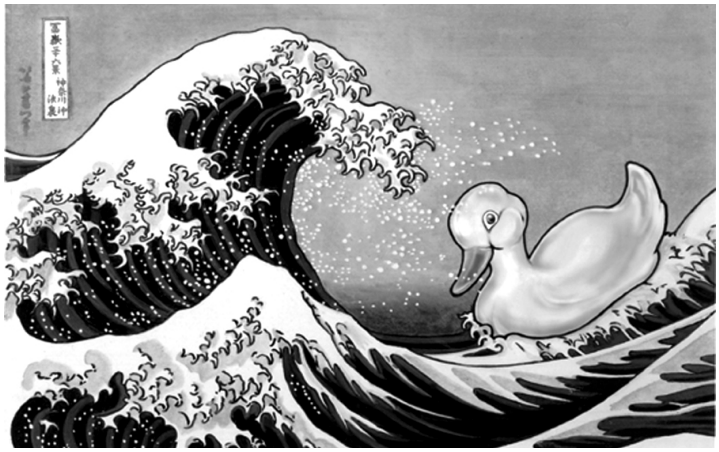


Figure 2
Peggy Lindt, "East Meets West," T-shirt design, 2004. Image courtesy Peggy Lindt.

Masterpiece branding makes good commercial sense because it gives mundane mass-produced goods a cachet that distinguishes them from those available on the street. Such design, through its replication, simultaneously markets both sameness and difference. Visitors might be moved to pay more for a purchase because it reconciles consumerist impulses with good work: As all the Metropolitan Museum's packaging announces, "proceeds from the sales of all publications and reproductions are used to support the museum." A further attraction of such merchandise is its connotations of quality. Unlike other comparable articles, the quality of the museum-branded product is guaranteed not primarily by the manufacturing process, but by the internationally recognized masterpiece in the museum's collection. A pendant that advertises itself as "inspired by the V&A collection," on sale in the Fitzwilliam Museum's shop in 2010 and online at Amazon.com, illustrates how commercial enterprises, by paying a licensing fee, can capitalize on the aura of the museum.[6]

Consumers' reasons for buying merchandise featuring "The Great Wave" are no doubt highly variable. The small size, practicality, and modest cost of many goods make them ideal souvenirs or gifts to mark and remember a visit to the museum. The motif might strike a chord among those with a special interest in Japan and its culture. Museums often function as alternative sites for people who are seeking but not able to have actual tourist experiences; thus, a memento bearing a striking image of the wave and Mount Fuji might appeal as a surrogate for a journey to the country. Conversely, such museum goods might also afford Japanese abroad external validation of their own culture. As waves have general connotations of travel and leisure, they also make tasteful gifts, even for those who don't visit the museum. In 2008, the Metropolitan Museum of Art was operating 23 satellite stores in major cities and airports across the United States, with the aim of catering to such travelers.[7] A display at the Houston International Airport in 2007 included silk scarves and date books featuring "The Great Wave."

6 Available from www.amazon.co.uk/Inspired-Argentium-SilverThe-Great-Necklace/dp/B002SXN1US (accessed May 31, 2011).

7 *New York Times*, February 24, 2009.

The Metropolitan Museum tries to contain and restrict the circulation of "The Great Wave" by selling in its own retail stores and websites products featuring only exact reproductions (sometimes skillfully cropped for dramatic effect). However, the number of (sometimes cute or caricaturing) adaptations available from other museums has undermined the aura of exclusivity that once surrounded its merchandise. A case in point is an irreverent design by Peggy Lindt that combines two incongruous extremes of scale in a watery environment: the Great Wave and a bright yellow rubber duck. A t-shirt bearing the design was available in 2004 at the Denver Art Museum (see Figure 2). In addition, the same T-shirt could be purchased online, by anyone anywhere in the world, through Fliptomania.com.[8]

Today, the production and sale of masterpiece-branded goods is bound up with the global flow of capital, just as any other consumer good. Museums have extended their footprint by opening new outposts in far-away locations, and blockbuster exhibitions travel from one continent to another; not surprisingly then, museum merchandising has also become part of a vast network of material and symbolic exchange. However, these changes come at a price: these institutions can no longer maintain top-down control of their "brands."

Alternative Lifestyles

While the image of the Great Wave itself pushes the limits in its articulation or presentation of lived experience, it also delivers a visual experience that, metaphorically, may be readily translated into a bodily one. The design has undergone a wide range of reformulations in service of what B. Joseph Pine and James Gilmore have termed "the experience economy"—the commercial value of a promise by a particular product or service to provide a transformative sensorial experience.[9] Many of these uses target individuals or groups that identify the wave with an alternative lifestyle. Sometimes this perception is specifically mediated by the motif's identification with Japan. Pearl River, a well-known novelty store on the periphery of New York's Chinatown, in 2007 sold bars of soap featuring the wave (without Fuji). The front of the box showed the Sino-Japanese character for eternity and the words "*The Perfect Spa*-water… aroma… the healing place, the unwinding place;" on the back was the explanation that the image was based on Hokusai's woodcut, "a perfect representation of a moment frozen in time." It interpreted its packaging for would-be consumers by explaining that "The 'eternity' symbol suggests the same idea: awareness of every moment." That the boxed soap was "Made in Australia," as indicated under its list of ingredients, speaks to the logic and reality of global production.

8 Available from http://Fliptomania.com/category/2.html (accessed May 31, 2011).

9 B. Joseph Pine, II, and James H. Gilmore, *The Experience Economy: Work is Theater and Every Business a Stage* (Boston: Harvard Business School Press, 1999).

Gennifer Weisenfeld, in her study of the use of a modernist aesthetic in the packaging and marketing of Kao soap in 1930s Japan, noted that one message this packaging conveyed implicitly was that, "even through a commodity as mundane as a bar of soap, every man or woman could tap into an international culture of modernism."[10] Similarly, the message in *The Eternal Spa*'s clumsy effort to manufacture authenticity appears to be the promise that, by using this product to wash, the bather can discover the natural purity and serenity that is the essence of traditional Japan. In conveying this message, it relies on a time-honored trope of Japan as an island of tranquility in the modern western world—an image strangely at odds with the disruptive potential of the wave.

Consumption, as Thorstein Veblen and Pierre Bourdieu have written, is a process of self-construction through differentiation, and marketing often capitalizes on the recognition that consumers who buy to satisfy their desires often do so with a concern for identity—but also with a need to authenticate their identity in very particular ways.[11] T-shirts provide a means of achieving this end fashionably and inexpensively, and given their origins as counter-cultural apparel, they lend themselves well to adoption by those who want to assert their independence from bourgeois value systems. Both the real and the virtual marketplaces are full of entrepreneurial designers who make and market T-shirts to commemorate a special event or membership in a particular social community. Treasured as records of personal experience by those who buy them, they often take on social and cultural value beyond their modest cost.

Figure 3
Designer unknown, "The Great Wave as perceived by Mrs. Hokusai," T-shirt design. Image courtesy Anne Walthall.

10 Gennifer Weisenfeld, "From Baby's First Bath: Modern Soap and Modern Japanese Commercial Design," *The Art Bulletin* 86, no. 3 (September 2004): 577.

11 Thorstein Veblen, *The Theory of the Leisure Class* (London: Unwin, 1970). Also, Pierre Bourdieu, *Distinction: A Social Critique of the Judgment of Taste*, trans. Richard Nice (Cambridge, MA: Harvard University Press, 1984).

Figure 4
View of Warm Planet Bikes shop, San Francisco, California. Author's photograph.

For example, when a woman wears a T-shirt or sweatshirt that shows a great wave emerging from a top-loading washing machine, with an inscription reading, "The laundry as perceived by Mrs. Hokusai," she does not simply don an item of functional attire but makes a personal statement (see Figure 3). This shirt subverts the muscular and masculine rhetoric of the Great Wave by suggesting that, behind every great artist, there is a hard-working wife: even great artists depend on willing partners who can take care of the more (or less) mundane but necessary aspects of life.[12] Wearing clothing thus inscribed is a public act that invites reaction. In so doing, it becomes a socializing experience that might bring together those who share the outlook it expresses—or those who disagree with it.

Most pastiches of Hokusai's design, however, do not point so explicitly back to the artist or his artwork. Many professional artists and graphic designers know "Under the Wave off Kanagawa" through their studies, but such knowledge is not necessarily carried by the general public. In addition, those in the former group don't necessarily want or expect those in the latter to make the connection between their design and the original work by Hokusai.

Outdoor sports marketing fits well within already accepted understandings of waves, even as it may expand these perceptions in unpredictable, localized ways. To illustrate, in 2008, California's Bay Area leaders responded to "the growing demand for sustainable transportation choices … amid growing concerns over global warming" by authorizing San Francisco transportation authorities to open a bicycle parking facility next to the city's main Caltrain station.[13] The facility includes a repair shop and retail store operated by Warm Planet Bikes, whose logo—prominently featured on the exterior wall and decorative grills protecting the windows—is an image of a cresting wave, with Sutro Tower (a San Francisco landmark) replacing Mount Fuji in the background (see Figure 4). The logo of Warm Planet Bikes clearly doesn't speak specifically to cycling, but it evokes the Bay Area and the city where the shop is located. Underscoring the highly specific and subjective interpretation that individuals can bring to adaptations of the great wave, "Kash"—the owner-operator of Warm Planet Bikes—wrote of Sutro Tower, "it's so overwhelming that most people block it from their minds, but for me, it says 'that direction, that's where home is.'"[14] He also acknowledged Hokusai as the source of his design, declaring "I rip off only the best"—an outlook that is likely shared by other creative consumers of Hokusai's "Under the Wave off Kanagawa."[15]

12 Although "Kasumi for RIC" appears below the image, I have not been able to determine the identity of its creator.

13 "New Bicycle Valet Service opens at SF Caltrain Station," press release January 9, 2008 (accessed May 20, 2011).

14 Email exchange May 13, 2011.

15 Ibid.

The new creative landscape in which the Great Wave appears includes interactive "product development" that exploits consumers' desire to personalize what they wear. Zazzle, an online platform for custom products, invites consumers to take an active role in the styling of their Keds sneakers—for example, by allowing for the addition of a wide range of striking motifs.[16] "The Great Wave" is one of the many artistic options this online company offers in its "remixing" of icons. The self-customization of comfortable, once inexpensive, canvas athletic shoes is achieved using computer-aided printing systems, which allow for print-on-demand products at competitive prices. Zazzle customers need only a jpg, tif, or similar image file of reasonable resolution, which in the case of the wave, Zazzle provides. Although the same wave image is used on each pair of shoes ordered with it, customers have considerable freedom to scale, crop, and place it. Thus, the process simultaneously represents mass-produced standardization and differentiation. Zazzle promotes its products using images of the customer-crafted footwear, along with the names of the designer customers; in so doing, it creates a sense of a transnational "imagined community" through consumption and design interaction.[17]

Who are the members of this community and what makes this design so appealing to them? Although their precise identity is difficult to pinpoint, we might assume that they include skateboarders and surfers, whose activities, like bicycling, foster a highly individualized sociability. In fact, Zazzle and other online sites also can produce Great Wave customized skateboards and surfboards.[18] Once marginal, and practiced primarily in Hawaii, California, and Australia, surfing has become a global sport whose enthusiasts devote much money and attention to high-performance gear. Since 2005, for instance, customers have been able to download for the Apple Computer a "dashboard widget" styled with the Great Wave; the app is called *marée* (tide) and gives the tide charts for the current day, allowing users to choose from several harbors in France and elsewhere.[19] However, as Marjorie Kelley has observed in a study of T-shirts in Hawaii, where modern surfing originated, "the vast majority of surf-related merchandise is sold to those who only empathize with this passion by surfing recreationally and by emulating the hard-core surfer's look and lifestyle."[20]

Sports marketing might center on young and predominantly male consumers, or to those who buy for them, but it can spill over into other demographics as well. Themed greeting cards are among the items that allow people to "participate" in the surfing lifestyle without getting their toes wet. In 2004 and again in 2006, the Art Institute of Chicago's annual holiday sales catalogues, which reach consumers across the United States, advertised an unconventional Christmas card of a surfing Santa, designed by illustrator Tom Hertzberg. Surfing also enjoys a huge following in Japan, and in an

16 Available from www.zazzle.co.uk/zazzle+great+wave+shoes (accessed May 31, 2011).

17 Benedict Anderson, *Imagined Communities: Reflections on the Origins and Spread of Nationalism* (London: Verso, 1991).

18 See www.filf.co.uk/skate/carver-skateboards/carver-skateboard-37-great-wave.html (accessed June 3, 2011).

19 Available from www.apple.com/downloads/dashboard/information/maree_bobbyhugges.html (accessed April 28, 2011).

20 Marjorie Kelly, "Projecting an Image and Expressing Identity: T-shirts in Hawaii," *Fashion Theory* 7, No. 2 (2003): 205.

interesting variation of the "artistic remix," one enterprising maker of inexpensive paper summer fans capitalized both on this motif and on another celebrated Japanese brand, Hello Kitty.

Hokusai's design lends itself to these disparate uses because, by showing the huge, cresting wave in motion, it creates the illusion of overcoming gravity, nature, and time, even as it retains the threat of impending disaster. Its dynamic fluidity metaphorically expresses the freedom, grace, and agility required for any sport, while its heroic isolation is especially apt for those whose sports are more individualistic, like cyclists, skateboarders, and surfers. The Great Wave also has what might be characterized as street attitude, drawing attention through its in-your-face spectacle but at the same time keeping the beholder at bay with its implications of danger. If its identification with Japan is implicated in any of these readings, it is more for a generalized sense of anti-authoritarian alterity than for any intrinsic aesthetic or cultural traits.

Corporate Products

Both skateboarding and surfing activities were once subculture practices that expressed youthful rebellion, empowerment, and freedom from the bourgeois work ethic. Today, they retain something of this lifestyle image but also represent part of a multimillion dollar global business. The customization of Keds speaks to the way marginal or subculture groups might, through their do-it-yourself *bricolage*, have an effect on mainstream products.[21] Keds sneakers were first produced in 1916, but competition from new styles of footwear, made by Nike and other manufacturers, forced the company to close in 1986. In 2002, however, the shoes made a come-back thanks to music, dance, and skateboarding. As one of the numerous publications now devoted to the subject of sneakers asserts, sneakers "moved out from the sports arena and exploded into popular culture as a fashion style which simultaneously transcend[s] race and class, yet defines who you are in today's urban tribes."[22] In their return, Keds took on connotations of back-to-basics retro chic, with implications of resistance to the powerful forces of global branding. The image of irresistible momentum that "The Great Wave" projects when applied to this footwear echoes the motion of the Nike Swoosh—providing commentary that is simultaneously a tribute and a parody.

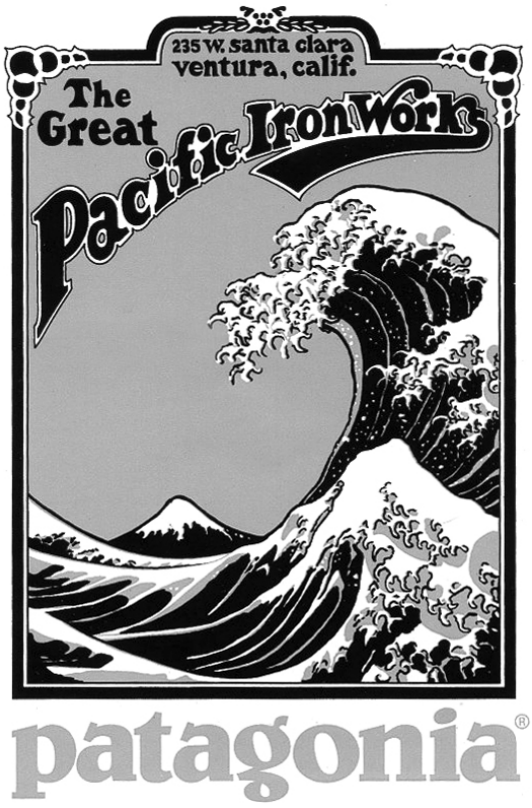
With its company motto, "Let My People Go Surfing," the sporting goods company Patagonia typifies the commercial mainstreaming of countercultural values. Since the opening of its first retail outlet in 1970 (The Great Pacific Ironworks, in the beach town of Ventura, CA), Patagonia has used adaptations of Hokusai's design as the store's logo and on a wide range of apparel—especially T-shirts and long, baggy surfer shorts (see Figure 5).[23] This design reflects the love of founder, Yvon

21 Dick Hebdige, *Sub-Culture: The Meaning of Style* (London: Routledge, 1987), 102-06.

22 *Sneakers: The Complete Collectors' Guide*, written and designed by Unorthodox Styles (London: Thames & Hudson, 2005), 7.

23 See GPIW ™ Sign Logo T-shirt Style 51844 at www.patagonia.com (accessed June 1, 2011).

Figure 5
Patagonia Logo. Property of Patagonia, Inc.



Chouinard, for both mountains and surf.[24] The company began as a supplier of mountain climbing equipment, but when it moved into colorful yet practical sports clothing in 1972, this was marketed under the Patagonia label to give it a separate identity. The name Patagonia, a reference to a region in Argentina, was selected because it conveyed a romantic image of cosmopolitan ruggedness. The Japanese inflected logo, with its jagged mountain and stormy sea, reinforced this vision, while also making visible Chouinard's admiration of Japanese culture. The market in Japan for mountain climbing gear and, later, for outdoor sports clothing led the company to open shops there, and today clothing branded with Patagonia's distinctive logo has found special appeal among hip, young Japanese consumers.[25]

Pitching parody instead of using the straightforward "buy me" approach, and using language rich in visual and verbal quotations has worked well for Now and Zen—an Alsacian white wine sold in the United States, especially through the unconventional supermarket chain, Trader Joe's.[26] The wine's unusual name is a pun on the phrase "now and then," perhaps a coy allusion to the nationwide campaign urging consumers to drink in moderation. The wine's logo is a figure in a "tipsy" rowboat perched precariously atop a playfully distorted cresting wave (see Figure 6). Now and Zen is produced in France, as suggested by the Anglophone stereotype of the French mispronunciation of the word "then;" in turn, the name links the wine to Japan through identification with

24 Yvon Chouinard, *Let My People Go Surfing: The Education of a Reluctant Businessman* (New York: Penguin Press, 2005).

25 On Yvon Chouinard's engagement with Japan, see Chouinard, *Let My People Go Surfing*, 74-75, 127-28.

26 A review by a Trader Joe's fan is available at www.facebook.com/note.php?note_id=414711605669 (accessed June 3, 2011).

Zen Buddhism. The logic underlying its double-barreled branding is to convey the idea that this "wasabi white" wine is suitable for drinking with Asian fusion cuisine. This campy marketing attracts even as it distracts from the fact that the wine is a down-market product priced in 2010 at $4.99. The label may further capitalize on *Now and Zen* as the title of a 1988 hit record from Led Zeppelin's Robert Plant (a connection not necessarily made, however, by all consumers). Such unconventional branding is effective, especially in the crowded global marketplace of low-cost wines. Together, the brand name and logo create the image of a hip beverage that is fun to drink. Now and Zen doesn't claim to be Japanese, but it banks on an eclectic mix of qualities that some consumers associate with that country to impart transnational distinction to its product.

The wit and marketing savvy of the distinguished Paris purveyor of gourmet foods, Fauchon, comes through in its *La Vague* (The Wave) éclair. Filled with quivering, creamy white goodness, *La Vague's* decorative icing features the Great Wave, Mount Fuji, and a single lemon yellow boat—all together also creating a visual pun on the elongated boat-like shape of the pastry itself. The unexpected conjunction of "art" and pastry serves effectively to distinguish this relatively commonplace commodity so that consumers are prepared to pay Fauchon's high prices. The wave éclair is one of a number of such customized delicacies at the gourmet shop; like Fauchon's dark chocolate *Mona Lisa* éclair, it capitalizes tastily, if not tastefully, on identification with an internationally recognized masterpiece. The message here is less about Japanese culture than about the global culture of conspicuous consumption of which Japan is a part.[27]

When or where Fauchon first introduced the éclair is not clear, but its development was likely part of a global marketing strategy to cater to Japanese consumers, both at home and abroad.

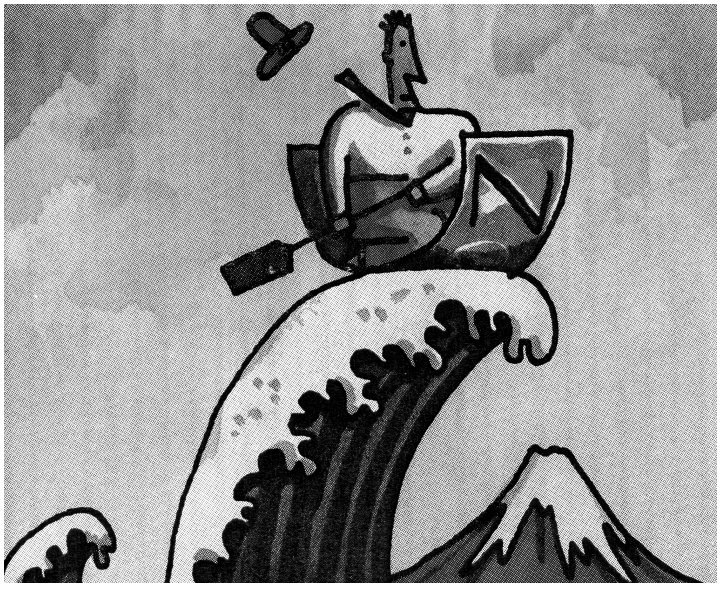


Figure 5
Now and Zen packaging (detail).
Author's photograph.

27 Available from http://en.gigazine.net/index.php?/news/comments/20090710_hokusai_cream_puff/ (accessed May 31, 2011).

Fauchon has had a presence in Japan since the 1970s and still has independent outlets there, as well as selling its confections through the up-scale Takashimaya Department Store. References to the delicacy on Japanese language blogs (where it is referred to as a *dezain*—the Japanese pronunciation of design—éclair) and other social networking sites suggests that it especially appeals to brand-conscious young women for gift-giving.[28]

As part of the ocean that surrounds us, the cresting wave clearly is a motif that conveys a global message of interconnectivity that is attractive to multinational firms. In this sense it may function like the Coca Cola musical campaign based on the song, "I'd like to teach the world to sing," or the analogous "United Colors of Benetton" slogan, built around compelling color photographs of groups of people of disparate ethnic and racial backgrounds. In 2005, Levi's devised a campaign that played on the idea of global denim by mounting 35 pairs of blue jeans on a giant 22-foot-by-12-foot canvas. Caroline Calvino, a Levi's executive and enthusiastic surfer, then painted over all of them in varying shades of blue a single giant wave alluding to Hokusai's woodcut. Called "Love and Peace," the collage was introduced at the Los Angeles fashion week before being displayed in Japan. Following the showing in Japan, 32 pairs of the exclusive jeans, each identified with the words "Love and Peace" on the back, were sent to stores in New York, London, Los Angeles, Tokyo, and San Francisco and were sold for $1,000 each.[29] By this clever ploy, Levi's disguised the commodity status of the jeans while simultaneously carrying out an act of commercial seduction. As part of the art work, the jeans were unwearable, but once dismantled, each pair was more valuable for its identification with Calvino's collage.

For Calvino, the Great Wave offered an innovative way to engage consumers around the world with Levi's product. Yet, even as her creative use of the motif brought audiences into a trans-national conversation, online responses to her artwork indicate that it simultaneously drew attention to the wave's identity with Hokusai.[30] In so doing, it illustrates Viviana Narotsky's assertion that a "discourse of national identity, which generally draws on pre-established cultural stereotypes, can be arbitrarily constructed 'from the outside' around certain products, reflecting the global context in which they are created and consumed rather than their intrinsic formal or 'essential' qualities."[31]

An advertisement developed in 2008 for Kikkoman soy sauce by the Swedish division of the advertising agency, Scholz and Friends offers a further illustration of this. The ad shows a dramatic photographic close-up of the rich, amber-colored sauce splashing in the shape of Hokusai's cresting wave, and over it, the company's distinctive, hexagonal Japanese crest, with the character for 10,000 in the middle. Inscribed in small letters above the image is the tagline, "Culinary art from Japan."[32]

28 Available from http://8tokyo.com/2009/11/06/fauchon-eclair-la-vague/ and http://blog.oggi.tv/present/2010/05/fauchon.html (accessed May 31, 2011).

29 Available from Ami Kealoha, "Denim Hokusai," www.coolhunting.com/archives/2005/10/14 (accessed June 3, 2011). Another example of promotional use of Levi's jeans is available at www.designer-daily.com/hokusais-great-wave-is-everywhere-4697 (accessed October 27, 2009).

30 Ibid.

31 Viviana Narotsky, "Selling the Nation: Identity and Design in 1980s Catalonia," *Design Issues* 25, no. 3 (Summer 2009): 68, 71.

32 Available from: http://adsoftheworld.com/media/print/Kikkoman_the_great_wave_f_Kikkokman?size=original (accessed October 27, 2009).

There is nothing intrinsically Japanese about soy sauce. It is an indispensable ingredient in all East Asian cuisines, and one that, until the surge in popularity in sushi and other "healthy" Japanese delicacies, was more likely to be associated with China. Many consumers outside the region where it was historically consumed have long used a splash of it in cooking, and brand identity is unlikely to be a major consideration in its purchase. Kikkoman is a company with a long domestic history, but since the 1970s, it has also sought to expand its international profile; thus, advertising campaigns have emphasized the fact that it is naturally brewed and fermented—an image that goes hand in hand with the perception that Japanese food is healthy.[33]

The advertisement described, only one of many developed for European and American consumers, trades on the stereotype of Japan as an artistic nation, and the dissemination of Hokusai's "Under the Wave off Kanagawa" that has been implicated in the creation of that stereotype since its introduction to Europe and America. However, unlike the geisha, samurai, cherry blossoms, and other motifs of Japanese origin that have become part of the idiom of modern-day Japonisme, the Great Wave has the capacity to take on a plurality of identities through its displacements to new forms and media and, in doing so, to simultaneously express and suppress cultural difference. As used by a Swedish graphic designer on behalf of a Japanese corporation that seeks to market a product whose ingredients are sourced and brewed around the world, the image can hardly be claimed to be part of an internally-driven nationalistic discourse on tradition.

The Local and The Global

This essay has sought to document, analyze, and make available for critical reflection "The Great Wave"—a graphic icon serving as a powerful cultural signifier for over a century and, for the past decade, as one deeply embedded in the language of global product design and promotion. I have necessarily been selective; no one essay can reflect the full range of commercial products and services to which the motif has been applied. The messages this icon communicates are pluralistic, ambiguous, and, like the wave itself, in a constant state of change. Nevertheless, at this point, we can reasonably ask whether there is a logic underlying the diverse products on which it appears and the messages it conveys. What can we conclude about the consumer tastes, social and economic forces, and other factors that have contributed to its ubiquity?

Does the image make visible the eastward migration of power and capital to Asia, and more specifically Japan? Might it provide coded acknowledgement of the process that sociologist Koichi Iwabuchi, in his 2002 book of the same title, described as "recentering globalization," with Japan at its center?[34] The ubiquity of this graphic design can well be understood as a cultural

33 Ronald E. Yates, *The Kikkoman Chronicles: A Global Company with a Japanese Soul* (New York: McGraw-Hill, 1998), ch. 1, 1-11.

34 Koichi Iwabuchi, *Recentering Globalization: Popular Culture and Japanese Transnationalism* (Durham: Duke University Press, 2002).

phenomenon that gestures toward a value system outside Europe and America. Although the image's transnational celebrity has a long history, it has also unquestionably benefited from the global success of Japan's pop culture—animation, manga, characters, computer games, and fashion. And yet, when used as a design on or for promoting products, the great wave and its permutations are simultaneously context specific and variously situated. This multivalence argues in favor of seeing its mediating power as residing in its potential to communicate the dialectics of globalization—its decentering effects as well as its centering effects.

In discussing the reasons for the commercial success of Japanese products in China, Korea, and Southeast Asia, where there is a strong legacy of anti-Japanese sentiment, Iwabuchi underscores the absence of the "odor" of national identity in such products—a trait that he characterizes as deterritorialization: *mukokuseki*.[35] Might the globalizing, free-floating product identity he suggests be useful in explaining the remarkable popularity of the Great Wave as well? With its image of constant movement to, from, and between boundaries, and its implication of experience at the expense of materiality, the wave (without Mount Fuji) does seem to be emblematic of the pluralistic, fragmented, and media-saturated landscape of the postmodern world. And yet, such a reading fails to acknowledge the agency of individuals to make new social meanings for the things they see and use. The visual language and subject of the Great Wave invite the adaptation and adoption of its "deterritorializing" qualities to refer to or reflect on local socio-cultural structures, often blurring the boundaries between production and consumption. The web has been a key platform for such critical engagement, and one that has helped the motif to become a symbol of global cool. Although the Great Wave has been mobilized to confer desirable Japanese connotations on some products, today it functions increasingly as a transnational signifier of local difference. Paradoxically, the aura of alterity that it confers on the products it promotes is dependent on its status as a global icon.

Acknowledgements

I would like to thank Allen Hockley for his comments on an earlier version of this essay and, especially, Kimberley Chandler for her research assistance.

35 Ibid., 28.

Revisiting Design as a Hermeneutic Practice: An Investigation of Paul Ricoeur's Critical Hermeneutics

Marcus Jahnke

Introduction

Despite the plethora of methods, processes, and models that have tried to "explain" design since the Design Methods movement in the 1960s,[1] we still see a general lack of studies that investigate *experienced* design practice.[2] Although it could be argued that practice knowledge abounds in the design research discourse, this knowledge is often entangled in other research objectives, is "hidden from view" as predominantly tacit knowledge, or is sometimes developed using the terms of epistemologies that do not reflect design practice—not least, positivist-inspired ones.[3] Even representations in the practice-oriented, design-thinking literature are problematic, in that they typically are dichotomous, establishing design as something fundamentally "different,"[4]—for example, when comparing designing with engineering, managing, or scientific inquiry. Although such representations hold relevant insights, the risk is that the *experience of designing* is abstracted away and lost in translation. In addition, as long as these representations lack a solid foundation that resonates with practice, they potentially risk supporting metaphors that also do not reflect design practice (e.g., the pervasive metaphor of problem solving), and thus continue to overshadow other perspectives and possible metaphors for designing.[5]

Coyne and Snodgrass suggest that the "hermeneutic circle" is a better metaphor for designing than the dominant metaphor of problem solving because it doesn't "…destroy the complexity, subtlety, and uniqueness of the design situation; or privilege or preclude aspects of the process, but rather respects their interdependence and interaction."[6] The hermeneutic circle is also a metaphor that resonates with Donald Schön's concept of the "reflective practitioner," and as Snodgrass and Coyne note: "Even a cursory examination of the protocol studies of Donald Schön indicates that the design process he describes works according to the dynamics of the hermeneutic circle, proceeding by way of a dialogic exchange with the design situation."[7] The concept and metaphor of the reflective practitioner indeed goes a long way to describe design as contingent, situation oriented, and reflective; that said,

1 Nigel Cross, "Forty Years of Design Research," *Design Studies* 28 (2007): 1-4.

2 See, for example, Erik Stolterman, "The Nature of Design Practice and Implications for Interaction Design Research," *International Journal of Design* 2 (2008): 55-65, and Lucy Kimbell, "Rethinking Design Thinking: Part 1," *Design and Culture* 3, no. 3 (2011): 285-306.

3 See, for example, Klaus Krippendorff, *The Semantic Turn: A New Foundation for Design* (Boca Raton, FL: CRC Press, 2006), and Richard Buchanan, "Wicked Problems in Design Thinking," *Design Issues* 8, no. 6 (1992): 2.

4 See, for example, Roger L. Martin, *The Design of Business* (Toronto: Rotman School of Management, 2004), and Tim Brown, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation* (New York: Harper Business, 2009).

5 This article relates to an ongoing experimental project where designers share their experience of design practice to "non-designerly" firms, the aim of which is to strengthen innovativeness in these firms. The study is also a contribution to the budding stream of "design-driven innovation." See, for example, Roberto Verganti, "Design, Meanings, and Radical Innovation: A Metamodel and a Research Agenda," *The Journal of Product Innovation Management* 25 (2008): 436-56.

6 Adrian Snodgrass and Richard Coyne, "Models, Metaphors, and the Hermeneutics of Designing," *Design Issues* 9, no.1 (1992): 72.

7 Adrian Snodgrass and Richard Coyne, "Is Designing Hermeneutical?" *Architectural Theory Review* 2, no.1 (1997): 87.

"philosophical hermeneutics"[8] likely offers an alternative or complementary understanding that further deepens our understanding of Schön's seminal contribution.

In this article, I build on the work of Coyne and Snodgrass, who to my knowledge have done the most to advance a hermeneutical understanding of design practice.[9] I first revisit Schön's theory of reflection-in-action and suggest three areas in need of further investigation, where philosophical hermeneutics can provide guidance. I then introduce Hans Georg Gadamer's "historical hermeneutics"—the foundation for Coyne and Snodgrass's work—which at first seems to address these areas. However, after highlighting two gaps that Gadamer's historical hermeneutics leaves in relation to design practice, I direct attention to Ricouer's "critical hermeneutics" and "hermeneutic spiral" that seems to provide an even better metaphor for designing. In the discussion section, I relate these themes to established design theory to show examples of how Ricouer's critical hermeneutics provides a foundation for understanding designing that resonates with and enhances established design theory. Finally, I reflect on and sum up the contribution to design theory made in the article.

Departing from Schön: An Analysis of the "Reflective Practitioner"

When Donald Schön introduced the now well-known concept of the "reflective practitioner" in 1983, he offered a clear departure from the dominant problem-solving paradigm in research on professional knowledge.[10] To Schön, "The situations of practice are not problems to be solved but problematic situations to engage in, characterized by uncertainty, disorder, and indeterminacy."[11] Schön argued that practitioners deal with such situations through "reflection-in-action." In Schön's well-known illustration of this process, architect and tutor "Quist" shows first-year architect student "Petra" how, "by doing," to fit an elementary school building to a specific site characterized by a "screwy slope." In "… a reflective conversation with the situation,"[12] Quist applies possible "disciplines" (e.g., a specific geometry) to try to order the ambiguous situation. Throughout the reflective process, Quist listens to how the situation "talks back"—what the possible consequences of this or that move might be. Thus, he continuously "reframes" the situation in different ways, showing Petra how, by reflecting and sketching in tandem, she could get out of the problematic situation she was in. However, as enlightening as the case is, at least three areas are in need of further investigation.

First, the theory of reflection-in-action still seems for the most part to presuppose a *negative* something—a problematic situation. However, many design situations are more open and less negatively connoted than the concept and terminology of

8 I use the term "philosophical hermeneutics" to indicate that I mean more contemporary hermeneutics developed by, for example, Hans Georg Gadamer and Paul Ricoeur, rather than the older, biblically oriented hermeneutics.

9 See also Terry Winograd and Fernando Flores, *Understanding Computers and Cognition: A New Foundation for Design* (Indianapolis: Addison-Wesley, 1987).

10 Donald A. Schön, *The Reflective Practitioner: How Professionals Think in Action* (London: Basic Books Inc, 1983), 43.

11 Ibid., 15.

12 Ibid., 43.

"problem" can capture.[13] Designers often direct their interest toward situations and phenomena that may be inspirational and may spur new understanding without being problematic and in need of a "solution." Second, the subject-object duality remains intact. Reflective practitioners reflect *on* something by immersing themselves in reflection, but the subject is still positioned in a traditional distanced role in relation to the object. Neither does Schön discuss the relationship between the situation and the "world." The situation is equally intact and restricted, certainly complex, but nevertheless "inert." Third, the notion of reflection seems to be restricted to a more or less inert self. Schön discusses how Quist draws on his "repertoire," but he does not delve into where this resource comes from or how it is related to practice. What happens with the self in the act of reflecting on, or preferably *with*, something?

These three areas of how to understand the design situation, subject/object duality, and engagement or transformation of the self are in one way or the other directly related to meaning. Schön certainly discusses meaning, but in the protocol studies of this first-year tutorial case in architecture, more practical and tangible difficulties seem to take precedence, and as Molander notes, "… there is a lingering trace of objectivism in the sense that he [Schön] speaks as though there is still a fundamental world of facts."[14]

Enter Hermeneutics: Hans-Georg Gadamer's Historical Hermeneutics and Hermeneutic Circle

Hermeneutics can be considered a European cousin to the American Pragmatist tradition in Philosophy, where Schön had his roots. Both offer a "relativist" or "constructivist" understanding of knowledge, culture, practices, social interactions, and so on—a clear contrast to the dominant "objectivist" tradition in science on both continents. The linguistic term "hermeneutic" goes back to ancient Greek mythology and to *Hermes*, the messenger between the Gods and the mortal humans who had to be able both to understand the original message from the Gods and to translate it so that intended meaning would be understood by humans.[15] Hermeneutic interpretation builds on a long history of Biblical exegesis—the process of extracting meaning from and interpreting Biblical texts, which began to develop in ancient times when the Greek and Hebrew texts were first written.[16]

More contemporary hermeneutics began to develop in the eighteenth century by German philosopher and theologian Friedrich Schleiermacher. Inspired by the land winnings in positivist science his claim was that objective knowledge about the meaning of historical texts could be reached through the use of method. Gadamer's "historical hermeneutics" provides a clear departure from such ambitions and in his *magnum opus*, *Truth*

13 Interestingly, the everyday use of the word "problem" began around 1920 (*Webster's Ninth New Collegial Dictionary,* 1985), and the metaphor of problem solving has since then become one of the most influential metaphors of our time. (George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: The University of Chicago Press, 1980).

14 Bengt Molander, *Kunskap i handling [Knowledge in action]* (Göteborg: Daidalos, 1996), 158. The title and quote are my translations.

15 Bengt Kristensson Uggla, *Kommunikation på bristningsgränsen: en studie i Paul Ricoeurs projekt [Communication at Breaking Point: A Study of Paul Ricoeur's Project* (my translation)] (Stockholm: Brutus Östlings Bokförlag Symposion, 1994), 175.

16 Tzvetan Todorov, *Symbolism and Interpretation* (Ithaca, NY: Cornell University Press, 1982), 111.

and Method,[17] Gadamer argues that such notions of knowledge are impossible because both the subject and the object are already *situated* in history; alas, there is no objective position. This view was inspired by German philosopher Martin Heidegger's ontological philosophy and the concept of "Dasein"—of being in the world, and of "thrownness" (Geworfenheit); to be in the world is necessarily to have to interpret and seek to understand (as a verb). Truth is then found not in any original meaning of a text or work, but in its application. Here, Gadamer was inspired by Aristotle's concept of Phronesis, and a striking similarity emerges to the way truth is understood also in the American Pragmatist tradition.

To reach such situated truth one has to be *immersed* in interpretation. Just as leaving the game means to lose touch with the "play experience," so the "Ehrfahrung" (experience) that is fundamental to understanding is lost if one is distanced from that which is to be interpreted. For this reason, Gadamer rejected attempts to build hermeneutics on the strict use of method. To Gadamer, attempts at distanced objectivity through method mean that "Zugehörigheit" (belonging) is lost and therefore also any possibility to reach any relevant understanding.[18]

Further, to Gadamer the practice of interpretation is truly dialectical one; it is a process characterized by active questioning and answering: the "… art of entering into dialogue with the text."[19] It is a dialogue that moves in a circular pattern centrifugally toward understanding. In this "hermeneutic circle," the movement starts from our own prejudices (which is part of our own "horizon of understanding"); in encountering the "other" in the interpretive process, ideally our own horizon of understanding evolves and may fuse with the horizon of the other who is to be understood—Gadamer's central notion of the "fusing of horizons."

Gadamer ties these notions of situated truth, meaning, and understanding with the idea that tradition and historical texts represent the accumulated "being in the world" of others before us. This fundamental principle Gadamer calls "Wirkungsgeschichte," which can be translated "history of effect" or "effective history." A consequence of these principles is that we are always downstream of effective history and thus have access to the means necessary for true interpretation. In a move that strengthens his opposition to scientific objectivity, Gadamer thus considers prejudice, by which he means pre-understanding, as not only unavoidable but also fundamental to understanding. In other words, he "gives nuance" to the essentially negative understanding of prejudice in relation to the objectivist tradition.

However, Gadamer's strong emphasis on reconfiguring interpretation of history and tradition to deemphasize distancing poses a problem when we apply his approach to better understand a more future-oriented design practice that

17 Hans Georg Gadamer, Truth and Method (London: Sheed & Ward, 1996).

18 Ibid., 104.

19 Ibid., 368.

contributes to the on-going creation of new meaning in culture. When Gadamer emphasizes "situatedness," he fails to explain how *new* meaning might arise. This gap in Gadamer's historical hermeneutics in relation to design practice is important to investigate further. The second gap I investigate is how Gadamer's focus on interpretation of existing works fails to give a rich understanding of how works emerge in the first place. In design, the emerging work and the design practice behind it are of greater interest.

From Hermeneutic Circle to Hermeneutic Spiral: Paul Ricoeur's Critical Hermeneutics

One way out of the deadlock of tradition and authority is to be found in French philosopher Paul Ricoeurs' critical hermeneutics. His philosophy builds on Gadamer's historical hermeneutics, but it also departs from it in several respects. Most important, it introduces a critical distancing dimension to interpretation that Gadamer could not allow in his opposition to the method oriented approach. It also enhances "poetic redescription" to achieve new meaning, something on which Gadamer did not elaborate.

To understand how Ricoeur can introduce a "critical instance at the heart of interpretation,"[20] we start by seeing that Ricoeur has a different relationship to ontology than Heidegger and Gadamer. While Ricoeur acknowledges interpretation and the notion of Dasein, he rejects Heidegger's universalist ambition to let ontology determine everything. Instead, he follows German Idealist philosopher Karl Jaspers in thinking about merely "ontological indications"[21]—a response to the risk that ambitions toward complete ontological understanding may shut down further communication. Typical of Jasper's and Ricoeur's philosophies is that they instead accord primacy to ongoing and open communication. With this Jaspers-inspired position, Ricoeur re-introduces epistemology into hermeneutics and establishes a "long detour"[22] to understanding in which that both are involved: an ontologically derived interpretation and an epistemologically derived reflection (which might even be distanced and critical). These two are intertwined in a "hermeneutic spiral" that opens up to the "excess of meaning" of the world, rather than locking meaning to established history and tradition. This more postmodern understanding of discourse can be seen as a positive, ongoing encounter of diverse interpretations—a "loving struggle"[23] in which care has to be taken to actually keep tensions and frictions in place because they are fundamental to the process of understanding.

To achieve this integration of a critical faculty in the dialectic of hermeneutics, Ricoeur found inspiration in critical theorist and sociologist Jürgen Habermas's critique of Gadamer's historical hermeneutics.[24] Habermas challenged Gadamer's historical hermeneutics to reveal alternative understandings which are obscured

20 Bengt Kristensson Uggla, *Slaget om verkligheten [The Battle of Reality* (my translation)] (Stockholm: Brutus Östlings Bokförlag Symposion, 2002), 339.

21 Kristensson Uggla, *Kommunikation på bristningsgränsen*, 238.

22 Ibid.

23 Bengt Kristensson Uggla, *Ricoeur, Hermeneutics and Globalization* (New York: Continuum, 2010), 28.

24 Paul Ricoeur, *From Text to Action: Essays in Hermeneutics II* (Evanston: Northwestern University Press, 1991), 270.

by dominant ideology. To Habermas, oppression occurs in the "sphere" of communicative action where language is distorted on the basis of the terms established by the dominant power—for example, through tradition and history writing. Hermeneutics cannot detect this distortion if it cannot develop an *explanatory* critical perspective, Habermas argued. This understanding supports Ricoeur's assertion that critique is fundamental to the goals of keeping communication open and of enhancing the tension needed to generate new meaning. Ricoeur thus proposes a fusion between the critical attitude of Habermas's focus on *explaining* and the interpretative approach of Gadamer's aim for *understanding*. To achieve this move, Ricoeur has to rearrange the understanding of hermeneutics in four interrelated ways.

First, "distancing" can be seen as a prerequisite for interpretation rather than as it's opposite. Indeed, the fixation of the text is a kind of distancing from the "original" meaning already there—"… the world of the text may explode the world of its author"[25]—making an infinite number of readings or interpretations possible in new socio-cultural contexts. In other words, distancing was in a sense already there in Gadamer's hermeneutics. Second, to overcome the devastating dichotomy between explaining and understanding, hermeneutics has to move its discourse from the work back to the practice—from the text to the act of writing (or, for example, from the designed object to designing). Third, when departing from practice instead of from text or work, it is vital to emphasize "poetic redescription" within the process of hermeneutics. To illustrate, the use of metaphorical deliberation enhances the potential to open up the meaning of the text (or artifact) in relation to what is external to it—to let the text open a "world" (or many) "in front" of it.[26] Fourth, the subject needs to be rearranged. As Ricoeur articulates it, "To understand is not to project oneself into the text but to expose oneself to it; it is to receive a self-enlarged by the appropriation of the proposed worlds that interpretation unfolds."[27] To receive thus becomes the dialectic counterpart to distancing; to receive also means to surrender the notion of an inert self.

Gadamer saw thrownness as an essential to the practice of interpretation; we might also relate the concept of thrownness to the *result* of the practice, as Ricoeur proposes. The design, or the poem, or the "other" is also something that is "thrown into the world" as a proposal to be interpreted, and thus it holds the capacity to open up new worlds. If we then combine the poetic reference and the ability to rewrite reality with a critical perspective, we gain a subversive "… mode of the possible, or better, of the power-to-be …;" "… therein resides the subversive force of the imaginary."[28] This perspective resonates with design practice as understood by, for example, design theorist Håkan Edeholt,

25 Ibid., 298.
26 Ibid., 300.
27 Ibid., 301.
28 Ibid., 300.

who suggests that the innovation potential in design is to propose how things "might be."[29] For understanding design practice, Ricoeur's critical hermeneutics and his metaphor of the hermeneutic spiral thus provides an even richer metaphor and concept than Gadamer's historical hermeneutics and circle. Taken together, the four ways in which Ricoeur rearranged the understanding of hermeneutics correspond precisely with the two gaps found in Gadamer's historical hermeneutics.[30] While Gadamer's circle and fusion of horizons suggest an inwardly centering and potentially conserving dialectic also found in the metaphor of reflection,[31] Ricoeur's spiral integrates both a centering movement of reflection and a decentering movement of communication with others via manifested and poetically rich interpretations: for example, designed objects that are open to yet new interpretations in ever new iterations.

Ricoeur's Critical Hermeneutics in Relation to Established Design Theory

Adopting the metaphor of reflection and considering "problem setting" rather than problem solving, as Schön did, is to take a giant leap toward explicitly discussing meaning. Here, Coyne and Snodgrass's Gadamer-inspired understanding of the "reflective conversation" further deepens Schön's contribution. However, as the previous sections show, Gadamer's interest was first and foremost in how relevant interpretations are made of existing texts—not in the practice of creating new meaning. This mismatch with design practice, which is engaged in active interpretation of situations to manifest new meaning in designed objects (and services), revealed two missing and intertwined dimensions of design work: critique and poetic redescription. Ricoeur explicitly introduces these dimensions to hermeneutics with the notion of the hermeneutic spiral. If we now take a look at design theory from this new vantage point, what does it say about some common themes?

First, from a hermeneutic perspective, the notion of the problem is fundamentally challenged. As Coyne has argued, a more postmodern understanding grants that even the "tame" problem is wicked.[32] In other words, design situations are more or less inherently "open." The social dimension of open projects means that the designer has to deal with complex "assemblages" of more or less articulated meanings, material artifacts, embodied experiences, and more.[33] These assemblages could be seen as an expansion of Schön's "design domains," which "… contain the names of elements, features, relations, and actions and of norms used to elevate problems, consequences, and implications."[34] Further, these collections are often paradoxical and may have the quality of a dilemma or mystery and be characterized by their "excess of meaning," to use Ricoeur's terminology. As a result, even the concept of the "wicked

29 Håkan Edeholt, *Design, innovation och andra paradoxer: Om förändring satt i system [Design, innovation and other paradoxes: About systematic change* (my translation)] (Göteborg: Chalmers University of Technology, 2004).

30 I identified these gaps when I applied Gadamer's historical hermeneutics to three empirical design cases, also mentioned in note 46.

31 See, for example, Donna Haraway, *Modest-Witness@Second-Millenium* (New York: Routledge, 1997).

32 Richard Coyne, "Wicked Problems Revisited," *Design Studies* 26 (2005): 5-17.

33 See, for example, Nigel Cross, *Designerly Ways of Knowing* (London: Springer Verlag, 2006), who acknowledges that "… designers are immersed in material culture," or Verganti, *Design, Meanings and Radical Innovation*, 2008, who argues that designers as interpreters engage in the "design discourse," which includes socio-cultural perspectives on design.

34 Schön, *The Reflective Practitioner*, 96.

problem"[35] seems insufficient. It neglects the fact that what is deliberated in design is often not so much a problem, but rather is a typical human situation where inspiration can be found in almost anything that is intriguing. This understanding also expands Schön's discussion of problem setting and problem solving to more explicitly enhance meaning.

Second, to accept this meaning-oriented understanding of design situations implies that the interpreter is inevitably situated in such complex assemblages of meanings.[36] To understand design practice in these situations, Claude Lévi-Strauss's notion of "bricolage" might be useful.[37] Lévi-Strauss devised the bricolage metaphor to describe how myth-making and the generation of knowledge in pre-scientific cultures seems to be a bricolage (i.e., collage) of an already existing and more or less coherent or ruined heritage. In other words, situatedness is in no way an obstacle to finding *new* meaning; in fact, quite the opposite—it is a prerequisite. In addition, as Derrida proposed in a response to Levi-Strauss's notion of the Engineer as a symbol of the modern civilized ideal, even the notion of the Engineer is a myth generated by the Bricoleur. Or in other words, not even "scientific" cultures are as rational as they may seem.[38] The metaphor of bricolage thus resonates with Gadamer's argument that being situated in the "history of effect" cannot be avoided. It also resonates with his idea that prejudice and fore-meaning cannot be avoided in interpretation. Prejudice is tied to and operative in everyone's own horizon of understanding, and it has to be constructively engaged in interpretation as a willingness to expand our own understanding and to be open to the possibility of the "fusing of horizons"—to the understanding of something else or of the other. Schön's Quist and Petra case did not really discuss this dynamic and the matter of prejudice, although his notion of "repertoire of domains"[39] seems to be similar to pre-understanding (but more objectively oriented). Such aspects have also been discussed, for example, by Darke as "primary generators"[40] and by Buchanan as "placements."[41] These scholars frame primary generators and placements as preference-oriented design tools—approaches made both inevitable and necessary by a hermeneutic perspective.

Third, to accept the involvement of the self in interpretation means also to acknowledge that the self evolves in these processes—so that a "richer self may be received," in Ricoeur's words. In this perspective, designing is as much a process of learning as of generating a design outcome. The designed object can even be seen as a secondary manifestation of this process of learning, if we for a short while bracket our understanding of design as being about the resulting object (or service, etc.). This perspective also reflects Gadamer's thought of *Bildung* as important—not so much as something that you have to better understand, but rather

35 Horst W. J. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Planning* 4 (Amsterdam: Elsevier Scientific Publishing Company, 1973): 155-69.

36 This understanding also corresponds with Krippendorff's understanding of design as "making sense of things" (Klaus Krippendorff, "On the Essential Contexts of Artifacts, or on the Proposition that 'Design is Making Sense (of Things),'" *Design Issues* 5 (1989): 9-39.

37 Claude Lévi-Strauss, *The Savage Mind* (Chicago: The University of Chicago Press, 1966). See also Louridas Panagiotis, "Design as Bricolage: Anthropology Meets Design Thinking," *Design Studies* 20, no. 6 (October 1999): 517-35.

38 Jaques Derrida, *Writing and Difference* (Oxon: Routledge, 1978), 360.

39 Schön, *The Reflective Practitioner*, 98.

40 Bryan Lawson, *How Designers Think: The Design Process Demystified* (Oxford, UK: Architectural Press, 2006), 46.

41 Richard Buchanan, Wicked Problems in Design Thinking," *Design Issues* 8, No. 2 (Spring 1992): 5-21.

as something that that you *live: Bildung* as a process that makes understanding possible, as a process of being shaped or of *becoming* (as the German word connotes).

Fourth, all interpretation calls for an emphasis on the question, according to Gadamer: "A question places what is questioned in a particular perspective. When a question arises, it breaks open the being of the object…"[42] Questions here are those that emerge from "wondering"—from an honest wish to *understand* in a phenomenological sense.[43] When Gadamer discussed questions, he saw them as parts of a process of intimacy with the work, where "Zugehörigheit" (belonging) must not be lost. Quist's sketchings in teaching Petra may be seen as just such an intimate situation. However, neither Schön nor Gadamer explicitly discussed the necessity of also maintaining a critical position through distancing. Schön did indeed suggest that "reflection-on-action"[44] was important, but more from the point of improving practice than to understand the engaged situation. He also showed how framing and reframing is fundamental to the "conversation with the situation," but this iterative process in my mind does not capture the full tension experienced in a critical dialectic and how it can help provoke and establish new understandings and meanings. In the empirical cases that have inspired my Ricoeur-influenced perspective,[45] it was clear that critical and distanced questioning was essential, and as Johansson and Svengren Holm have shown through empirical research on the work of industrial designers, a critical perspective seems fundamental to any design practice that wishes to propose solutions "outside the box;"[46] and where from a hermeneutical perspective, "the box" is efficiently shut by a problem-solving perspective that does not acknowledge a meaning perspective. In other words, the tension between the phenomenological question and the critical *questioning* that resonates with Ricoeur's notion of a critical dialectic "at the heart of hermeneutics"[47] also seems relevant to design practice.

Fifth, although many design scholars have noted that metaphors can help to generate new ideas and to solve problems,[48] Ricoeur's notion of metaphor directs its attention to *understanding* rather than to problem solving and idea generation.[49] To Ricoeur, metaphors are at the root of how we understand the world, beyond "seeing-as," Lakoff and Johnson hold a similar view of "experiential metaphors" as deeply connected with experienced practice and embodied behavior.[50] In other words, while metaphors can help us see things in a new light and solve problems, as in Schön's notion of the "generative metaphor,"[51] they also are active in establishing *new* meaning that may be (partially) solidified in objects. Metaphorical deliberation might thus be seen as an ongoing process of open communication and poetic creation of

42 Gadamer, *Truth and Method*, 362.

43 See, for example, Max Van Manen, "Practicing Phenomenological Writing," *Phenomenology + Pedagogy* 2, no. 1 (1984): 36-69.

44 Schön, *The Reflective Practitioner*, 61.

45 For details, see Marcus Jahnke and Lena Hansson, "Innovation of Meaning Through Design – An Analysis of a Gender Bending Design Process," *Design Research Journal* 2, no. 10 (2010): 26-33.

46 Ulla Johansson and Lisbeth Svengren Holm, *Möten kring design: Om relationer mellan design, teknik och marknadsföring [Meetings of Design: On relations between design, technology and marketing (my translation)]* (Lund: Studentlitteratur, 2008), 41.

47 See note 15.

48 See, for example, Krippendorff, *The Semantic Turn*; Lawson, *How Designers Think*; and Tom Kelley, *The Art of Innovation* (New York: Doubleday, 2004).

49 Paul Ricoeur, *The Rule of Metaphor: The Creation of Meaning in Language* (London: Routledge, 1977).

50 Lakoff and Johnson, *Metaphors We Live By*, 154.

51 Donald A. Schön, "Generative Metaphor: A Perspective on Problem-Setting in Social Policy," in *Metaphor and Thought*, ed. Andrew Ortony (Cambridge, UK: Cambridge University Press, 1993), 137-63.

new meaning so that some objects—even in design (and often in art)—may be inherently metaphorical in nature and open up to yet new interpretations.

Sixth, although I started out by questioning the problem-solving metaphor for understanding design, the question of whether a focus on meaning might obscure problem solving in design bears asking. In the empirical projects that have inspired my interest in the philosophy of Ricoeur, practical problem solving has abounded, even though the resulting conceptual artifacts were oriented more toward asking questions and providing new and unexpected experiences. The point is that all the problem solving occurred *within* a process of seeking an evolving meaning. Interestingly, this experience corresponds with research in science and technology studies indicating that science and technology development is not as rational as it may seem.[52] Imagination, metaphor, experiences, and other "irrational" thinking are necessary to coming up with new scientific concepts and innovations. What emerges is not an eradication of objectivity and problem solving, but a reversal of the relationship between problem solving and interpretation, particularly when wicked or ill-structured situations are concerned. Considering the strong position of the rational problem solving school of thought in industry and society, the risk that a focus on meaning would replace rational problem solving is minimal. However, a hermeneutic perspective might help lift the veil to reveal the fact that even the sudden idea that may solve a problem comes out of a process of interpretation and deliberation of meaning.

"The real nature of the sudden idea is perhaps less that a solution occurs to us like an answer to a riddle than that a question occurs to us that breaks through into the open and thereby makes an answer possible. Every sudden idea has the structure of a question."[53]

Conclusion

This article contributes to Coyne and Snodgrass's notion that design can be understood as a hermeneutical practice and that the metaphor of the hermeneutic circle reveals things that the dominant problem-solving metaphor seems to cloud—especially aspects that correspond to the lived experience of designing. In the process I have highlighted three areas in Schön's theory of reflection-in-action that needed further exploration. Here, Hans-Georg Gadamer's historical hermeneutics helps to deepen the understanding of the "conversation with the situation." However, this lens falls short of describing both critical distancing and the poetic re-description through metaphorical deliberation that is necessary for the ability to manifest new meaning in design practice. Ricoeur's critical hermeneutics and communicative philosophy achieve an even better fit by articulating the practice rather than

52 See, for example, Mary B. Hesse, *Revolutions & Reconstructions in the Philosophy of Science* (Brighton: The Harvester Press, 1980), and Bruno Latour, *We Have Never Been Modern* (Cambridge, MA: Harvard University Press, 1993).

53 Gadamer, *Truth and Method*, 366.

the work, and by using the metaphor of the hermeneutic spiral, which keeps the tension alive between critique and interpretation, distance and closeness, epistemology and ontology, so that interpretation opens the work to the world via the notion of poetic practice.

The contributions by Schön, Gadamer, and Ricoeur should not be seen as conflicting—in fact, quite the opposite. Taken together, they make a strong case for understanding design as a practice where new meaning, as well as new ingenious practical solutions, can emerge through a process of interpretation, and where more "rational" problem solving is inscribed within rather than define the process as such.

Acknowledgements
This article is dedicated to the memory of ethnographer Magnus Mörck.

Knowing Their Space: Signs of Jim Crow in the Segregated South

Elizabeth Guffey

Figure 1
Peter Sekaer, Movie Theater, Anniston, Alabama, 1935-6. Courtesy of Peter Sekaer estate.

"They had black, well it was "colored" back then, on one side and "white" on the other, and we had our place on the bus, we had our water fountains for coloreds and our bathrooms for coloreds . . . we figured that's just the way it's supposed to be."[1]

"Jim Crow" was a character portrayed by the black-face minstrel, Thomas "Daddy" Rice, whose stage performances in the 1830s and 1840s typified many whites' view of African-Americans throughout the nineteenth century. Jim Crow segregationist signs, believed to have been named for this character, are emblematic of southern white leaders' unrelenting effort to enforce African-American subservience after slavery was outlawed.[2] Spread across a vast region of the southern United States, these visual communications systems confirmed the re-marginalization of African Americans in the aftermath of the Civil War and subsequent Reconstruction. Four generations of Southern blacks endured Jim Crow laws; only now, some 50 years after the height of the Civil Rights Movement, are scholars beginning to examine the ubiquitous signage that kept this system of oppression in place.[3] Although these Jim Crow signs have

1 "Oral History Interview with Sheila Florence, January 20, 2001, Interview K-0544. Southern Oral History Program Collection (#4007)," http://docsouth.unc.edu/sohp/K0544/excerpts/excerpt_1126.html (accessed September 01, 2008).

2 Robert R. Weyeneth, "Architecture of Racial Segregation: The Challenges of Preserving the Problematical Past," *The Public Historian* 27 (Fall 2005): 11-44.

3 Elizabeth Abel, *Signs of the Times*, (Berkeley: University of California, 2010).

begun to be considered in spatial and semiotic terms, an important alternative is to view them through the lens of design history. Design historians have paid scant attention to Jim Crow signs as artifacts, or as parts of processes or systems, but doing so illuminates important aspects of the signs' function and appearance, examining how their style made them meaningful and authoritative. Even more important, when recognized as a feature of communication design history, they remind us how often design is used to enforce social regulation (see Figure 1).

To many blacks and whites living in the South, racial stratification might have seemed "just the way it's supposed to be." However, segregation and the signs that expressed it were consciously legislated and designed. Moreover, just as they were rarely considered by contemporary scholars and social critics of the time, they are rarely examined by design historians today. Nevertheless, these signs can also be read as an early and practical example of *wayfinding*. These signs confirm how design—whether of individual letterforms and or of complete signage systems—must always be involved in critical discourses of social, economic, and political power.

A Missing Design Legacy?

Jim Crow signs existed in the United States for nearly a century, but the signs themselves have utterly disappeared from public spaces. Even documentation of their once ubiquitous presence is rare. After scouring private and public archives, scholar Elizabeth Abel has uncovered little more than 100 photographs of these signs.[4] As Abel suggests, both the signs and the photos of them might have been destroyed after Jim Crow laws were overturned; most likely many of them were simply thrown away.

One likelihood is that the very ubiquity of such signage has worked against our remembering it today. As Abel notes, Jim Crow signs were considered "about as worthy of documentation as telephone poles or traffic signs, and typically appear, if at all, only in the background of the places or events whose documentation was the primary goal."[5] Despite their once pervasive presence in the American South, the little visual documentation left has led design historians to overlook this aspect of visual communications history. Nevertheless, Jim Crow signs illustrate how maps, signs, and other wayfinding devices, while providing critical information, also can pervade our consciousness and subconsciousness and subtly shape our choice of action.

Understanding Wayfinding

An outgrowth of urbanism and mass transportation, large-scale wayfinding systems have emerged in the postwar period. Architect Kevin Lynch's 1960 publication *The Image of the City* introduced wayfinding as a distinct field of study by analyzing how people

4 Ibid., 107.

5 Ibid.

Figure 2
Esther Bubley, Anonymous, A Greyhound bus trip from Louisville, Kentucky, to Memphis, Tennessee, and the terminals. Sign at bus station. Rome, Georgia, 1943. U.S. Farm Security Administration/Office of War Information, Prints & Photographs Division, Library of Congress, LC-USW3- 037939-E.

perceive, remember, think, speak, and solve problems while trying to navigate urban spaces. Building on Lynch's seminal work and noting that wayfinding is anything but static, designer Paul Arthur and architect and environmental psychologist Romedi Passini argue that wayfinding is more than generating a static mental map of a spatial situation: it is a form of spatial problem-solving based on understanding and comprehension. It involves knowing where you are in a building or an environment, identifying where your desired location is, and understanding how to get there. Successful wayfinding systems do not rely on architecture or barriers alone; instead, they require the consistent identification and marking of space. Often seen as essential to the design process, wayfinding today is applied to relatively small-scale projects, including rural hospitals in Nebraska, as well as to the planning of entire cities under construction in the Gulf states. Above all, wayfinding is conceived as a form of communications that guides the movement of large numbers of people, allowing them to perceive, engage and navigate through physical and conceptual space.[6]

Unfortunately in design studies today, wayfinding is a practice-driven field. Designers generally resort to a positivist conception of wayfinding that aims to protect wayfarers from the uncertainty that can occur when, in the words of geographer Reginald Golledge, "even momentary disorientation and lack of recognition of immediate surrounds" causes them to feel lost.[7] Passini, for instance, emphasizes how "wayfinding difficulties and disorientation are highly stressful even in benign cases when the user of a setting is merely confused or delayed. Total disorientation and the sensation of being lost can be a frightening experience and lead to quite severe emotional reactions including anxiety and insecurity…"[8]

Because wayfinding is deeply infused with an ardent positivism, linking the field with something so loathsome as racial segregation may seem unwarranted or even quixotic. Wayfinding today is intended to help, not hinder, an individual's passage. Arthur and Passini admit that "it is unlikely that a person will actually die from the stress of getting lost." With the result that "we have tended to downgrade this problem as being relatively unimportant."[9] In this study, I explore Jim Crow signage within the larger design tradition. As theorists like Kevin Lynch and practitioners like Otl Aicher were developing the beginnings of wayfinding thought and systems, this earlier, if only partial, system of wayfinding was being dismantled. Although the Jim Crow system predates the more modern ideas of wayfinding, its function and execution are best understood as an early example of the spatial decision making that wayfinding now represents (see Figure 2). Counter to Arthur and Passini's view, however, segregation signs were, in fact, part of a larger racial caste system that made them a life or death

6 With the 1960 publication of *The Image of the City*, (Boston: MIT Press, 1960) architect Kevin Lynch highlighted how individuals perceive, remember, think of, and describe public space. Based on "Perceptual Form of the City," a study funded by the Rockefeller Foundation and conducted at MIT with designer György Kepes from 1954 to 1959, Lynch's analysis of how people perceive, remember, think, speak, and solve problems while trying to navigate urban spaces introduced wayfinding as a distinct field of study.

7 Reginald G. Golledge, *Wayfinding Behavior: Cognitive Mapping and Other Spatial Processes* (Baltimore: John Hopkins University Press,1998), 5.

8 Romedi Passini, "Wayfinding Research and Design," in Jorge Frascara, *Design and the Social Sciences: Making Connections*," (New York: Taylor and Frances Press, 2002), 97.

9 Romedi Passini and Paul Arthur, *Wayfinding: People, Signs, and Architecture* (New York: McGraw Hill, 1992), 6.

issue. In the larger design context, segregation signage involves a complex negotiation—both guiding individuals and molding their behavior. Jim Crow signs clearly inscribe space, but what "way" did these signs help people to find?

Space and Jim Crow Geography

As the relatively recent development of critical geography has pushed geographers from studying landscapes and objects to examining the space around them, historians have begun to re-examine notions of segregation in the South. French sociologist and philosopher Henri Lefebvre studied the "production of space" as a largely theoretical construct.[10] A Marxian philosopher, Lefebvre argued that space can be social as well as geographical, and conceptions of space have a cultural and highly changeable basis. Insisting that conceptions of space can deny individuals' and communities' "rights to space," Lefebvre argued for greater understanding of the struggles over and meanings of space. Building on these insights, geographers have begun in the past 30 years to urge an examination of lived experience and the spaces that shape ordinary life.[11] In that light, scholars explore the evolution and effect of Southern segregation, noting that it reflects a complex constellation of issues revolving around racialized space. For example, Lawrence Levine suggests that slaves created a metaphorical separate space for their own cultural forms, and that "slave music, slave religion, slave folk beliefs—the entire sacred world of the black slaves—created the necessary space between the slaves and their owners and were the means of preventing legal slavery from becoming spiritual slavery."[12] Meanwhile, in *Making Whiteness: The Culture of Segregation in the South,* historian Elizabeth Grace Hale argues that segregationists in the twentieth century tried to establish not metaphorical but literal black and white spaces that shaped patterns of living; she sees this landscape of territorialism and exclusion as both driven and challenged by capitalist expansion in the South.[13] For Hale, "consumer culture created spaces—from railroads to general stores and gas stations to the restaurants, movie theaters, and more specialized stores of the growing towns—in which African Americans could challenge segregation. . . The difficulty of racial control over the new spaces of consumption, in turn, provoked an even more formulaic insistence on 'For Colored' and 'For White.'"[14]

More recently, Elizabeth Abel provides a rich discussion of segregation, examining for instance the "science" of racial difference; in doing so, she considers the Jim Crow signs and the rare WPA photographs that documented them as part of a semiotic system. Looking at archival photographs of the signs today, she argues, "we can chart the changing intersections among a specific disposition of racial terms, the angles of vision they afford, the photographic practices they enlist, the modes of resistance they

10 Indeed, Lefebvre introduces the notion of the production of space as something that "sounds bizarre, so great is the say still held by the idea that empty space is prior to whatever ends up filling it." Henri Lefebvre, *The Production of Space* (Oxford: Blackwell, 1991), 15.

11 This notion is linked to the German phenomenological concept that geographers have adopted of lebenswelt or "lifeworld." See J. Eyles, *Sense of Place* (Warrington: Silverbrook Press, 1985) and David Seamon, *Geography of the Lifeworld: Movement, Rest, and Encounter* (New York: St. Martin's Press, 1979).

12 Lawrence Levine, *Black Culture and Black Consciousness: Afro-American Folk Thought from Slavery to Freedom* (New York: Oxford University Press, 1977), 80.

13 Grace Elizabeth Hale, *Making Whiteness: The Culture of Segregation in the South, 1890-1940* (New York: Vintage, 1999).

14 Ibid., 125.

galvanize, and the critical perspectives they engage." While she focuses primarily on photography's "ostensibly neutral practice of observation," Abel strives to reveal "a more charged interaction with the cinematic camera, [as well as] a politically engaged photojournalism" that documents this signage. By concentrating on photographs of Jim Crow signs rather than on the signs themselves, Abel's analysis engages the process and purpose of photography; in so doing, she includes signage as one part of a larger "mode of expression" made by "public officials and private individuals, professional signmakers and amateur scribblers." She concludes that the photos of Jim Crow signs are a form of "American graffiti."[15] Meanwhile, the signs themselves, far from being a subversive form of public communication casually scribbled on abandoned walls, represent a particular aspect of a design tradition—one that not only involved intentional design, but that carried a power and intent that can be linked to larger legal systems (see Figure 1).

Jim Crow Law

Jim Crow laws were relatively rare before 1895, when the African-American Homer Plessy lost his Supreme Court suit against the State of Louisiana. Plessy's lawsuit was intended to bring attention to an 1890 Louisiana law that dictated segregated transport; ironically, the authority and publicity of the Supreme Court judgment helped concretize the concept of "separate but equal" spaces, providing firm legal footing for institutionalized racism in the United States. Southern segregation signs reflect a pervasive patchwork of local and state laws that formed a racialized order throughout the region.

In the decade following the Plessy ruling, state and municipal legislators throughout the South passed a spate of new laws that regulated daily life;[16] these mandates were so pervasive that the phrase "Jim Crow law" first appeared in the *Dictionary of American English* in 1904.[17] Many of the most prominent segregation laws dictated separate spaces on public transportation, including trains, streetcars, and trolleys. By 1909, 14 state legislatures enacted laws in which passengers were assigned separate coaches, compartments, or seats on the basis of race.[18] These laws were first enforced by conductors and ticketing agents, whose duties included maintaining segregated spaces; railroad companies could be fined as much as $100 a day for violating segregation laws.[19]

But Jim Crow legislation did not end there. By the time the United States entered into the First World War, laws in Southern states ordered racial segregation in marriage, education, and health care. Laws also molded the shape of daily life in other ways, as state and local prohibitions prevented different races from renting in the same building and required that movie theaters seat the races separately, that amateur baseball teams play on diamonds

15 See Abel's first chapter, "American Graffiti: The Social Life of Jim Crow Signs," 36.

16 For more on Jim Crow laws at the state level, see Pauli Murray (ed.), *States' Laws on Race and Color* (Athens: University of Georgia Press, 1997).

17 C. Vann Woodward and William S. McFeely, *The Strange Career of Jim Crow* (Oxford University Press, 2001), 7.

18 Richard Henry Boyd (ed.), *The Separate or "Jim Crow" Car Laws* (Nashville: National Baptist Publishing Board, 1909), 6.

19 North Carolina Railroads (ch. 60, art. 12, secs. 94-98, inclusive; secs. 101 and 103, and 135-37, inclusive).

Figure 3
Danny Lyons, Segregated Taxi, Birmingham, Alabama, 1960, Magnum Photos, NYC16911.

separated by two or more blocks, and that restaurants install partitions at least seven feet high between areas reserved for white and non-white diners.

In the post-Civil War South, reformers argued that transportation, education, and infrastructure would transform this impoverished region. Little did they anticipate, however, that the very trains, street cars, parks and hospitals that these reformers helped introduce and develop would become part of complex systems of racialized wayfaring. The rapid growth of cities like Atlanta shows just how closely Jim Crow segregation followed Southern urbanization. This emblem of the New South also became one of the most segregated cities in the nation. Jim Crow became the very public face of new civic ordinances that extended not only to public spaces under the city's jurisdiction (e.g., parks and libraries), but also to privately-owned ones like saloons and restaurants. Legislation mandated that black barbers could not cut the hair of white women or children under 14, and separate Bibles were required for white and black witnesses in the Atlanta court system. In cities like Atlanta and Birmingham, taxis had to be labeled by race "in an oil paint of contrasting color," and laws stipulated that drivers had to be the same race as their customers (see Figure 3).[20]

Separation of Public Space in the New South

For whites and blacks, most day-to-day activities in the American South were carried out in racialized space. Mark Schultz notes,

20 Woodward and McFeely, 116.

however, that race relations in the rural (as opposed to urban) South were marked by a "culture of personalism," which shaped racial interaction on the basis of close relations and custom, rather than on the law.[21] In these settings, Jim Crow space was rarely labeled; tradition alone, for instance, clearly dictated that blacks were to step aside for passing whites on a sidewalk. Many small towns enforced Saturdays as "Black People's Day," when town business districts were given over to weekly shopping trips by African Americans flush with Friday paychecks. County fairs often sold tickets marked "colored" to African Americans, and they would be open to whites on Tuesdays through Fridays, thus leaving Saturdays for blacks. Wilhelmina Baldwin, a teacher from Waynesboro, GA, remembered that the entire town became white after dark: "They also had a curfew for blacks. If you were just a run-of-the-mill black, your curfew was at 9:30. If you were, you know, what they called an educated black, you could stay out 'til 10:30. If you stayed out beyond 10:30, you had to have a written statement from the chief of police."[22]

Because race relations were relatively settled in less densely populated rural and farming districts, wayfinding systems in these areas were often unnecessary. Most residents living in these small communities were born there, and few feared getting lost, either in physical or social terms. Outsiders who stumbled into small and often isolated towns could read the unwritten signs that signaled segregation. George Butterfield, an African-American Supreme Court judge and then congressman in North Carolina, noted that, "when you live in the South and have been in the South all your life, you could find [places to eat and sleep] instinctively."[23]

Nevertheless, as the towns and cities of the new urbanized South grew, residents encountered unfamiliar problems; here, where strangers could casually meet and interact, traditions were not established. Complex racialized spaces had to be negotiated, and expectations for behavior had to be articulated. Restaurants frequently erected wood screens through their dining rooms, and train cars were sometimes designed with panels that divided carriages into two distinct compartments; in a Virginia courthouse and along a South Carolina swimming shore, ropes separated the black and white sections of the court and the beach.[24] And, as architectural historian Tim Weyeneth has demonstrated, large-scale building projects increasingly dictated the terms and conditions of racialized space[25] as specifically-designed schools, libraries, hospitals, mental hospitals, homes for the aged, orphanages, prisons, and cemeteries were built across much of the South in the first half of the twentieth century. In Richland County, SC, for instance, the 1940s remodeling of Columbia Hospital by Lafaye and Associates included the construction of a smaller, separate hospital two blocks away from the main, whites-only complex.[26] When building such

21 Mark Schultz, *The Rural Face of White Supremacy: Beyond Jim Crow* (Urbana: University of Illinois Press, 2005), 6.

22 Wilhelmina Baldwin, Duke University archive. See also James W. Loewen, *Sundown Towns: A Hidden Dimension of American Racism* (New York: The New Press, 2005).

23 George Kenneth Butterfield, oral history interview, July 19, 1994, Behind the Veil project, use tape 12, tray C, Tuskegee, AL., Rare Book, Manuscript, and Special Collections Library, Duke University.

24 Weyeneth, 21.

25 For more on exclusion in Southern architecture, see Weyeneth, 13-15.

26 Weyeneth,16.

completely separate spaces was deemed too costly or otherwise inefficient, structures were commonly designed to include both separate and shared spaces under a single roof. Hospitals, for instance, would have segregated wings, public housing would be divided into separate districts or even units, and public parks were fenced or roped into grounds and facilities designated as "white" or "colored."

Although no urban planner designed fully segregated cities, architects clearly planned buildings that not only included separate black and white spaces but also ensured segregated routes for finding those spaces. For example, architectural drawings of cinemas designed by Erle Stillwell in North Carolina, reveal not only separate African-American seating areas but also carefully planned systems of diversions, including entrances (for a similar configuration, see Figure 1), and passageways explicitly designed to lead non-whites away from white-designated spaces.[27] When Stillwell designed Raleigh's Ambassador Theater in 1938, he planned for African Americans to enter the building at a side entrance. Patrons climbed a discrete staircase that led them to a landing housing what Stillwell's plans called the "colored" box office. Up another flight of stairs, African Americans could find toilets, a small room for the use of "colored ushers," and balcony seats.[28]

Although the Ambassador Theatre was torn down in 1979, the relatively complex passage by which African Americans entered the movie house from the street, then found the "colored" box office, then found their seats and separate facilities suggests just how byzantine Jim Crow wayfinding could be. Recalling a less carefully planned theater in Waynesboro, GA, Wilhemina Baldwain described exiting a matinee showing of a film in the late 1930s; white patrons insisted on not even seeing African Americans who'd attended the same show. "There was usually nobody there. We'd go to the ticket window, buy our tickets, and go upstairs (to the segregated seating for blacks). And likewise there was nobody there when we would come out. Well, one day there was a little white boy. . . eight or nine years old. . . he was standing there, with his hands across the door. . . and so when we got to the bottom of the steps I said 'excuse me please.' He said 'Niggers can't come out till the white people get out.'" At least a decade older than the boy, the movie-going Baldwin talked the boy down but recalled seeing other African Americans obeying his directions.[29]

Blocked doors, the construction of isolated buildings and the erection of barriers were useful but only effective for a limited time to segregationists. Similarly, duplicate architectural features such as entrances, exits, elevators, and stairwells, might have served immediate racist ends. However, if they lacked specific labels to indicate their function, such structural elements lost their significance.

27 *Going to the Show* (www.docsouth.unc.edu/gtts) is a digital library project that documents and illuminates the experience of movie-going in North Carolina between 1896 and 1930. It should be noted that women, too, were segregated from men in a similar way. And, as Elizabeth Abel notes in "Bathroom Doors and Drinking Fountains: Jim Crow's Racial Symbolic," *Critical Inquiry* 25 (Spring 1999): 448, court rulings "endorsing separate car laws often cited gender separation as a model for racial segregation." For example, the state Supreme Court of Pennsylvania cited the analogy of the 'ladies' car,' which is 'known upon every well-regulated railroad' and whose 'propriety is doubted by none.'"

28 The pressure to accomplish this separation was clear; as a point of pride, many theaters explicitly advertised themselves as "white" theatres. Those theaters that did admit blacks rarely stated so, but even they abided by norms of racial segregation. If provided at all, seating for African Americans was usually relegated to theater balconies; railings or other barriers were commonly installed to separate shared balconies. For more, see Robert Allen, "Going to the Show: Mapping Moviegoing in North Carolina, Documenting the American South, http://docsouth.unc.edu/gtts/index.html (accessed November 27, 2010).

29 Oral History Interview with Wilhelmina Baldwin, July 19, 1994, use tape 12, tray C, Tuskegee, AL, Behind the Veil project.

When President Franklin Roosevelt inspected the construction of the Pentagon in Arlington, VA in 1941, he questioned the inclusion of "four huge washrooms placed along each of the five axes." The astonished president, a native of New York, was informed that Virginia's segregationist legislation "required as many rooms marked 'Colored Men' and 'Colored Women' as 'White Men' and 'White Women.'" Military officials, heeding larger issues of waste and inefficiency, ultimately disregarded the local law; signs were never mounted on the doors and the duplicate spaces lost their initial meaning.

Finding the Way to Jim Crow Space

While Arthur and Passini suggest that wayfinding is a form of spatial problem-solving, they insist that successful wayfinding systems do not rely on architecture or barriers alone; instead, they require the consistent identification and marking of space. Without signage, the Pentagon's Jim Crow bathrooms lost their meaning. Reading the plans of Raleigh's Ambassador Theater, with its carefully designated "colored box office" and room for "colored ushers," makes clear how the architect created a labyrinth of passageways that guided African-American customers away from whites. But without labeling, the theater's maze of passageways would have been incomprehensible.

As a field, wayfinding was in its infancy when Jim Crow laws and signs were at their height. However, as the older Jim Crow signs make clear, by the early twentieth century, public signage could construct complex systems when supported by custom and law. Of course, segregation was so pervasive a system that whites also abnegated a degree of freedom by embracing it. They, too, arranged their shopping around "black days" in town and avoided taking colored taxis. Jim Crow signage dictated both white and black space. The white writer and sociologist Kathryn DuPre Lumpkin recalled, "as soon as I could read, I would carefully spell out the notices in public places. I wished to be certain we were where we ought to be. Our station waiting rooms—'For Whites.' Our railroad coaches—'For Whites.'" White passengers could be ejected from trolleys and buses when they chose to sit in the back rows. Jennifer Roback, for instance, points to the case of J. M. Dicks, a white Augusta, GA ironworker who violated state segregation ordinances by insisting on sitting in the back of a streetcar in May 1900. Arrested by the train's conductor, Dicks explained to the court "When I got off from work yesterday afternoon I was feeling tough and looking tough. . . . I saw some ladies up ahead and did not want to sit by them looking like I was."[30] Calling the conductor a "d--- fool," the passenger was faced with a perplexing situation: violating social custom on the one hand or transgressing the law on the other.

30 Jennifer Roback, "The Political Economy of Segregation: The Case of Segregated Streetcars," *The Journal of Economic History* 46 (December 1986): 902.

Despite the limits that also affected them, whites—especially men—were often accorded a degree of flexibility in infringing on segregated spaces. For example, where African Americans were strictly prohibited from whites-only passenger cars on trains, the colored cars could double as smoking cars (for whites) or as spaces where the white crew could lounge and relax. Ticketed white passengers could pass through the Jim Crow cars, but African-Americans were often prohibited from walking through those set aside for whites. Indeed, public space was often deemed "white" by default, unless otherwise designated.[31]

Even when signage clearly circumscribed white behavior, the legal system often treated white's infractions lightly. For instance, when a municipal judge heard the case of J. M. Dicks, the Augusta, GA ironworker who insisted on sitting in the colored section of a city street car, the judge publicly belittled the conductor and arresting officers for their lack of judgment and dismissed the case.[32] Jim Crow signs dictated the decisions and actions of both black and white Southerners, but there was no doubt who ultimately held power in these situations.

Decision-Making in a Jim Crow World

Especially for African Americans, finding the way to one's "own" space in the Jim Crow South clearly could be a complex and counter-intuitive process. However, failing at it also carried high stakes. While theorists today describe wayfinding as a process that can keep people from being lost and afraid, in the Jim Crow South, mistaking a turn or using the wrong facilities could result in violence or death.

Passini suggests that wayfinding involves a hierarchy of decision making that begins long before an individual starts to move through space. Choosing a destination—that is, deciding to move from point A to point B—is a high-order decision. The scale of the trip is unimportant; the resolutions to shop at a store down the street or to take a trip across the country both reveal that a high-order decision has been made. In the South, the very choice of where one could and could not go was complex; a host of semi-public spaces (e.g., white churches, beauty parlors or funeral homes) were simply off limits to blacks. Indeed, most African Americans in the rural South relied not only on signs but also on a series of learned codes of conduct, habituated through years of living in racialized space and passed from one generation to the next. This learning was part of what black activist and academic Cleveland Sellers calls a "subtle, but enormously effective, conditioning process. The other people in the community, those who knew what segregation and Jim Crow were all about, taught us what we were supposed to think and how we were supposed to

31 As Tim Weyeneth notes, "much of the time signage was unnecessary because white space was commonly recognized and acknowledged by both races. The white university and the white library had no need to post a sign. No black man traveling to a southern city would seek to stay in its major hotels. In a small town everyone knew that the white doctor did not welcome black patients into his office." Weyeneuth, 14.

32 As a municipal judge, the magistrate who heard the case insisted that he didn't have the authority to enforce the state-wide segregation law (Augusta at this time was working on a city ordinance to the same effect, but it was still in proposal stages). Roback, 902-3, note 25.

act. They did not teach us with words so much as they taught us with attitudes and behavior. There wasn't anything intellectual about the procedure. In fact, it was almost Pavlovian."[33]

As an early, if incomplete, form of wayfinding, the Jim Crow spatial system complicates Passini's theory. In his view, wayfinders make high-order decisions in a sociological vacuum; but unlike Passini's empowered wayfinders, African Americans who understood the shaping of Jim Crow space automatically formed their higher order decisions around Jim Crow exclusion. Certain destinations were automatically off limits; others were simply avoided. Remembering these limitations, Wilhemina Baldwin recalled how her parents shielded their children, avoiding taking them to public spaces dominated by whites. "There were just certain things that we did not do," she recalled. "For instance, going to wherever we went out of town, they took us. We never had to go to the bus station for anything. Until I got to be 10 years old, they didn't take me to buy shoes. They bought my shoes. And if they didn't fit, they'd take them back and get another size. They bought the clothes for all of us like that. So we didn't get into the stores to have to deal with the clerks and whatnot."[34]

Planning Action in Jim Crow Spaces

African Americans in the Jim Crow South might have practiced a highly selective decision-making process, but as Passini reminds us, wayfinding involves more than choosing where to go. Having fixed a destination, the wayfarer then begins executing a series of lower level decisions that make that action possible. For most wayfarers, this planning involves designating a route and developing an action plan. Again, African Americans chose their routes with care. Long distance car trips through the South were often experienced as a gauntlet. African American wayfarers needed "exquisite planning," carefully weighing the need to stop for gas and food in segregated gas stations and restaurants, and often driving for three or four days without stopping, loading up on cold cuts and stuffing ice boxes and lard buckets full of ice to provide rudimentary air conditioning.[35]

Even planning simple routes around one's hometown could be fraught with peril, and many African Americans chose routes that avoided white spaces altogether. As Ralph Thompson recalled, his parents warily planned his childhood visits to Memphis. His mother, for example, took elaborate precautions to sidestep the "things that would be embarrassing, when they couldn't fight back. . . If we went downtown and they had the colored drinking fountain and white drinking fountain, my mother would always tell us to drink water before we left home. So we didn't get caught into drinking water out."[36] Dr. Charlotte Hawkins Brown ran the Palmer Memorial Institute, a missionary-funded school in Sedalia, NC, and

33 Cleveland Sellers, *The River of No Return: The Autobiography of a Black Militant and the Life and Death of SNCC* (Jackson: University Press of Mississippi, 1990), 10.

34 Oral History Interview with Wilhelmina Baldwin, July 19, 1994, use tape 12, tray C, Tuskegee, AL, Behind the Veil Project.

35 Isabel Wilkerson, *The Warmth of Other Suns: The Epic Story of America's Great Migration* (New York: Random House, 2010), 196.

36 Ralph Thompson interview, *Remembering Jim Crow: African Americans Tell About Life in the Segregated South*, William H. Chafe, Raymond Gavins, Robert Korstad (eds.) (New York: The New Press, 2001).

she taught her students to develop action plans that worked around Jim Crow restrictions. Taking her students to the movies, for example, she'd rent the entire cinema for the day and avoid the segregated upper balcony.[37] But no amount of careful planning could erase the ubiquitous presence of the signs that shaped the very environment in which African Americans lived their daily lives.

Wayfinding in Action: Lower Order Decisions

Indeed, in the Jim Crow South, signs were used to separate the races on a limited, local level, room by room, seat by seat. Segregation was most tangible when confronted in person, as a wayfarer moved toward his or her destination. Moreover, even if an African-American bus passenger momentarily mixed with white passengers on a crowded platform, that passenger would constantly remain aware of the larger spatial system intended to eventually isolate him or her in a specific section of the bus itself or station.

According to Passini, a journey is begun with a high-level goal but enacted by low-level decisions. Wayfaring, comprising simple actions like "walk down the hall" or "open this door," combines observation of local features (e.g., stairs and doors) with previous acquaintance with a space (e.g., earlier instructions or consultations with a map or guide). As Reginald G. Golledge notes, this navigation can be a "dynamic process;" as the wayfarer absorbs information from the environment, his or her original action plan is "constantly being updated, supplemented, and reassigned."[38] Finding one's way through streets and intersections or corridors and stairs may seem relatively simple; for most wayfarers, deciding what turn to take or which stair to follow, or choosing whether to continue or to stop and acquire information from the environment is clear and negotiated with relatively little thought. Navigating a route in the Jim Crow South, however, required African Americans to maintain constant vigilance.

Jim Crow signs exerted their most devastating power at precisely this level, consistently challenging and deflecting African Americans' action plans. Indeed, higher level destinations could be chosen while knowing where one would and would not be welcome. However, confronted with "white only" trains and waiting rooms, African-American wayfarers were faced with immediate lower level decisions. Segregation signs in the South filled multiple roles, but in wayfinding terms, they can be broken into two general types: identification signs and directional signs.

Identification Signs

Often called "the building blocks of wayfinding,"[39] identification signs mark out spaces by displaying their name or their function. Since the mid-nineteenth century, in rapidly growing cities like New York and London, public signage proliferated, labeling space

37 Charles Weldon Wadelington, Charlotte Hawkins Brown and Palmer Memorial Institute: What One Young African American Woman Could Do (Chapel Hill: University of North Carolina Press, 1999),186.

38 Golledge, 7.

39 Ibid., 48.

and addressing passersby.[40] Simple labeling techniques (e.g., posted street names and addresses, room numbering signs, name plates, and other forms of labeling) became ubiquitous in the United States after the Civil War. But the marking of Jim Crow space was more specific and relied on fairly consistent terms of identification. Clearly understood labels like "colored only" and "whites only" were most common, although some relied on more cursory words, such as "white" or "black." Such signs routinely rerouted travelers.

Directional Signs

Coupled with exclusionary phrases, like "Whites This Way" or an arrow with the words, "Colored Dining Room in Rear," Jim Crow signs not only identified, but also directed. Usually mounted on walls or placed overhead, directional signs dictated who could drink at which water fountain or where to sit in a restaurant (see Figure 4).

These directives could also be complex, involving a sequential process of multiple decisions, such as entering a train station through the "right" door, buying a ticket at the "right" window, finding the "right" waiting room, moving from that waiting room to the "right" platform, then finding the "right" train car. At this time, signage systems meant to control behavioral actions (e.g., turning left or going up stairs) were still in their infancy. But simple graphic prompts, such as prominent arrows or the Victorian letter jobber's pointing finger, or manicules still had the power to shape decisions.[41]

Jim Crow Laws as Signage: Substance and Make

The Jim Crow system may seem monolithic today, but it was actually held together through a patchwork of legislation, and it varied not only from state to state, but even from town to town. While individual signs could convey an indisputable authority, it took time for them to develop a consistency that would resemble a carefully planned wayfinding system developed by designers. Essentially, segregation signage filled multiple functions; at once, it indicated the existence of laws intended to guide individual behavior, it educated both whites and blacks about where they should and should not be, and it served as references for train conductors, police officers, and other authorities in case of confusion. Some Jim Crow legislation specifically called for signage to be installed and these statutes often dictated such particulars as the size of the lettering, the medium, and the placement. For example, to "promote comfort on street cars," a 1905 Tennessee law, authorized "large signs shall be kept in a conspicuous place,"[42] meanwhile, a 1904 Mississippi law ordered street car signs to be 8x12 inches in size.[43] While legislation sometimes dictated particulars in this way,[44] implementation was often left to municipalities,

40 David Henkin, "Word on the Streets: Ephemeral Signage in New York," *The Nineteenth-Century Visual Culture Reader* (New York: Routledge, 1994), 195.

41 Gillian Fuller, "The Arrow—Directional Semiotics: Wayfinding in Transit," *Social Semiotics* 12 (2002): 231.

42 Acts of Tennessee, Chapter 10 No. 87.

43 Laws of Mississippi, 1904, Chapter 99: 4060.

44 For example, in order to "promote comfort on streets cars," a 1905 Tennessee law, authorized "large" signs to be kept in" a conspicuous place," (Acts of Tennessee, Chapter 10 No. 87). Some laws were even more specific. A 1904 Mississippi law, for instance, ordered the size of street car signs to be eight by twelve inches high (Laws of Mississippi, 1904, Chapter 99, 4060).

Figure 4
Anon. Showing how the colour line was drawn by the saloons at Atlanta, Georgia. 1908, Courtesy of The New York Public Library. www.nypl.org.

local transit authorities, or individual business owners. It was not uncommon for individuals to go beyond the law by creating and placing signs on an ad hoc basis; for instance, no state or local law regulated the race of patrons using a Coca Cola machine at a sporting goods store in Jackson, TN, despite its being marked "White Customers Only!"[45]

Although Jim Crow signage clearly was part of an elaborate system that created separate Jim Crow spaces, the signs that made up this network varied in style and content; indeed, where wayfinding devices today aim to be uniform and predictable, Jim Crow signs were stylistically diverse. Dating from a period when graphic design was still coalescing as a self-identified profession, individual designers or firms were rarely associated with these communications. Initially Jim Crow signs were often the work of local or itinerant sign painters or skilled itinerants whose work included advertising murals and lettering on shop windows and vehicles. Many of these signs reflect their painters' pride in their craft; Jim Crow signage often includes decorative flourishes and other embellishments that seek to anesthetize the regulatory message. For example, the decorative sweeps and italicization of an Atlanta saloon sign from 1908 reflects a degree of elegance often displayed in late Victorian signage (see Figure 4); in this case the sign tries to integrate "white only" with the business's name, "Cohen & Union Beer." Similarly, a 1939 photograph of the sign for "The Gem Theatre: Exclusive Colored Theatre" reveals an ornamental italic subscript that reinforces both its Anglicized spelling "Theatre" and preferential description "Exclusive" (see Figure 5). In both these cases, the aestheticized letterforms seem to be an attempt to mask the blow of segregation by "prettifying" it, domesticating it, or at least making the regulatory message more palatable. The politesse of a hand-lettered sign on a North Carolina

45 See Library of Congress, Prints and Photographs Division, Visual Materials from the NAACP Records. Call LOT 13087.

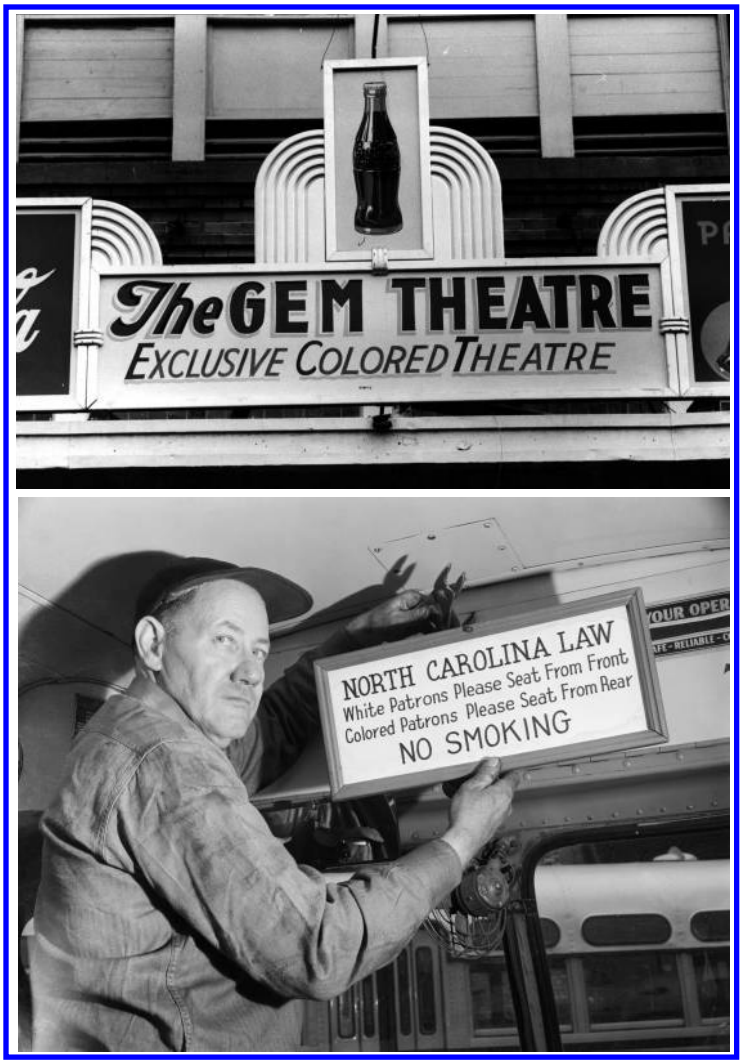


Figure 5
Russell Lee, Gem Theatre Sign, Waco, Texas, 1939, Courtesy of the Library of Congress U.S. Farm Security Administration/ Office of War Information, Prints & Photographs Division, Library of Congress, LC-USF33- 012498-M2.

Figure 6
Jack Moebes, Jim Crow sign being removed from a Greensboro, NC bus, in response to a court ruling, 1956. Copyright Jack Moeges/Corbis.

bus read "NORTH CAROLINA LAW/*White Patrons, Please Seat(sic) From Front/Colored Patrons Please Seat(sic) from Rear*/NO SMOKING" using an italic script to suggest an effort at elegance that matches the decorous use of "please" (see Figure 6). In some African-American owned establishments, however, such signage could be cursory and grudging. A haphazard collection of signs hanging on a mixed-use living quarters and juke joint for migratory workers in Belle Glade, FL, for example, includes one clearly hand-painted sign stuck off to the side, reading "COLORED ONLY," followed by the phrase "POLICE ORDER" (see Figure 7).

Institutionalization and Mass Production

In the early years of Jim Crow signage, the use of ink and paint was sometimes legally stipulated; an 1898 Tennessee law, for instance, insisted that such signs not only be placed in a "conspicuous place," but that they be painted or printed.[46] Widespread demand ultimately led to the mass manufacture of Jim Crow signs, and

46 Acts of Tennessee, Chapter 10 No. 87.

Figure 7 (left)
Osborne, "Colored Only: Police Order," Belle Glade FL, 1945, Copyright/Corbis.

Figure 8 (right)
Russell Lee, "Man drinking at a water cooler in the street car terminal, Oklahoma City, Oklahoma,"1939, Courtesy of the Library of Congress U.S. Farm Security Administration/ Office of War Information, Prints & Photographs Division, Library of Congress, LC-USZ62-80126.

by the 1940s, such signs were standard retail products commonly available at national chains (e.g., Woolworth's and Western Auto), as well as at local home supply and hardware stores throughout the South. The manufactured signs were quite different from the hand-drawn and -painted signs of a generation earlier, tending toward the utilitarian rather than the decorative; they were more matter-of-fact rather than persuasive (see Figure 8). Moreover, as wayfinding devices, they were not as descriptive and provided less explicit directions for users. William Kennedy, a journalist for the *Pittsburgh Courier,* reported from Jacksonville, FL in 1961, that "best sellers" were the "catch-all plain race labels, which could be tacked on any door" and simply read "white" and "colored."[47] While most manufactured signs were produced with standard industrial printing processes, including offset lithography and silkscreen, Jim Crow signs were also customized with stencils and vinyl letterforms and were printed on more permanent materials, including metal and porcelain. At the new Tennessee Valley Authority headquarters, for instance, an imposing "WHITE" sign was crafted in metal and installed above public water fountains, conveying a tangible sense of institutional authority. While the sans serif letters were clearly influenced by the spare, unadorned typographic forms of the emergent Modernist movement, their function was utterly antithetical to the egalitarian, even utopian, goals that drove designers such as Jan Tschichold and Herbert Bayer to develop typefaces that would promote universal legibility.

The tradition of hand-made, and especially painted, Jim Crow signs continued until the Civil Rights movement obviated the entire system in the early 1960s. Nevertheless, as mass-produced signs became more and more common, the increasing consistency of segregation signs' appearance began to convey a kind of uniform identity, flatly assigning races to different spaces. Nevertheless, this increasing uniformity was misleading: the South's segregation laws and customs were inconsistent and

47 William Kennedy, "Dixie's Race Signs 'Gone with the Wind,'" *Reporting Civil Rights* 1 (New York: The Library of America, 2003), 627.

inconsistently applied; in addition, the signs' authoritative appearance belied a system of racializing space that, while pervasive, was far from universally understood.

Ambiguous Spaces and Incomplete Wayfinding Systems

Jim Crow segregation differs from latter-day wayfinding in several notable ways. While Passini defines wayfinding as "essentially congruent with universal design" and a formal desire for inclusiveness, Jim Crow signage was dictated by racial exclusivity.[48] Moreover, the Jim Crow system was held together through a diverse hodgepodge of legislation that varied not only from state to state, but even from town to town. The patchwork of laws was essentially reflected in the many different forms of graphic expression; the style, content, and materials used to make Jim Crow signage were wide-ranging. There was no consistent look to the signs until they began to be mass-produced. Finally, no one "designed" Jim Crow signs; indeed, the earliest signs predate modern notions of design and designer.

Not surprisingly, Jim Crow space was piecemeal and fraught with inconsistency. Some spaces (e.g., city sidewalks) proved impossible to formally regulate; rarely, if ever, was specific behavior or action in these areas dictated by signs. Similarly, while crowded train and bus depot platforms frequently included numerous "white" or "colored" signs designed to instill order in the spatial and social chaos, these spaces were often fluid, evoking both spatial and racial confusion. Indeed, the wayfinding signs sometimes added to the system's inherent dysfunctionality. Easily destroyed, moved, obscured from view or lost, the signs were anything but permanent, and the spaces they were designed to regulate remained transitory and amorphous rather than strictly defined and demarcated.

Some Jim Crow signs were even designed to serve dual purposes. Despite legal requirements to provide separate facilities for both races, some impoverished Southern towns could only purchase a single public water fountain; by default, such amenities were marked with a "whites only" sign. As Lillian Smith observed, however, "sometimes when a town could afford but one drinking fountain, the word *White* was painted over one side and the word *Colored* on the other. I have seen that. It means that there are a few men in that town whose memories are aching, who want to play fair, and under 'the system' can think of no better way to do it."[49]

Principal flashpoints of racial tension were the street cars and trolleys that ran in larger Southern cities in the late nineteenth century; as the journalist Ray Stannard Baker noted, what made them volatile spaces was the "very absence of a clear demarcation."[50] Streetcar interiors created what he called a racial "twilight

48 Romedi Passini, "Wayfinding Design: Logic, Application and Some Thoughts on Universality," *Design Studies* 17 (1996): 319.

49 Lillian Smith, *Killers of the Dream,* (New York: W. Norton, 1994 reprint of 1949), 95.

50 Ray Stannard Baker, *Following the Color Line, American Magazine* (1908): 30-1.

zone." Rather than run two sets of trolleys at great expense, transportation authorities often followed the letter of the law by segregating the interior space of each tram. Local laws, such as the one established in 1900 in Augusta, GA, stipulated that African Americans must first fill seats in the rear of a car, while whites were to sit in the front seats. Although the first two seats of each car were reserved for exclusive use by whites and the last two seats reserved for blacks, the undefined middle zone was segregated according to the capacity of any given car and its relative use at any given time.[51] In response, "white" or "colored" signs were often hung on strips and slid along the length of the car; if trolleys were crowded, many municipalities empowered conductors to determine the location of the car's "middle" and to allocate seats accordingly. Indeed, conductors were often legally provided with the power to arrest and otherwise enforce their temporary regulations.

This movable streetcar and later bus signage created an unstable space that became a flashpoint for racial conflicts, resulting in fights, arrests, and even death.[52] To illustrate, in 1917, African-American members of the U. S. Army's 24th Infantry Battalion were ordered from Columbus, NM, to Houston, TX. Fearing the onslaught of large numbers of negro troops, local politicians tightened segregation. When the soldiers arrived in the city, however, they simply ignored the Jim Crow signs hung in movie theaters and street cars. At times they tore the signs down and at least once, at a local dance, made them objects of ridicule by wearing them; their anger at Houston's ordinances percolated into a full-scale mutiny by August 1917.[53]

Such uprisings occurred throughout the South. In a single year, beginning in September 1941 and ending 12 months later, at least 88 cases occurred when blacks occupied "white" space on public transportation in Birmingham, AL.[54] After the war, men, particularly African-American veterans returning from active duty—more actively resisted these signs. In 1946 in Alabama, a black ex-Marine removed a segregationist sign from a trolley; in the resulting melee, he was shot dead by the local chief of police.[55] As late as 1956, just as Jim Crow travel restrictions were being lifted from interstate travel, *Jet Magazine* announced the death of Robert L. Taylor, a 30-year-old veteran from Ohio, who dared to use a whites-only restroom on a speeding train in central Tennessee; Taylor's body was found the next day beside the train tracks.[56] At best, Jim Crow wayfinding was based on a rigid race-based caste system; for soldiers who'd experienced spatial freedom in the North, the West, or overseas, the extent to which it shaped the lives of African Americans and their day-to-day movement was inexcusable.

51 Jennifer Roback, "The Political Economy of Segregation: The Case of Segregated Streetcars," 901.

52 Carol Anderson, *Eyes off The Prize: The United Nations and The African American Struggle for Human Rights, 1944-1955* (New York: Cambridge University Press, 2003), 58.

53 Arthur E. Barbeau and Florette Henri, *The Unknown Soldiers* (Cambridge: Da Capo Press, 1996), 28.

54 Robin D.G. Kelley, "'Not What We Seem': Black Working-Class Opposition in the Jim Crow South," *Journal of American History* 80 (June 1993): 75-112.

55 Anderson, 58.

56 "A Fear That a Negro Ohio War Veteran, Robert Taylor, Was Slain for Using White Toilet on Tennessee Train," *Jet Magazine*, January 5, 1956.

Figure 9
Ladies are not adults, photo by Eric Bruger, used under the Share Alike license of Creative Commons. Photograph URL: http://www.flickr.com/photos/uw-eric/3182483073/

Ending Jim Crow Signs

When Rosa Parks famously refused to give up her seat on a Montgomery, AL, bus to a white man in 1955, she sat in the bus's fifth row—officially the beginning of its colored section but also one of the ambiguous "twilight zones" that a conductor might transform from "black" space to "white" space by simply repositioning a printed sign. Her act of civil disobedience reflected the increasing questioning of Jim Crow segregation and the system it represented by both whites and blacks. Indeed, Parks' action was well timed; after 1946, when the Supreme Court's decision in Morgan v. Virginia ruled segregation illegal on interstate bus travel, Jim Crow laws were increasingly challenged at the local level.

In considering the system under the rubric of wayfinding, defined as spatial problem solving, a critical need is to identify just whose problems wayfinding actually addresses. For the whites on Parks' bus, Jim Crow signs directed African Americans away from white space, thus perpetuating a sense of racial entitlement. Of course, this study of Jim Crow signs as wayfinding signals is more than a historical exercise in remembering the forgotten past and more than a theoretical exercise in overlaying the two systems. More critically, this study is intended to prod us to consider more recent wayfinding systems that perpetuate similar entitlement. In South Africa, for instance, racialized wayfinding was explicit and carefully controlled during that country's long-standing system of apartheid. Meanwhile, in other countries, most notably in Saudi Arabia today, gender-specific wayfinding systems continue. Whether applied to hotel gyms and pools which are off-limits to women, or McDonald's restaurants, which are restricted to women and families, the Saudi kingdom has shaped a complex system of spaces for women and aims to guide them toward it (see Figure 9). Segregation signs not only point to separation in public space; they

also serve as reminders that both law and signage are "designed" and that "designers" have a role to play in thinking critically about their purpose. We have no record of what figures like Aicher and Lynch made of the Jim Crow system; in some ways, this system might have been the underbelly of or the precursor to the universal signage and systems that began to develop just as the segregation system was being dismantled. In modern public spaces, strangers can meet and mix in an informal manner. Traditional mores are no longer relevant and residents must be guided through unfamiliar spaces.

The most pervasive designed systems are often invisible to those who follow them; if Sheila Florence simply assumed that segregated racial spaces were "just the way it was," she would never have reflected on the powers that shaped Jim Crow signs. Signage systems have hardly disappeared; but for designers today, the fundamental issue is not just in noting them or designing them from a disconnected, disinterested position. The real question is about how well we know our own spaces and the power that resides in them.

The Epistemology of the Unspoken: On the Concept of Tacit Knowledge in Contemporary Design Research

Claudia Mareis

Introduction

The concept of tacit knowledge has advanced to become a prolific guiding principle in contemporary design research. In their attempts to describe knowledge within the scope of design, design researchers frequently draw on this concept and its related references. They attest that design is influenced by tacit knowledge in a distinctive way. However, in regard to the corresponding provisions of this form of knowledge, we must recognize that we cannot attain an understanding of the complexity of tacit knowledge using only philosophical categorizations or only the analysis of individual creative practices. Even more, we must recognize that tacit knowledge is not merely a "natural" phenomenon but is created in a social and discursive sense. In this article, we examine tacit knowledge from a cultural research perspective and as a sociocultural phenomenon, using the concepts and lenses of Michael Polanyi and Pierre Bourdieu.

Limits of the Spoken

In *The Practices of Everyday Life*, French philosopher Michel de Certeau states that a particular problem arises when theory is no longer a discussion about other discussions, as is usually the case, but tends to press forward into an area in which discussion no longer exists:

> There is a sudden unevenness of terrain: the ground on which verbal language rests begins to fail. The theorizing operation finds itself at the limits of the terrain where it normally functions, like an automobile at the edge of a cliff. Beyond and below lies the ocean.[1]

Design researchers currently testing the model of practice-based design research have been able to experience something similar. Such research deals with a methodology "in which the professional and/or designerly practices of art, design, or architecture play an instrumental part in an inquiry."[2] As these researchers

1 Michel de Certeau, *The Practice of Everyday Life* (Berkeley and Los Angeles: University of California Press, 1984), 61.

2 Chris Rust, Judith Mottram, and Jeremy Till, AHRC Research Review Practice-Led Research in Art, *Design and Architecture* (Swindon: Arts & Humanities Research Council, 2007), 11.

have experienced, "[t]he ground on which verbal language rests" apparently also diminishes when design practices and design objects are regarded as knowledge practices or as "epistemic objects."[3]

The launch of "practice as research" goes hand in hand with many controversial questions in design research. In particular, the inter-subjective and objective communicability of such research findings, which are created through practical actions, is debated.[4] However, verbalization is not the only component that reaches its limits in the mode of practice-based design research; even the question about a specific knowledge culture of design—about specific "designerly ways of knowing"[5] —quickly leads to the diagnosis of an unspoken knowledge on a theoretic-reflexive level. Despite its current explosive nature, this diagnosis is not new. David Pye already stated in the early 1960s that "the essential nature of the activity seems not to be understood except by designers, and they have not formulated what they know."[6] To date, the tacit dimension of knowledge still presents a particular challenge to design research. On the significance of tacit knowledge, Kristina Niedderer notes:

> [...] tacit knowledge plays an important role both in the research process and in evaluating and communicating research outcomes. […] tacit knowledge seems important for the generation and application as well as the experience and judgment of research and its results, and for creating new experiences, abilities, and knowledge.[7]

The tacit relativity of knowledge, however, is not to be understood one-dimensionally, but must be interpreted in several ways: On the one hand, the difficulty of being able to give sufficient information about practical activities refers to insights into the sociology of knowledge, according to which our knowledge and skills always consist of tacit elements that resist verbalization. This paradox of knowledge has been described by, among others, Michael Polanyi and Donald Schön. On the other hand is the speechlessness to which practitioners have often attested, but which is also linked with normative language specifications and traditional value discourses, like those described in Bourdieu's habitus concept. With Bourdieu, the question arises about the extent to which designers actually are not able to articulate their practical knowledge verbally, or whether in recognizing those limits, an acquired elevation of speech is not denoted and pursued because of certain habituation processes in design education and design practice. The latter might possibly be asserted all the more the further the discipline evades a spoken discourse.

3 Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube* (Stanford, CA: Stanford University Press, 1997). Boris Ewenstein and Jennifer Whyte, "Knowledge Practices in Design: The Role of Visual Representations as 'Epistemic Objects,'" *Organization Studies* vol. 30, no. 7 (2009): 7–30.

4 Stephen Scrivener, "The Art Object Does Not Embody a Form of Knowledge," *Working Papers in Art and Design* vol. 2 (2002), http://www.herts.ac.uk/artdes1/research/papers/wpades/vol2/scrivener.html (accessed July 20, 2011). Michael Biggs, "Editorial: The Role of the Artefact in Art and Design Research," *Working Papers in Art and Design* vol. 3 (2004), http://sitem.herts.ac.uk/artdesa_research/papers/wpades/vol3/mbintro.html (accessed July 20, 2011).

5 Nigel Cross, "Designerly Ways of Knowing," *Design Studies* vol. 3, no. 4 (1982): 221–27. Idem, "Designerly Ways of Knowing. Design Discipline Versus Design Science," *Design Issues* vol. 17, no. 3 (2001): 49–55.

6 David Pye, *The Nature of Design* (London: Studio Vista, 1972 [1964]), 7.

7 Kristina Niedderer, "Mapping the Meaning of Knowledge in Design Research," *Design Research Quarterly* vol. 2, no. 2 (2007): 6.

Tacit Knowledge as a Theme of Design Research

Tacit knowledge and design are commonly linked to a perspective either on characteristic design activities, such as sketching or modeling, or on more general activities, such as showing, presenting, mimicking, and trying out. What these attributes have in common is that they refer to non-verbal activities—meaning visual, aesthetic, haptic, performative, or motoric and gestural aspects—in and on which knowledge in design should manifest itself in a non-verbal manner. In this regard, Cross's thesis statement can be understood so that "design knowledge" is to be located not only on a verbal level, but also in designers, design processes, and design objects.[8]

One reason for the strong present interest in the concept of tacit knowledge possibly lies in the past—in the history of design methodology. During the 1960s, a promising test to establish a systematic design methodology took place with the *design methods movement*. Primarily favored (although not exclusively) were logical-rational concepts and methods, by means of which the systematics and characteristics of the design should be assessed.[9] However, because of this orientation, the movement was soon criticized. The criticism of the design methodology was directed at the absence of practical relevance and at its tendency to overly theoreticize design. Design methodology had gone from a practically motivated matter and mutated into an abstract theoretical venture, as John Christopher Jones tellingly concluded in 1977.[10] Against the background of the criticism on rational design, and ultimately even on knowledge concepts, we can observe that design researchers increasingly search for practical approaches to the research of design processes. As a result, there is less consideration of the "rational" aspects of design than of the "creative," "intuitive," and "tacit" aspects, along with the alleged design-specific manner of knowledge production.[11] No later than at the start of the 1990s, a close link between design research and design practice was postulated—both on an institutional level and under a disciplinary pretense.[12] Making this connection in exemplary form, Fatina Saikaly notes that "it could be argued that the main aspects of the practice-based approach are leading toward the definition of a designerly way of researching […] since it advances knowledge partly by means of design practice."[13]

To assess practical, experiential knowledge, the concepts of design research for tacit, non-propositional knowledge consequently must be used. Particularly noteworthy here is Michael Polanyi, who identified practical expertise and skills as a form of knowledge that cannot always be articulated or verbalized.[14] On the basis of this insight, Hubert and Stuart Dreyfus established in the late 1980s a five-stage model that describes how expertise could be gained by the internalization of rule sets.[15] At about the same time,

8 Nigel Cross, *Designerly Ways of Knowing* (London: Springer, 2006), 100-1.

9 cf. Claudia Mareis, *Design als Wissenskultur. Interferenzen zwischen Design- und Wissensdiskursen seit 1960* (Bielefeld: Transcript, 2011), 34–54.

10 Jones wrote: "In the 1970s, I reacted against design methods. I dislike the machine language, the behaviorism, the continual attempt to fix the whole of life into a logical framework." Cf. John Christopher Jones, "How My Thoughts About Design Methods Have Changed During the Years," *Design Methods and Theories* vol. 11, no. 1 (1977): 50–62.

11 e.g., Brian Lawson, *How Designers Think: The Design Process Demystified* (Oxford: Architectural Press, 1983). Peter G. Rowe, *Design Thinking* (Cambridge, MA: MIT Press, 1987).

12 e.g., Christopher Frayling, "Research in Art & Design," *Research Paper Royal College of Art London* vol. 1, no. 1 (1993/94). Bruce Archer, "The Nature of Research," *Co-Design Journal* (January 1995): 6–13. Nigel Cross, "Design Research: A Disciplined Conversation," *Design Issues* vol. 15, no. 2 (1999): 5–10. Alain Findeli, "Die projektgeleitete Forschung: Eine Methode der Designforschung," in *Erstes Design Forschungssymposium*, ed. Ralf Michel (Zürich: Swiss Design Network, 2004), 40–51. Wolfgang Jonas, "Design Research and its Meaning to the Methodological Development of the Discipline," in *Design Research Now. Essays and Selected Projects*, ed. Ralf Michel (Basel: Birkhäuser, 2007), 187–206.

13 Fatina Saikaly, "Approaches to design research: towards the designerly way," *Proceedings of The 6th International Conference of the European Academy of Design, Design System Evolution* (The University of the Arts Bremen, March 29-31, 2005), http://www.verhaag.net/ead06/fullpapers/ead06_id187_2.pdf (accessed July 20, 2011).

14 Michael Polanyi, *The Tacit Dimension* (Gloucester, MA: Peter Smith, 1983 [1966]).

15 Hubert L. Dreyfus and Stuart Dreyfus, *Mind over Machine. The Power of Human Intuition and Expertise in the Era of the Computer* (New York: Free Press, 1986).

Donald Schön suggested that practical knowledge of designers can be understood using the concept of the "reflective practitioner" or with the mode of a "reflection-in-action."[16] He also referred to the tacit knowledge that professional experts generally have but can hardly ever articulate. Following Polanyi, he suggests that "the best professionals know more than they can put in words."[17]

The Semantics of Tacit Knowledge

The debates about practice-based design research have been accompanied by their own epistemological semantics. Familiar expressions include "design knowledge" and "designerly ways of knowing,"[18] "design thinking,"[19] "sensuous knowledge," and "experiential knowledge."[20] Further epistemological terms accompany these debates because an intensive debate about experiential knowledge has been raging in other fields of practice and disciplines since the 1980s. Examples of these terms are "personal knowledge,"[21] "knowledge of familiarity,"[22] "tacit knowledge,"[23] or "situated cognition."[24]

What these, in principle, inconsistent terms share, is that they are based on a similar concept of knowledge that is gained and applied via practical measures and that is, to a great extent, person- and situation-oriented (particularly in the areas of work, technology, and economics). According to the German sociologist Fritz Böhle, the reorientation of experiential knowledge must not result in an undifferentiated status towards the increasing scientification of society, but must focus on its limits and search for ways to consider experiential knowledge in the case of, or despite, scientification.[25] In this regard, the terms "expertise," "connoisseurship," and "intuition" play a central role. Strictly speaking, all of the terms named are not necessarily to be understood as synonyms for "tacit knowledge." They originate from knowledge debates in philosophy, psychology, or education and illustrate correspondingly very different aspects in each. What they do share, though, is that they address central aspects and attributes that are also significant in connection with the analysis of tacit knowledge (e.g., the aspect of the sensuous and physical experience). At the same time, the wealth of terms also clearly indicates how far the complex dimensions of tacit knowledge must be projected and how hazy its borders remain.

Polanyi's Dimension of Tacit Knowledge

Michael Polanyi is considered to be the most influential, although not the sole, founder of the coherent theory of tacit knowledge. The foundation for this is already compiled in his major philosophical work, *Personal Knowledge* (1958). In 1966, he published the articles of his Terry Lecture (held 1962 at Yale University) in the book *The Tacit Dimension*. There, the quote frequently linked to tacit knowledge,

16 Donald Schön, *The Reflective Practitioner. How Professionals Think in Action* (New York: Basic Books, 1983), 68-69.

17 Schön, *The Reflective Practitioner* (1983), book cover.

18 Nigel Cross, "Designerly Ways of Knowing," *Design Studies* vol. 3, no. 4 (1982): 221–27.

19 Rowe, *Design Thinking* (1987).

20 "Sensuous Knowledge" is the title of an annually held conference on design research at the Bergen National Academy of the Arts: www.sensuousknowledge.org. "Experiential Knowledge" is the theme of a special interest group of the Design Research Society and the title of a series of resulting conferences: www.experientialknowledge.org (accessed November 4, 2011).

21 Michael Polanyi, *Personal Knowledge. Towards a Post-Critical Philosophy* (Chicago: University of Chicago Press, 1974 [1958]).

22 Bo Göranzon and Ingela Josefson (eds.), *Knowledge, Skill and Artificial Intelligence* (Berlin: Springer, 1988).

23 Stephen Turner, *The Social Theory of Practices. Tradition, Tacit Knowledge and Presuppositions* (Cambridge, MA: Polity Press, 1995).

24 David Kirshner and James A. Whitson, *Situated Cognition. Social, Semiotic, and Psychological Perspectives* (Mahwah, NJ: Lawrence Erlbaum Associates, 1997).

25 Fritz Böhle, "Wissenschaft und Erfahrungswissen," in *Wissenschaft in der Wissensgesellschaft*, eds. Stefan Böschen and Ingo Schulz-Schaeffer (Wiesbaden: Westdeutscher Verlag, 2003), 143–77.

"we can know more, than we can tell," can be found.[26] According to Polanyi, human knowledge always consists of certain tacit (i.e., unspoken or unknown) components. These components enable human beings to ride a bicycle, play a musical instrument, or recognize individual faces in a crowd, without being able to say precisely how they do this. Polanyi supports his statements on Gilbert Ryle's differentiation between "knowing that" and "knowing how" and presents human expertise correspondingly as a form of practical knowledge.[27] He thereby develops a knowledge and consciousness theory concerned not with a static knowledge result *(knowledge)*, but with the act or the process of recognition and perception *(knowing)*; he therefore assigns the human body and its senses a central position in the production of knowledge.[28]

Polanyi uses very different examples in *The Tacit Dimension* to explain specifically how certain intelligent processes exist or are applied subconsciously (subliminally or internalized), despite limitations in our capacity to articulate or formalize these processes. For him, the dimension of tacit knowledge production incorporates the tacit components of knowledge and expertise, including such constituents as emotions, physiognomic perception (i.e., individual elements are completed to make a whole), and rule practicing that is internalized and perceived as "intuitive" (through the constant repetition of a practical activity), as well as non-verbalized but guiding morals and values within the scope of scientific knowledge production. With "implicit-tacit," Polanyi does not necessarily signify the opposite of "explicit-verbal," but the term can be interpreted as the opposite of "focal awareness," for instance in Gestalt formation.[29] A further interpretation of the phrase, "we can know more then we can tell," is that tacit knowledge, although generally not verbalized, can nevertheless be detected in behavior. According to this interpretation, "implicit" would be understood as the opposite of "articulable."[30] Thus, experienced craftspeople perhaps are not able to completely articulate their expertise, but they can often demonstrate it.

Polanyi, who had initially studied medicine and went on to become a distinguished scientist in physical chemistry, draws on an unorthodox reference tool for his epistemological work. He touches upon various discourses and disciplines, although he rarely explicitly explains these references. Essential points of contact certainly exist to Gestalt psychology,[31] as well as to behavioristic experiments in the 1950s on emotional conditioning and subliminal perception.[32] Particularly the ability described in Gestalt psychology to understand fragments as a whole of which they are a part and—depending on the focus—to interpret things in one way or the other present important intellectual abilities. In regard to this ability, Polanyi therefore spoke about a "from-to structure" of knowledge: "In an act of tacit knowing we attend from something for attending to something else."[33]

26 Polanyi, *The Tacit Dimension* (1983), 4 (italics in the original text).

27 Gilbert Ryle, *The Concept of Mind* (Chicago: University of Chicago Press, 2002 [1949]).

28 cf. Georg Hans Neuweg, *Könnerschaft und implizites Wissen. Zur lehr-lerntheoretischen Bedeutung der Erkenntnis- und Wissenstheorie Michael Polanyis* (Münster: Waxmann, 2004 [1999]), 134.

29 Neuweg, *Könnerschaft und implizites Wissen* (2004), 138.

30 Ibid.

31 Polanyi, *The Tacit Dimension* (1983), 6.

32 Polanyi, *The Tacit Dimension* (1983), 8-9.

33 Ibid., 10.

Polanyi's statements on tacit knowledge are not in the least to be understood as timelessly valid, ahistorical theorems. They are decidedly influenced by concrete historical and political conditions and by personal cultural and religious beliefs. Thus, he repeatedly criticized an ideologically based knowledge theory, as it was taught in the former Soviet Union under Stalin.[34] In regard to this theory, he searched for ways and opportunities to formulate an (at least in his opinion) ideology-free, holistic knowledge model, yet one still bound to values and traditions, for "Western" sciences.

In summary, we can say that both theoretical knowledge and practical knowledge belong to the dimension of tacit knowledge for Polanyi; but in addition, and perhaps even more-so, he includes internalized values and worldly wisdom, along with ideological and religious aspects.[35] He thus emphasizes the fact that tacit knowledge—even knowledge in any sense—is not only influenced by moral, cultural, and scientific authorities, but also is first realized within the social boundaries generated by them.

Expertise and Connoisseurship

Although great importance is attached to the concept of "tacit knowledge" in design research,[36] rarely discussed is the extent to which the phenomenon, "we can know more than we can tell," can also be understood as an effect of social influence and habit. In this reading, tacit knowledge is to be understood not only as an individual form of practiced, internalized knowledge and expertise, but also as collectively perpetuated knowledge carried in standards, values, and traditions. With the aid of the terms "expertise" and "connoisseurship," which are frequently linked to the concept of tacit knowledge and also critically argued, this effect can perhaps be discussed best.[37]

Polanyi already specified a direct relationship between tacit knowledge, expertise, and connoisseurship.[38] In current texts on practice-based design research, this relationship is indicated but is only rarely expounded in terms of the social dimension of knowledge. Instead, the focus is frequently only on the alleged "professional" aspect of a practiced connoisseurship; as such, it is considered separately, detached from the social parameters in which connoisseurship is initially learned and communicated. In turn, Niedderer writes: "Tacit knowledge is an important requirement for achieving best results in research and practice, which is associated with expertise and connoisseurship."[39] Moreover, she notes that "connoisseurship […] is referring to an ability for very fine (qualitative) discrimination that is (usually) beyond scientific measurement and that is acquired through extensive training."[40] Niedderer does not elaborate on the relationship between design practice, tacit knowledge, expertise, and connoisseurship in her text, but the impression arises that these phenomena overlap in

34 Ibid., 3.

35 cf. Polanyi, *The Tacit Dimension* (1983), 92. See also on Polanyi's religious orientation: Mark T. Mitchell, Michael Polanyi. *The Art of Knowing* (Wilmington, DE: Intercollegiate Studies Institute, 2006), 10ff.

36 e.g., Chris Rust, "Design Enquiry: Tacit Knowledge and Invention in Science," *Design Issues* vol. 20, no. 4 (2004): 76–85. Niedderer, "Mapping the Meaning of Knowledge in Design Research," (2007), 1–13.

37 e.g., Griselda Pollock, *Differencing the Canon. Feminism and the Writing of Art's Histories* (London: Routledge, 1999), 13ff, 136.

38 Polanyi, *Personal Knowledge* (1974), 54-55.

39 Niedderer, "Mapping the Meaning of Knowledge in Design Research," (2007), 6.

40 Ibid.

practice-based design research and manifest themselves there as components of knowledge. Thus, neither "expertise" nor "connoisseurship" are critically questioned or developed as (historical) concepts.

To explain the manner in which expertise and connoisseurship are related to the habituation and perpetuation of social standards, values, and traditions, one can again refer back to Polanyi. He notes that connoisseurship, like many other practical competencies, can be communicated only by using example, but not by using rules.[41] Elsewhere, connoisseurship is described as an "expert's eye," which simultaneously pays attention to a variety of nuanced, in principle indescribable details and quality characteristics; using this impression, the expert is able to refer to previously experienced, but not consciously present, situations.[42] According to Polanyi, the expert thus sees a rich panorama of characteristic physiognomies there, where the eye of the amateur sees nothing of significance.[43] As an example, he presents the diagnostic competence of doctors: "The medical diagnostician's skill is as much an art of doing as it is an art of knowing."[44] The same expert eye can also be attributed to art and wine experts, meteorologists, sailors, or botanists; to a certain extent, Polanyi even attests that scientists have an anticipatory skill in the search for relevant scientific issues.[45]

A fundamental aspect in the analysis of "expertise" and "connoisseurship" is, as Neuweg states, the fact that the necessary skills are acquired in a direct encounter with connoisseurs and expert cultures.[46] Such a teaching-learning relationship is particularly pivotal where experience is to be gained by means of imitation, as in design training. To date, this teaching-learning preferably takes place in a practical, atelier-like training situation and is often realized according to the model of a master-apprentice relationship. However, the transfer of expertise and connoisseurship can, according to Polanyi, hardly be communicated by means of verbalized rules; instead, it must be demonstrated on the basis of examples: "An art which cannot be specified in detail cannot be transmitted by prescription, since no prescription for it exists. It can be passed only by example from master to apprentice."[47]

According to Polanyi, this form of transfer can only be achieved through an initially uncritical imitation of existing (local) traditions and of the authorities of a field. He wrote: "To learn by example is to submit to authority. You follow your master because you trust [that] manner of doing things, even when you cannot analyse and account in detail for effectiveness."[48] But even while the apprentice surrenders blindly to the authority of the master, the master, in turn, "blindly" follows certain rules that can rarely be designated or articulated as such:

41 Polanyi, *Personal Knowledge* (1974), 54.

42 Neuweg, *Könnerschaft und implizites Wissen* (2004), 176-77.

43 Michael Polanyi, "Skills and Connoisseurship," in *Atti del Congresso di Metodologia*, ed. F. de Silva (Turin: 1952), 393.

44 Polanyi, *Personal Knowledge* (1974), 54.

45 Polanyi, *The Tacit Dimension* (1983), 21–25.

46 Neuweg, *Könnerschaft und implizites Wissen* (2004), 378.

47 Polanyi, *Personal Knowledge* (1974), 53.

48 Ibid.

> By watching the master and emulating his efforts in the presence of his example, the apprentice unconsciously picks up the rules of the art, including those which are not explicitly known to the master himself. These hidden rules can be assimilated only by a person who surrenders himself to that extent uncritically to the imitation of another.[49]

Polanyi concludes that a society that wants to maintain a repertoire on personal, tacit knowledge must be committed to tradition. In his work, he strove in an almost paradoxical manner to uphold traditions and value systems, while also exposing how implicit limits of knowledge manifest as traditional values during the acquisition and transfer of knowledge and how they are perpetuated through authoritative relationships.

Social Habituation Based on Bourdieu

Polanyi's insights on the social constructs that limit individual behavior raise the question of what is required to generate a stable, collective anchoring of values, traditions, and standards that influence individual human thought and behavior. This question has been particularly handled by the French sociologist, Pierre Bourdieu. His theories regarding this question can be productive for the critical designation of a tacit dimension of knowledge in design. Bourdieu's habitus concept exhibits numerous points of contact to Polanyi's statements on tacit knowledge, although Bourdieu ultimately showed less interest in the continuation of traditions and value systems than in individual freedom of decision and choice.[50]

Similar to Polanyi, who establishes the dimension of tacit knowledge in different, intertwined levels of thought and action, Bourdieu assumes that an analytical difference between perception, thought, and action is not sustainable. According to Bourdieu, habituated perception, thought, and action schemes intertwine themselves in individual practices and consistently act together as implicit structures, or as "social sense:"

> The habitus, the durably installed generative principle of regulated improvisations, produces practices which tend to reproduce the regularities immanent in the objective conditions of the production of their generative principle, while adjusting to the demands inscribed as objective potentialities in the situation, as defined by the cognitive and motivating structures making up the habitus.[51]

Bourdieu developed the habitus concept subsequent to Marcel Mauss's terms of "body techniques" (*techniques du corps*) and "hexis"[52] and Norbert Elias's writings on the genesis of civilization.[53] The habitus as conceptualized by Bourdieu comprises the all

49 Ibid.

50 cf. Pierre Bourdieu, *Outline of a Theory of Practice* (Cambridge: Cambridge University Press, 2010 [1977]), 78–95.

51 Bourdieu, *Outline of a Theory of Practice* (2010), 78.

52 Marcel Mauss, "Les Techniques du corps," *Journal de Psychologie* 32 (1934): 3–4. Reprinted in Marcel Mauss, *Sociologie et anthropologie* (Paris: PUF, 1936).

53 Norbert Elias, *The Civilizing Process – The History of Manners* (vol. I) and *The Civilizing Process – State Formation and Civilization* (vol. II) (Oxford: Blackwell, 1969 and 1982).

habits, customs, physical abilities, aesthetic and cultural preferences, and additional *non-discursive* aspects of knowledge that are considered self-evident to a specific social group.[54] For him, the deciding factor is the assumption that habitus is not inherent, but instead is based on learned individual and collective experiences, which deposit themselves in an individual as determining perception, thought, and action schemes. From early childhood on, the limits of our individual behavior, perception, and thought are therefore determined by predetermined material and cultural existential conditions, by social class, and by gender.

Nevertheless, the genesis (or "becoming," from the Greek) of the habitus of the players is usually "unconscious" because it becomes, as a matter of course, something that is experienced as "natural." According to Bourdieu, "[t]he 'unconscious' is never anything other than the forgetting of history which history produces by incorporating the objective structures it produces in the second natures of habitus."[55] This early and, above all, implicit influence leads even to having the prevailing social order registered in the body by means of habituated schemes. In this regard, Bourdieu also speaks about an "implicit pedagogy" or a "somatization" of knowledge with far-reaching consequences.[56] Prevailing social power and dominance relationships are internalized through habituation and accepted as "natural" (naturalized) and thereby forgotten. He even sees the implicit dimension of knowledge of practitioners as being a result of this mechanism:

> It is because subjects do not, strictly speaking, know what they are doing that what they do has more meaning than they know. The habitus is the universalizing mediation, which causes an individual agent's practices, without either explicit reason or signifying intent, to be none the less "sensible" and "reasonable." That part of practices, which remains obscure in the eyes of their own producers, is the aspect by which they are objectively adjusted to other practices and to the structures of which the principle of their production is itself the product.[57]

For Bourdieu, the term habitus is indivisibly coupled with that of the social field. In collective interaction, they both outline the dimension of practice. The dialectic of habitus and social field is based on the assumption that behavior is always performed within a specific context and from a certain position.[58] Foremost, behavior has significance when interpretation of it includes the position of the actor in a socially well-differentiated field. This perspective on behavior is valid for science, as well as for politics, religion, and art.[59] Individuals are socialized into distinct fields and learn to behave appropriately according to the rules that apply there and the prevailing "symbolic capital."[60] Although social

54 cf. Pierre Bourdieu, *Distinction: A Social Critique of the Judgment of Taste* (Cambridge: Harvard University Press, 1984).

55 Bourdieu, *Outline of a Theory of Practice* (2010), 78.

56 Ibid., 94.

57 Ibid., 79.

58 Pierre Bourdieu, *The Logic of Practice* (Stanford: Stanford University Press, 1990).

59 cf. Pierre Bourdieu, *Homo Academicus* (London: Polity Press, 1990). Idem, *Rules of Art: Genesis and Structure of the Literary Field* (Stanford: Stanford University Press, 1996).

60 Bourdieu, *The Logic of Practice* (1990), 112–21.

fields provide actors with individual options for action, these actions are limited and apply to certain (often non-verbalized) constraints at the same time.

This observation can also be applied to the acquisition and transfer of connoisseurship and expertise in design. Design education, practice, and research are structured by means of certain implicit, practical, and social rules and self-conceptions and are transferred to a certain extent via tradition and authority. This complexity in the transfer process is even the case when the transfer does not take place perpetually but contingently, and it is renewed and changes with every generation. Often, precisely those components of the discourse of values that are bound to social tradition and authority remain implicit in design. For instance, the measuring of quality criteria in design or the gender-specific inclusion and exclusion processes in design education and practice reflect this implicitness. In this sense, Richard Sennett states in his book on craftsmanship that a large portion of authority possessed by master craftspeople stems from their knowing things that others don't and that this authority is presented non-verbally.[61]

Speaking Bans, Taboos, and Naturalizations

In regard to the spoken, the fact that "we can know more than we can tell" can be understood in such a way that tacit knowledge, rather than just presenting a "natural" circumstance, also includes the effects of social habituation, which always are manifested in it. Tacit knowledge can thus first be understood as a complex of certain incorporated cultural capital. It comprises practical and semantic knowledge, schemes, rules, and scripts, as well as values and standards, abilities, competencies, and skills.[62] If we transfer this interpretation of tacit knowledge to the field of design, we can assume that social and cultural determinants not only enable the explicit designation and provision of detailed information on a particular circumstance, activity, or knowledge, but also can impede or even prevent it. We do not mean to suggest that, theoretically, all knowledge and expertise can be verbalized, quantified, and formulated; rather, we do not see that a supposed "natural" epistemic structure of tacit knowledge in design is the only explanation why the knowledge of design practitioners remains "mute."

This interpretation indicates that the limits of what can be said by individuals is difficult to identify as such for two reasons: First, certain social orders are "incorporated" through habituation, and second, the regulation mechanisms of a discourse are usually unspoken and, as such, are performed and perpetuated without being detected. Michel Foucault, in repeatedly pointing out this mechanism, asserted that discourses are always cultivated by certain taboos and speaking bans. Such sanctions can be recognized by the fact that one does not have the right to say everything; that one can't speak about everything at every opportunity; and that, in

61 Richard Sennett, *Handwerk* (Berlin: Berlin Verlag, 2008), 109. English edition: *The Craftsman* (New Haven: Yale University Press, 2008).

62 Michael Meier, "Bourdieus Theorie der Praxis. Eine 'Theorie sozialer Praktiken'?," in *Doing Culture. Neue Positionen zum Verhältnis von Kultur und sozialer Praxis*, eds. Karl H. Hörning and Julia Reuter (Bielefeld: Transcript, 2004), 66.

the end, not just anybody can speak about anything.[63] This assessment can also be transferred to design for the purpose of critically questioning its intrinsic speaking bans and taboos.

In conclusion, a sensibility to the social dimension of knowledge seems essential for design researchers if we seek to avoid a positivistic reduction or a "romantic idealization" of tacit knowledge.[64] In regard to the implicit habituation and somatization of knowledge, it is appropriate to critically question the "often-declared as natural" apriorism of design. Design definitions based on such apriorisms, suggest, for example, that design is a "natural human ability" or an "essentially innate human capacity."[65] Such definitions marginalize the varied historical influences that decisively shape different design practices, and they conceal the cultural context and the social conventions that enable the acquisition of these practices in the first place. According to Roland Barthes, the myth about the "conditio humana" is based on an age-old mystification that has always involved counting on the fundamentals of the history of nature.[66] "Naturalization" consequently signifies that social, man-made meanings and orders are understood as originating from "nature," and such natural findings–as myths–shape history. Similarly, the habitus, Bourdieu writes, is "history turned into nature, i.e. denied as such."[67]

The currently targeted nexus of design practice and design research seems to indicate a vulnerability that would allow conveyed historical and socially standardized (self-)conceptions to flow into design research as "naturalized" findings and to be perpetuated there without being questioned. The debates on "tacit knowledge," in particular, are vulnerable to such naturalizations because the human body is addressed therein as an allegedly "natural" medium of knowledge. The danger is that knowledge will be understood unilaterally as biological phenomenon and that its significant socio-cultural dimension will be ignored. An insistence that we declare designerly practices in the context of research as "tacit," might then work against a transparently conducted knowledge discourse that avoids or rejects the critical analysis of natural and mythological figures in design discourses.

Concepts and models of a tacit knowledge are not free from "blind spots" themselves. They have been influenced by specific historical knowledge debates and social and economic contexts. Design researchers must consider such historical influences in the analysis of tacit knowledge and make the influences compatible with current knowledge debates.

63 Michel Foucault, *The Archaeology of Knowledge and the Discourse on Language* (New York: Pantheon, 1972), 215ff.

64 Neuweg, *Könnerschaft und implizites Wissen* (2004), 401.

65 cf. Filippo A. Salustri and Nathan L. Eng, "Design as…: Thinking of what Design might be," *Journal of Design Principles and Practices* vol. 1, no. 1 (2007): 24-25.

66 Roland Barthes, *Mythologies* (New York: Hill and Wang, 1972).

67 Bourdieu, *Outline of a Theory of Practice* (2010), 78.

Why a Culture of Design in France Never Took Off

Stéphane Laurent

At the Centre Georges Pompidou, the main French contemporary art center and museum located in Paris, one of the last outstanding exhibitions related to design was devoted to Patrick Jouin, a contemporary French designer. Everyone feels free to express their mood and their opinion about such exhibitions, and they usually enjoy doing so, dropping a comment on a specific book near the exit. Although using these comments in an article of this sort might seem inappropriate, my experience and viewing distance as a design historian allows me to examine an event of this type to deal with the question of design culture in France. Here, "Design Versus Design" and "Tiffany" were recently displayed at the Grand Palais and at the Musée du Luxembourg, respectively—the most recent significant shows on design in Paris. More widely, these exhibits offer an opportunity to practice a critical analysis of the situation in France—resulting in both a negative assessment, as well as an understanding of some of the reasons for significant delays vis-à-vis other countries (especially from Northern Europe) and for some of the malfunctions in the cultural dissemination of design in France.

The Fundamental Issue?

Can a basic or fundamental problem be identified? For 20 years, England (primarily because of the Victoria and Albert Museum), Germany (through the Vitra museum at Wahl-am-Rhein), the Scandinavian countries (e.g., Finland) and the United States (through the Metropolitan Museum of Art, MoMA, the Cooper-Hewitt Museum, and the Bard Graduate Center in New York) developed leading programs of exhibitions on design and decorative arts. Such development was based on the desire to give the general public a substantial knowledge of these areas, and to achieve the same quality of display as the major exhibitions on art generally seen at the Grand Palais, the Louvre, Musee d'Orsay, and Pompidou Centre, or at the National Gallery in London or in Washington. To achieve this goal, each institution relied on extensive research, both from a scientific point of view and from the museum's own experience and achievements.

Meanwhile, what was happening in France? Except for some specialized exhibitions here and there (e.g., at the Musee d'Orsay in small rooms, at the Galliera museum for fashion only, and at the museum of Decorative Arts), often without substantial catalogues, France has been quite removed from such an outcome. In fact, in France we are still eager to *explain* design, while our neighbors are exploring and developing all of its refined and elaborated facets. To illustrate, the intention for the exhibition on Patrick Jouin was to demonstrate to the public what industrial design is, using the personal itinerary of the creator; in 2008, the exhibition titled "Design Versus Design" at the Grand Palais (which we discuss in detail later) aimed to provide a panorama of creative furniture; finally, at the Musée du Luxembourg in 2010, one could find only a poor presentation on Tiffany, despite the various informative and consistent aspects that might have been explored in the work of the famous glass designer and entrepreneur. Furthermore, when considering the situation over a quite longer period, the state of affairs becomes even more alarming: It gives the strange impression that design remains at the same place or, even worse, regresses in terms of the education of the public about the decorative arts/design; the consequences, then, affect the development of design itself.

Despite the opportunities available from having exceptional structures of diffusion, including the Centre Georges Pompidou and the Galeries Nationales du Grand Palais or the Musée du Luxembourg, many opportunities for forward progress have been lost. In 1993, "Design, Mirror of the Century," hastily organized, showed the paradox of, on the one hand, a strong publication through the catalog and, on the other hand, of a puzzled and puzzling display of the objects during the show. Exhibitions on the decorative arts have included the following: "A Golden Age of the Decorative Arts, 1814-1848" in 1994; in 2000, the exhibition "1900," which was a very confused exhibition on the Art Nouveau, compared to its equivalent in London at the same time; and finally, in 2002, "A Time of Exuberance—the decorative arts under Louis XIII," which was limited to the connoisseurs of the seventeenth century decorative arts.

The Art/Design Divide from the 1950s

Different explanations help to shed light on the reasons for such failures. First, we still suffer from the academic complex that divides major arts and minor arts and that always (alas!) gives priority to the former over the latter. Indeed, exhibitions on art are still highly visual, while design is part of a technical culture—more austere, less able to distract the public. Second, education on the history of design and decorative arts in France is still embryonic, including the education provided in design schools. Such

teaching rarely involves scholars, rather discredited in France; meanwhile in China, for example, because of the long tradition of the mandarins, design scholars are routinely invited to reveal their point of view, which is considered to be "the most neutral and the most expert." Design schools and professionals in France prefer social sciences readings, which tend to be generated under a theory combining—loosely (and uninterestingly)—aesthetic, philosophical, semiotic, psychological, and sociological verbage, often based on outdated publications.

For a time though (between 1850 and 1950), the public along with the designers (named then "industrial artists" and afterward "decorateurs") were familiar with the styles (we would speak today about a history of objects). Such familiarity was a result of the fierce activism of the creators of objects, supported by journalists, writers, and culture officials—none of whom could tolerate anymore the disdainful and persistent academic gap that penalized the decorative arts, despite the increasing presence of objects in the everyday environment. (Also from this age was invented the expression "decorative arts" as a counterpart to "fine arts.") This span of decades was the time of historicism, Art Nouveau, and finally Art Deco. Unfortunately, in the 1960s, the designers—new players in the decorative arts field—expressed an absolute desire for modernity. They found it convenient to denigrate a knowledge of styles, connected to the domain of the "decorateurs" from the previous generation, instead of taking advantage of the advertising offered by their elders. Thus, design culture had to start over, exactly as if the century of promotional efforts had been useless.

One evidence of this failure to thrive can be found in the absence of a literature dedicated to design or decorative arts; the production of such literature has significantly decreased in terms of the number of new issues, compared to the wide range of publications on styles and decoration at the beginning of the twentieth century. Now, a strong concentration of survey books simply introduces design for the education of the public, but very few books specialize on the topic and stress questions from the field. In addition, very few periodicals specialize in design, and none focus on research.

As a result, the old but persistent academic system had an easy time taking over, in a country where the overwhelming presence of the fine arts contributes to their cultural domination. In such conditions, we understand better why significant exhibits on design or decorative arts in France still provide some definitions, often emphasizing the scenography, as in the Starck and Ron Arad shows, to attract the public. Such an impressive display, although more or less successful, sometimes appears to hide the poverty of the content or of the curator's capacity to reflect on the content. Meanwhile, in the other countries mentioned, the motivation for and recognition of the technical culture and the lack of such a great

heritage in painting generate a wider interest in the design and decorative arts from the public. Objects seduce and stimulate the intellect, without any need to use subterfuge.

This situation is precisely the one that faced nineteenth-century France, as northern nations already were motivated to focus more on the production of everyday objects. And just as in the nineteenth century, one can find in France, since the 1980s, the paradox of both a successful breakthrough in industrial design (including at an international level interior decor, car design, animation graphics, and stars such as Philippe Starck)—which nevertheless suffers from a poor understanding—and a difficulty with institutional and academic representativeness.

However, this weakness or difficulty is not only a cultural problem; it also has important implications for the design development actors, who remain mostly unknown to the general public and whose interest and taste for design are not much encouraged. Economic issues inevitably follow: a tight market in home furniture design, whose customers belong to an upper-class elite; some risk of market losses because of the difficulty in promoting French products internationally (with the exception of the luxury sector, which appears to be the mirror of France abroad since the end of the seventeenth century); and an underdeveloped infrastructure for the preservation and the culture of design, which deprives the sectors of tourism and communication of possible job opportunities and incomes (with the exception of some initiatives, such as the Saint-Etienne cluster and its City of Design, the Lace Museum in Calais (northern France), and the museum of Decorative Arts in Paris). Because the richness of this heritage is vast and encompasses techniques as different as the arts of ceramic and glass; of wood, textiles, and paper; of metal; and of plastic—and this since the Middle Ages—it largely surpasses the potential of the fine arts in terms of the numbers of artifacts, expressions of creativity, and implications for the economic and industrial worlds.

More insidiously, we can see that, in place of weaker institutions, the art market now controls the heritage of decorative arts and design. To understand, we can recognize their recent acknowledgment by collectors and dealers, which has caused the objects of designers and decorators of the twentieth century to reach record prices in auctions, including recent works from the art-design creators. (A table conceived in the 1980s was sold for 111,000 euros [U.S. $148,144 approximately] by the French auctioneer, Tajan.) Such success highlights the exclusive interest in decorative arts and furniture, to the detriment of design in general and industrialized objects in particular.

This latter tendency to disregard design has apparently been targeted for correction by the exhibit at the Centre Georges Pompidou on Patrick Jouin—in a new but very unequal confrontation between the Ancients and the Moderns. Somehow, those who

planned the exhibit stood up against the cultural deficit of exhibitions on the subject served up by the Grand Palais blockbuster shows machine, and worked particularly to remedy the failures of "Design Versus Design," which missed the opportunity—ten years after the failure of "Design: Mirror of the Century"—to offer the public a comprehensive, fair, and exciting view on design. Such an overview would indeed have succeeded in leading the way toward a salutary deepening of understanding and appreciation. However, the public can only be confused when it has been presented design on the one hand as an impressive gallery of amazing and rare items (the operating principle of a collector's collection) and on the other hand as a panorama everyday life imbued with an almost anonymous beauty (the operating principle of industrial design).

Looking for Links and Continuity

Can we, in fact, identify any continuity or links between the two fields? Following the show on Charlotte Perriand, we can indeed praise a wonderful initiative that emanates from the Ministry of Culture that is the Centre Georges Pompidou and that intends to revive the exhibitions of the former Centre de Creation Industrielle (Industrial Creation Centre) and, in doing so, to sort out the design of its incestuous marriage with the art market. We do so despite the fact that the ministry's head office has consistently promoted art-design through acquisitions of the FRAC (Fonds Regional d'Art Contemporain), and even through the Design creators granted and hosted by the prestigious Villa Medici in Rome. This effort is also a way to release design from its usual subservience to the services of architecture observable in many institutions, by allowing it to claim its own legitimacy, based on complex and specific questions (similar to the Anglo-Saxon expression of design). If we could include items in styles determined by their context, talk of the "art of furniture" to mean "decorative arts," underline the connection between house furniture and house construction with the idea that their common technical concern took them away from the visual arts, at the time of the industrial object such a subjection no longer makes sense.

In Japan, one can see a great number of events related to design that meet with great public success. In addition to temporary exhibits organized and displayed in museums, the public discovers design through conferences, festivals, or open house days in companies like Sony or the national television channel, NHK. In addition, a significant number of journals targeting a substantial audience specialize in design (e.g., *Axis* and *Design Research*). These magazines present not just new products but also the design process, including its research aspect. (Readers can learn about semantic mappings and results of consumption tests.) These

journals have no counterpart in France. However, such ways of communicating are complementary to and constitute a complete pedagogical framework.

The inefficiency of the system in France and the lack of dialogue between historians and curators led to some caricatured situations that illustrate a disconnect between France and the advanced results elsewhere in design historical presentations. In 2005, for example, the Centre Georges Pompidou and the Musée des Arts Décoratifs refused to loan some pieces of their collection for an exhibition on Art Deco at the Victoria and Albert Museum, co-organized by Tim and Charlotte Benton and Ghislaine Wood—two scholars and a curator. Despite the display of artwork from Picasso, Leger, Brancusi, and Van Doesburg, the Centre Georges Pompidou nevertheless decided that such a topic was connected to decorative arts, and the decision makers displayed the same disdain designers have toward the decorateurs from the 1960s.

Meanwhile, the exhibition was a tremendous success, receiving a Business Prize because so many visitors crossed the Channel on the Eurostar high-speed train to discover it! The catalogue is still considered a valuable reference and has been reprinted four times in its English version. Such interest among the French public demonstrates the possibility of a maturing appreciation for more specialized shows on the history of design. (The exhibition on Patrick Jouin was also a great success, with 377,000 visitors, although how that number is split between foreign tourists and nationals is difficult to say.)

The events that followed at the Victoria and Albert Museum on other periods, such as Modernism, Post-War Modernism, the 1960s, and the 1950s, also have attracted an international (including French) audience. France was the birthplace of Art Deco, and its contribution to the movement was quite significant. Why, then, did such a successful exhibition on Art Deco get organized abroad? France undoubtedly has a long way to go to discover a coherent presentation of design for the general public, as well as to meet international standards for achieving outstanding promotion and development of our cultural domain.