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Introduction 2004

This issue marks the twentieth anniversary of *Design Issues*. Twenty is a curious number. Counted in years, it is one fifth of a century. For a young person, reaching the age of twenty can be a frustrating milestone: no longer a teenager, not yet an adult. For an academic institution or a professional association, twenty years may mark the rise of a new generation of leaders and issues; but often it is only the latest in a sequence of generations stretching back into the past and seemingly destined to continue forward into the future. For an academic journal, however, dependent on institutional support for its funding and the interest of the design community for its intellectual sustenance, twenty years is an achievement to be celebrated

There is a documentary component to volume 20 number 1. Sustaining twenty years of provocative design discourse has called forth the best efforts of diverse groups. One group consists of authors who have shared their scholarship and their passion for design with an international readership. Readers will find a complete index of twenty years of *Design Issues* listing all the authors and titles. A second group consists of the men and women who have labored in a variety of capacities to produce this journal for two decades. In recognition of their dedication, a complete roster of editors and editorial staffers is also included. Finally, a note about the journal's archival material is added as a reference for future readers who find themselves curious about the origins of this design venture.

This anniversary certainly prompts reflection on two decades of design writing. *Design Issues* can be interpreted as a mirror of design discourse; it reflects, on one level, the concerns of our contributors. A simple "mapping" of the table of contents indicates fairly accurately the geographical and thematic range of manuscripts submitted. If there have been relatively few articles devoted to design developments in Africa or South America, for example, this reflects the paucity of manuscripts submitted treating the subjects. However, we are proud of the fact that a content analysis reveals the journal's role in bringing to the attention of our worldwide readership design developments in parts of the world and the design experiences of groups previously little noted in the literature.

Reflection, however, is too passive a description of this journal. More than a mirror we believe *Design Issues* has served as a generator of design discourse. The ideas, insights and suggestions published in these pages have actively expanded its horizons. *Design Issues* has served as a generator not by promoting a single conception of design thinking or one particular approach to design action but by providing a forum in which a broad range of voices can be heard.

An effective forum sustains intelligent conversation about design and projects this conversation beyond the confines of the conference hall, seminar room or the design studio. A good forum amplifies the discussion because it facilitates connections among the material presented in it. Through the editorials drafted by the editors and citations provided by the authors, the reader is constantly asked to establish his or her own connections among the discursive threads that run through the journal.

Present at the Creation

Design Issues was born in the fall of 1982 in the School of Art and Design at the University of Illinois, Chicago (UIC). Two of its five progenitors were artists, two were industrial designers, and one was a design historian. The two artists, Martin Hurtig and Leon Bellin, had graduated from the Institute of Design, not during the period when László Moholy-Nagy was there but a few years later. Nonetheless they had imbibed the traces of Moholy's ambition to create a philosophic discourse for design and to cut across the different media in order to address fundamental questions about vision.

Martin Hurtig was a painter of stark geometric forms and also the director of the UIC School of Art and Design; Leon Bellin preferred luscious nudes, whose sensuous flesh recalled the paintings of Rubens. Sy Steiner and Larry Salomon were both professors of industrial design but Salomon was also a sculptor. Victor Margolin, the only one of the group who did not make things, was a design historian, who had just received his Ph.D. He happened to write his dissertation on the graphic design of László Moholy-Nagy, El Lissitzky, and Alexander Rodchenko. So the Moholy connection was quite strong among the journal's founders, even though it was never acknowledged.

The intention of the founders was to create a journal that dealt broadly with design, both current as well as from the past. Leon Bellin, who had a polemical nature, proposed the name *Design Issues* because he believed it would represent a commitment to controversy and debate. None of the founders envisioned a journal that would simply document and record. All intended a publication that would provoke.

Victor Margolin was the Editor for the first three years. After that, decisions were made by an editorial board that began with the original editors and gradually expanded to include other colleagues, both from UIC and elsewhere. During the years that the journal remained within the UIC School of Art and Design, all the work was done by members of the design faculty. Tad Takano, who, like Hurtig and Bellin, had also been a student at the Institute of Design, was the designer and created the covers for the first three years, a series of photographic manipulations that certainly owed their origins to the abstract photographs and photograms of Moholy-Nagy. Other faculty members and a few graduate students

did the promotion, built up the subscriber base, assisted with editorial tasks, and helped with the design production. Later, prominent designers like Arthur Paul, Ivan Chermayeff, and Massimo Vignelli were invited to contribute covers and they did. Before the journal left UIC, John Greiner, a member of the graphic design faculty, took over the designer's job and created a series of covers himself, while also changing the journal's typographic style and layout.

The founders never envisioned *Design Issues* as a strict academic journal with all contributions in a scholarly format. Their intention was to mix research with polemic, visual spreads with informal essays, book reviews with original documents. They wanted the journal's audience to include both scholars and designers but, given the backgrounds of the founders, the aim of reaching designers was high on the list. Consequently *Design Issues* adopted an extremely broad definition of argument and has remained open to many voices.

For example, the editors wanted to keep alive the manifesto tradition of the European avant-garde and sought to publish contemporary manifestos wherever they could find them. Thanks to Gillo Dorfles, a member of the international advisory board and one of Italy's leading philosophers of aesthetics, the editors published the Scientific Program of the 1983 ICSID Congress in the inaugural issue and this led to a series of other manifestos such as the Guzzini Memorandum, the Declaration of the Central European Design Conference, and the Munich Design Charter.

It is difficult to recall exactly how the articles in the early issues were acquired. From the beginning, the founders committed the journal to an internationalist position and were willing to publish translations of articles in languages other than English that had been previously published elsewhere or that had never been published, along with new articles written in English. Margolin was interested in an article that laid out the historiography and methodology of design history and through John Heskett, a British colleague in the Design History Society, he found Clive Dilnot, who wrote the now classic two-part article "The State of Design History," which appeared in the first two issues. Also in the first issue was Dieter Rams's "Omit the Unimportant," which originated as a polemic against Memphis furniture at the 1983 ICSID Congress in Milan and became, through its publication in the journal, a defense of modernist minimalism which is still widely referred to, twenty years later.

Beginning with two issues a year, it was not too difficult for the editors to find enough material for the journal. Besides the articles and occasional documents, they also published book reviews. Within several years, *Design Issues* had published articles from Italy, France, Hungary, Poland, Japan, England, Canada, and Germany. In the early issues, the editors used professional translators but later John Cullars, a UIC librarian with a doctorate in comparative literature translated articles from French, Spanish, German, Italian,

and Russian. The editors also began to publish important historic documents as well as contemporary manifestos.

In the third issue, Vol. 2 No. 1, Richard Buchanan made his first contribution to the journal, "Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice." With a Ph.D. in Philosophy and Rhetoric from the University of Chicago, Buchanan was working in research and development and was teaching in the English Department at UIC. Margolin met him when seeking money to fund the first issue of the journal. Buchanan, who had studied with the philosopher Richard McKeon, was already accustomed to thinking about rhetoric outside the classical box, and took up Margolin's challenge to write an article on the rhetoric of design. At the time his article was published, Buchanan became a member of the journal staff as a consulting editor. With Vol. 3 No. 2, Dennis Doordan, who had joined Margolin in the Art History Department at UIC, where he taught architectural history, also became a member of the editorial board and the journal staff began to take on a more scholarly cast. Doordan and Margolin had met several years earlier when they both participated in one of the first panels on design history at the College Art Association in February 1984. Previously Doordan had organized an exhibition of work by the architect William Lescaze, who produced some of the first corporate design for CBS.

Margolin remained the Editor for the first three years until the end of Vol. 3. Several years later, he edited an anthology of articles from that period which was published in 1989 by the University of Chicago Press as *Design Discourse: History, Theory, Criticism.* As a transition from a single editor to an editorial board with one member coordinating each issue, the editors published a special double issue (Vol. 4 Nos. 1–2), "Designing the Immaterial Society," which was guest edited by the Italian sociologist Marco Diani, who was then teaching at Northwestern University. Diani stretched the journal's intellectual boundaries. His authors were mostly French and Italian sociologists and their articles had a distinct postmodern cast. With Vol. 5 No. 2, the editors invited Diani to join the editorial board and this added yet another disciplinary perspective to their deliberations.

On a trip to England to attend a conference of the Design History Society, Margolin had a discussion with his British colleague John Heskett about the lack of publications on the history of design in Asia and the Pacific. This led the editors to invite Heskett to guest edit a second special issue (Vol. 6 No. 1), though the journal's first devoted to a particular geographic region. "Design in Asia and Australia" introduced yet another group of writers to the journal including Rajeshwari Ghose and Shou Zhi Wang, from Hong Kong and China respectively, as well as Tony Fry from Australia.

About a year later, Heskett moved to Chicago to teach at the Institute of Design and he joined the editorial board at that time, adding another design historian to mix. However, Heskett was as

active in the area of design policy and management as he was in the field of design history. The expansion of the editorial board to eight members with the new balance weighted towards those who were scholars rather than practitioners or professors of art or design practice, began to create some tensions although these were never evident in the journal's contents, which continued to adhere to the original editorial vision. Nonetheless, the larger number of people contributing to the discussions and the diversity of their backgrounds made the choices of acceptable articles more intense.

Bellin coordinated another special issue (Vol. 7 No. 1) on Design Education, a subject on whose importance all the editors agreed. The issue was the journal's first foray into this field and it began a continued commitment to design education as a theme. Though no further special issues on the topic resulted, the editors have seen an increase in the number of submissions on the subject in recent years. By coincidence, the lead article in the special issue was by the French scholar, Alain Findeli, who wrote an historical account of the philosophical and methodological foundations of Moholy-Nagy's design pedagogy in Chicago. The article was based on Findeli's French Ph.D. dissertation, which analyzed more thoroughly than anyone else has done Moholy's Chicago tenure at the New Bauhaus, School of Design, and Institute of Design between 1937 and 1946. Subsequently Findeli published other articles in *Design Issues*, which addressed issues of design philosophy and pedagogy.

The UIC School of Art and Design continued to publish *Design Issues* until the end of Vol. 9 in 1993. Throughout its tenure at UIC, the journal was sustained by a combination of outside revenue and funds from the School of Art and Design and the UIC Chancellor. When the Chancellor reported that he would no longer be able to support the journal, it became necessary to find another home for it. By this time, Richard Buchanan had left UIC and after serving as a visiting professor at Carnegie-Mellon University, he became the director of the CMU design department whose name under his leadership was changed to the School of Design.

Buchanan was able to allocate funds from his budget to support the editorial costs of producing the journal, which included hiring a managing editor. The MIT Press agreed to become the journal's publisher. Doordan, who had moved to the School of Architecture at the University of Notre Dame, and Margolin, who remained at UIC, became the co-editors of the journal along with Buchanan and have continued in this role for the past ten years.

The CMU Years
There was no change of editorial policy and no break in publishing continuity with the move to Carnegie Mellon. One reason for the smooth transition was the work of Diane Stadelmeier, the new managing editor, and Karen Moyer, the journal's new designer. A

faculty member of Carnegie Mellon's Department of Design, Moyer directed a significant typographic redesign of the journal. The dimensions of the journal did not change and the wide gutter for footnotes remained. But there was a new font selection and many subtle changes in layout that greatly improved readability. Readers found other changes as well. The journal was now published three times a year, reflecting increased submissions of articles and a wider subscription base. A new Editorial Board was created, and the Advisory Board was reconstituted. A wider range of designers contributed covers, beginning with the notable "tattooed man" cover by Rick Landesberg. Other designers included Philip Burton, Martin Solomon, Lucille Tenazas, Uwe Loesch, Joan Dobkin, Laurie Haycock Makela, James Victore, Jan van Toorn, Michael Bierut, Karen Moyer, Ken Hiebert, Dan Boyarski, Olga Zivov, Garland Kirkpatrick, Jorge Frascara, Tom Strong, Katherine McCoy, Hanno Ehses, Jose L. Gimenez, Shariar Sarmast, Robert Massin, Chris Vermaas, Mark Mentzer, and Eddy Yu.

Another reason for the smooth transition to Carnegie Mellon was the shared vision of the three editors, expressed in the statement of editorial policy in the first issue of Volume 10 and republished in Volume 17, No. 1, when *Design Issues* expanded to become a quarterly journal. The journal would be a forum for thoughtful discussion of design, achieved through a mixture of history, criticism, and theory and a strong commitment to pluralism. This was a commitment the editors agree on, despite the fact that they held quite different intellectual, philosophical, and disciplinary perspectives on design. However, there was a subtle shift in the journal, reflecting the development of design thinking and research that characterized the 1990s. If the Chicago years represented the youthful beginning of the journal, the Carnegie Mellon years represented a confident development of earlier themes and an introduction of new themes—or old themes in new form. For example, Ezio Manzini's "Design, Environment and Social Quality" introduced environmental and ecological issues as well as social responsibility in the work of product designers. Gunnar Swanson and Gui Bonsiepe focused attention on a reconstruction of graphic design education—Swanson, in particular, discussed the place of design education in a university environment and the need to consider liberal education as a powerful influence on future practice. And Alain Findeli, with "Ethics, Aesthetics, and Design," brought forward the formal discussion of ethics in design. Taken together, these authors effectively widened the space for discussion of design and the designer's social responsibility.

Along with social responsibility, we also find articles that began to place products and the practice of designing in a wider social context, overcoming an earlier tendency in design writing to treat products in formal isolation. Indeed, design studies, itself, became a subject controversy, as in the special theme issue (Vol.

11, No. 1) that began as a discussion of design history and quickly broadened into a debate about the nature of design studies. The debate presented in this special issue—primarily among scholars from the United Kingdom and the United States—illustrated as well as any example the principled commitment of the journal to pluralism in the exploration of problems and issues.

While individual articles remained the central focus of the journal, special theme issues played a somewhat larger role than in the past. One reason for this was the development of the design community itself, with more participants and new focusing questions and concerns. This is evident in a variety of special issues published since 1993: "Designing the Modern Experience, 1885–1945" (Vol. 13, No. 1), edited by Dennis Doordan; "A Critical Condition: Design and Its Criticism" (Vol. 13, No. 2), guest edited by Nigel Whiteley; "Design Research" (Vol. 15, No. 2), guest edited by Alain Findeli; "Rethinking Design" (Vol. 17, No. 1), guest edited by Jorge Frascara; and "Design in Hong Kong" (Vol. 19, No. 3), guest edited by Hazel Clark. In 1995 two more anthologies of articles drawn from the journal were published by MIT Press: *The Idea of Design* edited by Victor Margolin and Richard Buchanan and *Design History* edited by Dennis Doordan. In introductory essays for each volume the editors contextualized the anthologized material in terms of the evolving nature of design studies. Like Margolin's earlier anthology *Design Discourse*, these quickly became standard texts in university design courses.

The widening of the design community in this period also reflected in the journal. There has been a progressive expansion of subject matter to address new design practices. For example, there have been articles on planning, scenario building, action research, and, generally, the use of social science methodologies in design practice and in design research. There have also been articles on a wider range of design products. For example, we have published discussions of environmental graphics, computers, hypertexts, web interfaces, information design, interactive media, service systems, interiors, and environments such as aquaria. On the latter, see Dennis Doordan's well known "Simulated Seas" (Vol. 11, No. 2). The journal has also sought to bring into design discussion articles about design in parts of the world where little has been previously documented. Articles on design in China, Mexico, Turkey, Indonesia, and Russia are examples. And the journal has also included writers from other disciplines where discussion of design is growing—for example, the philosopher Albert Borgmann, who works in the area of the history and philosophy of technology.

Design Issues continued to publish articles that profile individual designers and their work—for example, David Ryan on Enzo Mari, David Gartman on Harley Earl and the birth of styling at General Motors, Laetitia Wolff's interview of Robert Massin, and Claire Badaracco's discussion of George Salter's book jacket design. But these articles were balanced with a wide array of contextual

studies, so that individual accomplishment found its natural place among the many causes of design.

In this period, *Design Issues* also sponsored along with the Department of Industrial, Interior and Visual Communication at The Ohio State University and the School of Design at Carnegie Mellon University—the first international conference on doctoral education in design. Known as the "Ohio Conference," because it was held on the campus of the Ohio State University in Columbus, Ohio, this meeting proved to be the beginning of a series of bi-annual international conferences convened in Europe and Asia. It is consistent with the vision of the journal that these conferences have provided a forum for pluralistic discussion around the issues of design and design research confronting a new generation of designers and design scholars.

In general, *Design Issues* tried to be a forum for diverse views on the nature and practice of design. Instead of advancing a single view on design, the journal sought to be a neutral ground for thoughtful discussion from any perspective. It remains open to discussions of people and personalities, natural and social forces, the disciplines and processes of design and design studies, and the values and moral purposes that are the ultimate ground of design. This twentieth volume of *Design Issues* renews the commitment of the journal to advancing the understanding of design through the modes of history, criticism and theory.

Affirmation

Editing and producing *Design Issues* for twenty years has been a deeply satisfying experience. Much of the satisfaction comes from watching the maturation of design discourse over the past two decades. Fundamental questions about the nature of design, designerly ways of knowing as well as acting, the role of designers, and the multiple ways through which design is woven into the very fabric of life in the modern world have been debated in the pages of this journal. Inherent in the challenge to fully recognize the complexity of design and render this complexity legible and accessible to others is the necessity to position this recognition within a humanistic framework. Rather than posited as abstract universal entities adequately knowable in physiological and ergonomic terms, *Design Issues* has consistently argued the necessity to appreciate human beings as unique individuals and as communities sharing distinct forms of cultural, ethnic or other group identities and experiences.

No assessment of twenty years of design discourse can avoid the growing recognition and consideration of the effects of globalization. The phenomenon of globalization has provoked many cultural commentators to lament the loss of diversity due to the "commodification" and "homogenization" of experience in the contemporary world. Critics have pointed to the darker side of globalization: exploitation of labor, environmental degradation, and the rise of

economic and political forces that seems to escape regulation and democratic control. While it would be naïve to deny the excesses of globalization, it would be a mistake to forget an essential truth that has animated everyone involved with *Design Issues* all these years. At its finest, design is an affirmation of life. To design—to create, to improve, to preserve, to care for the world and all its inhabitants—is an act grounded in a fundamental commitment to life and a belief in the importance of the future.

Design Issues is committed to advancing design knowledge and promoting design discourse. This commitment, demonstrated page after page, issue after issue, volume after volume for twenty years, to bringing pluralistic discussions of design history, theory and criticism together in one place (which, due to the enduring and globe-spanning power of the printed word, means this one place is literally everywhere) remains the bedrock upon which *Design Issues* is built.

Richard Buchanan
Dennis Doordan
Victor Margolin

Introduction 1984

"I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach. And not, when I came to die, that I had not lived."
　　　Henry David Thoreau, *Walden,* 1854

No one, least of all the designer, can operate meaningfully in today's fast-changing economic and cultural situation without a well-defined sense of purpose. On a personal level, this means knowing what one's life is about; and on a professional level it means understanding one's possibilities for working, both for economic survival and for effecting change. Just as one needs to know oneself, one must also know one's profession—its history, its theoretical propositions, and its critical assumptions.

Within the American design tradition, too little attention has been given to understanding the profession of design in all its dimensions. Americans have always prided themselves on pragmatism and a hard-nosed confrontation with reality. But as the conditions of life become more complex, the celebration of an over-simplified pragmatism is unconvincing. At the same time, as design programs proliferate throughout the United States, many educators have realized that design education lacks the dimension of history, theory, and criticism that can foster more sophisticated and critical responses to the new situations.

It would be presumptuous to say that *Design Issues* has been created to solve this problem since it is difficult at this point even to know what might constitute a history theory, and criticism of design. The founders of this journal, a group of colleagues at The University of Illinois at Chicago, believe that before the design profession becomes too concerned with conclusions, a place for ongoing deliberation must be established.

Design Issues is a journal of ideas that will embrace many forms from scholarship to polemics. Articles are selected by the editors with the intent of presenting a range of positions and subjects. Some of the material will be complex but that is the challenge of reflection. If the contemporary situation is hard to grasp, how can its analysis be simple? However, we seek articles that avoid jargon which is daunting to the layperson. There will also be space in the journal for visual material—experimental typography, drawings, sketches for objects, and so forth.

In Europe there is a long tradition of discussing design as a significant social and cultural practice. This tradition is scarcely

evident in the United States although there are signs of change. Design Issues can play an active role here. The journal does not seek a set of universal principles and methods; rather we recognize the need for and value of a diversity of design strategies, ranging from large organizations of specialists operating with the latest technology to small teams of individuals concentrating on alternatives to mainstream practice.

The formation of a new set of directions for thinking about design is a long-term project. Therefore, a new level of thinking is not expected to emerge full-blown like Athena from the head of Zeus. Discussion and debate are encouraged. Beginning with the next issue, space will be provided for readers to respond to the articles and reviews. Articles and comments from outside the design field are also invited.

The aim of this journal is to be provocative and to raise controversial issues. The best design is done with intensity and commitment and we seek the same qualities from out contributors.

Victor Margolin, *Editor*
1984

Introduction 1993
Statement of Editorial Policy:
To Begin Again

Design Issues was founded in 1983 by a small group of designers, educators, and scholars who believed that a forum was urgently needed for serious discussion of the role of design in the contemporary world. This discussion, they reasoned, would have to include *historical perspectives* on where design has been, *critical discussions of* where design is at present, and *theoretical discussions* that may help to reveal where design will be headed in the future. All three would be needed because any one would be insufficient to convey the complexity of design if it existed in isolation from the others. The mixture of history, criticism, and theory became a signature of *Design Issues,* along with a commitment to pluralism—a belief that the understanding of design is best advanced through the interplay of contrasting perspectives and approaches represented among those who practice design as well as those who study it.

This signature will remain essentially unchanged in the relocation of *Design Issues* from the University of Illinois at Chicago to Carnegie Mellon University. But there will be other changes suited to new directions in design practice and design studies. For example, *Design Issues* will now be published three times each year to better serve the growing diversity of interests among designers and those who study design. In addition, we will invite more articles by practicing designers, because the issues of practice today are an important window into the evolving nature of design that must be addressed more thoroughly.

To understand further changes coming in the journal, consider a description of the kind of writer and reader we hope will participate in *Design Issues.* We will seek writers who are curious and intrigued by design and view their work as a responsible exploration of the subject. They will be individuals who value not only the concrete experience of design as both a mundane and profoundly significant feature of human culture, but who also value the challenge of expressing the assumptions that lie behind the work of designers, the objects created by designers, and the efforts of those who study design. In short, they will be men and women who pose exciting and challenging questions about design and seek reasonable answers, drawing on whatever evidence, disciplinary knowledge, or inspiration they regard as appropriate.

In turn, we will invite these writers to imagine their readers as people who are passionately interested in design and want to read clear, reasonable discussions of the subject that may shed new

and unexpected light on one of the most perplexing and influential features of the contemporary world. These readers may be professional designers, design educators, scholars of design, or experts in some other discipline related to design. They may be museum curators, students, or general readers. Their original interest may be graphic and communication design, industrial and product design, engineering design, or any of the new areas in which design has been systematically applied in recent years, such as exhibition design, human-machine interaction, retail and other interior environmental design, robotics, virtual spaces. human-computer interfaces, software, or interactive media. But most of all, they will be readers who seek an alternative to the short, thin, and sometimes self-promoting articles that have become too common in many commercial design publications in the United States and abroad. Clearly, we are satisfied that *Design Issues* is not intended for everyone. Our readers are those who seek relevant connections to their own work in any discussion of design and who do not mind wrestling with unfamiliar subjects or ideas.

As editors, our primary test in selecting manuscripts is simply this: "Why should anyone interested in design read this article?" The answer, for us, must be that it contributes to the understanding of the conception and planning of the human-made environment of graphic images and symbols, industrial products, services and activities, or systems shaped by designers to support the activities of men and women in all walks of life. The understanding may be historical, critical, or theoretic. It may be derived from the experience of designing or the fruit of scholarly research. It may focus on the classic expressions of graphic or industrial design or on one of the many new areas of design application and technology. It may probe issues of design education or the display of design in museums. It may address problems of design policy and management in corporations (what is the impact of TQM and the Learning Organization on design today?) or the difficulties of integrating marketing, engineering, and design in product development. It may seek to clarify the subtle problems of information design and the new blending of words and images found in many areas of design. It may examine the career of products in everyday life in the project that our colleague Tony Fry describes as "writing culture." It may even address aspects of architectural design or urban planning—provided that ideas about design emerge in a form that is potentially useful to all designers and those who seek to understand design.

In short, the identity of *Design Issues* does not lie in the limits of one branch of designing—we are open to exploration of all branches. Nor does it lie in an area of professional or academic specialization illustrated by any one of our contributors—we encourage writers from any discipline or professional background who want to explore a facet of design. Nor does it lie in a signature style of writing and reasoning that excludes contributions from indi-

viduals of different backgrounds—we seek many voices. Instead, the unity of the journal lies in the judgment of the editors that these articles contribute to the advance of design in practice or in study.

Who shall judge our judgment? Time, and the reader. Our readers will be an important source of guidance. Please tell us when you disagree with something you have read—and, at the same time, please tell us where you think the journal *should* be headed if it is to successfully pursue the changing character of design in the contemporary world. When content warrants and space permits, we will publish letters and responses from time to time in a special section of the journal. However, guidance will also be the responsibility of the new Editorial Board and the new Advisory Board of the journal, with distinguished individuals who represent distinction and excellence along the wider path that *Design Issues* seeks to explore.

As at the founding of *Design Issues*, we continue to believe that a forum is urgently needed for serious discussion of the role of design in the contemporary world, and we want this journal to be the best forum available today for thoughtful reflection.

Finally, for inspiration we are reminded of Sibyl Moholy-Nagy's remarks on the resilience of character displayed by Moholy at the surprise closing of the New Bauhaus a year after its initial opening in Chicago. "For Moholy it was the signal for a new beginning of which he had had so many in his life. With Plato he believed that a new beginning is like a God, saving all things." So, too, with *Design Issues.* Let us begin again.

Richard Buchanan
Dennis Doordan
Victor Margolin

also to the editorial staff, led first by Faith Van Alten and then by Bonnie Osborne, and to the MIT Press for recognizing the importance of the venture and demonstrating that recognition by becoming our new publisher. Finally, we want to thank all of the readers and writers of *Design Issues* who have participated in the search for better understanding of design in all of its facets.

Investigating Design: A Review of Forty Years of Design Research
Nigan Bayazit

What Is Design Research?

This paper will start to answer the above question with the definition of L. Bruce Archer: "Design research is systematic inquiry whose goal is knowledge of, or in, the embodiment of configuration, composition, structure, purpose, value, and meaning in man-made things and systems."[1]

In this paper, looking at design research from the design methodology and design science perspectives restricts our view in a sense that is necessary for such a topic. Design research tries to answer the obligations of design to the humanities:

A Design research is concerned with the physical embodiment of man-made things, how these things perform their jobs, and how they work.

B Design research is concerned with construction as a human activity, how designers work, how they think, and how they carry out design activity.

C Design research is concerned with what is achieved at the end of a purposeful design activity, how an artificial thing appears, and what it means.

D Design research is concerned with the embodiment of configurations.

E Design research is a systematic search and acquisition of knowledge related to design and design activity.

The objectives of design research are the study, research, and investigation of the artificial made by human beings, and the way these activities have been directed either in academic studies or manufacturing organizations. As Simon indicates, we can call overall activities of design research, "the sciences of the artificial."[2] Some of the art, craft, and design people call what they do for art and design "research." That kind of research is not the subject of this paper. An artist's practicing activities when creating a work of art or a craftwork cannot be considered research. Yet it is possible for an external observer to do research into how an artist is working on his or her work of art to make a contribution to the common knowledge. These can be observable phenomena. As Christopher Frayling[3] says, "Research through art and design is less straightforward, but still

1   L. B. Archer, "A View of the Nature of the Design Research" in *Design: Science: Method,* R. Jacques, J. A. Powell, eds. (Guilford, Surrey: IPC Business Press Ltd., 1981), 30-47. L. Bruce Archer gave this definition at the Portsmouth DRS conference.

2   H. A. Simon, *The Sciences of the Artificial* (Cambridge, MA: MIT Press, Third Edition, 1999).

3   C. Frayling, "Research in Art and Design," *Royal College of Art Research Papers* 1:1 (1993/4).

4   As Jacques Barzun and Henry F. Graf indicated in their book, *Modern Arastirmaci* (translated into Turkish from the Modern Researcher), (Ankara: TUBITAK, 1993).

5   Nigel Cross, "Designerly Ways of Knowing: Design Discipline Versus Design Science" in *Design Plus Research, Proceedings of the Politenico di Milano Conference,* Silvia Picazzaro, Amilton Arruda, and Dijon De Morales, eds. (May 18-20, 2000), 43-48.

6   G. Broadbent, "The Development of Design Methods," *Design Methods and Theories* 13:1 (1979): 41-45.

7   Nigel Cross has several publications in various conferences in "The Recent History of Post-Industrial Design Methods" in R. Hamilton, ed., *Design and Industry* (London: The Design Council, 1980).

8   N. Cross, *Developments in Design Methodology* (Chichester, UK: John Wiley & Sons, 1984).

9   N. Cross, "A History of Design Methodology" in *Design Methodology and Relationship with Science,* NATO ASI Series, M. J. De Vries, N. Cross, and D. P. Grant, eds. (Dordrecht: Kluwer Academic Publishers, 1993).

10   V. Hubka, E. Eder, *Design Science* (London: Springer Verlag, 1996).

11   N. Bayazit, *Endüstri ürünleri Tasariminda ve Mimarlikta Tasarlama Metotlarina Giriß* (Introduction to Design Methods in Industrial Product Design and Architecture), [In Turkish] (Istanbul: Literatur Yayinevi 1994).

12   V. Margolin and R. Buchanan, *The Idea of Design: A Design Issues Reader* (Cambridge, MA: The MIT Press, 1995).

13   *Doctoral Education in Design: Proceedings of the Ohio Conference* (8–11 October, 1998).

14   In 1986, the Design Methods Group celebrated its twentieth anniversary with some special reviews in its journal. D. Grant edited the anniversary issue of *Design Methods and Theories Journal of DMG* 20:2 (1986).

identifiable and visible," consisting of materials research, developmental work, and action research. Architects and engineers have applied these definitions of design research since the 1960s.

All design research reports are related to the history or past activity of the subject area under study. Studies of the present are part of the past because every research report has to prove its roots in the past.[4] I will try to identify some instances of the state of the art from some research papers as well as books on design research. This paper will provide a summary of design research history concerning design methods and scientific approaches to design.

Many writers[5] have pointed to De Stijl in the early 1920s as an example of the desire to "scientize" design. The roots of design research in many disciplines since the 1920s are found within the Bauhaus, which was established as the methodological foundation for design education. After the Bauhaus closed, most of the staff moved to the U.S., Britain, or Russia, where they were well accepted and took the Bauhaus tradition to other institutions. Moholy-Nagy moved to the U.S., where he finally became the director of the "New Bauhaus," which became the Institute of Design at the Illinois Institute of Technology in 1949. Gropius went to Harvard, and brought a new line of thought to that side of the U.S. Le Corbusier described the house as an objectively designed "machine for living." He envisioned a desire to produce works of art and design based on objectivity and rationality. During this same period, Buckminster Fuller sought to develop a "design science" that would obtain maximum human advantage from a minimal use of energy and materials. In 1929, he called his concept of design "Dymaxion" or "4-D."

Role of Design Methods in Design Research

Main sources for the history of design methods and design research can be found in various publications. Some historical reviews of design methods have been written by Geoffrey Broadbent,[6] Nigel Cross,[7, 8, 9] Vladimir Hubka and Ernst Eder,[10] Nigan Bayazit,[11] Margolin and Buchanan,[12] at various conferences.[13, 14, 15, 16]

> Horst Rittel[17] made the following statement in an interview: The reason for the emergence of design methods in the late '50s and early '60s was the idea that the ways in which the large-scale NASA and military-type technological problems had been approached might profitably be transferred into civilian or other design areas.

After World War II, the new techniques that had been used in the design and development of arms and wartime equipment, and the methods and techniques used in developing many new inventions, attracted many designers. Creativity methods were developed mainly in the U.S. in response to the launching of the first satellite,

15 "Foundation of the Future: Doctoral Education in Design Conference" at La Clusaz, France (9–12 July 2000).

16 This conference brought together the HfG people and state-of-the-art reviewers of design research, *Design Plus Research, Proceedings of the Politecnico di Milano Conference* (May 18–20 2000).

17 In an interview with Horst Rittel in the 1972 issue "Son of Rittelthink" in *The DMG 5th Anniversary Report,* he gave the basic reasons for design methods.

18 D. H. Edel, *Introduction to Creative Design* (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1967).

19 J. R. M. Alger and C. V. Hays, *Creative Synthesis in Design* (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1964).

20 M. S. Allen, *Morphological Creativity: The Miracle of Your Hidden Brain Power* (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1962).

21 B. Jerrard, R. Newport, and M. Trueman, *Managing New Product Innovation* (London, Philadelphia: Taylor & Francis, 1999).

22 H. Rittel, *The DMG 5th Anniversary Report* (1972).

23 J. C. Jones and and D. G. Thornley, *Conference on Design Methods* (Oxford University Press, 1963). This conference was the turning point of design studies.

24 C. Alexander, "The Determination of Components for an Indian Village" in *Conference on Design Methods,* J. C. Jones and D. G. Thornley, eds. (Oxford University Press, 1963). The method in his Ph.D. thesis was explained for first time at this conference.

25 C. Alexander, *Notes on the Synthesis of Form* (Cambridge, MA: Harvard University Press, 1964).

26 S. Chermayeff and C. Alexander, *Community and Privacy: Toward a New Architecture of Humanism* (New York: Doubleday and Co. Inc., 1963). This book contains the radio speeches of Chermayeff and also Alexander's method for patterns on the housing neighborhood.

27 S. A. Gregory, ed., *The Design Method* (London: Butterworth Press, 1966 .

the Soviet Union's "Sputnik," which caused the American government to free up quite a lot of money to do research on creativity. [18, 19, 20]

During the 1960s, it became evident that designers no longer could rely solely on their ability to focus upon the product as the center of a design task. Due to technological developments and the implications of mass production, interest had to be shifted from hardware and form to the consideration of human needs. This required a new look at the subject of design methods. [21]

First Generation Design Methods

The influence of systems analysis and systems theory on design established the grounds for the foundation of "systematic design methods," which Horst Rittel[22] later called "first generation design methods." The *Conference on Design Methods,* which was organized by J. C. Jones and D. G. Thornley,[23] was the first scientific approach to design methods in England. The methods proposed at that conference were simplistic in character. Everyone was systematizing his or her own approach to design, and externalizing it as design method. Morris Asimow, a chemical engineer, wrote the book *Introduction to Design,* published in 1962, about engineering design. L. Bruce Archer, the previous HfG teacher, became the head of the Design Research Unit in the Royal College of Art in 1964, and published his book *Systematic Methods for Designers* in 1965. His method was based on critical path analysis, a model of operations research, and gave design research examples. These publications can be considered pioneering examples of design methods and scientific approaches to design.

The first Ph.D. thesis in design methods by Christopher Alexander,[24, 25] entitled "Notes on the Synthesis of Form," broke new ground in architecture. S. Chermayeff and C. Alexander[26] dedicated their book, *Community and Privacy,* to Walter Gropius. It applied "pattern language," using the same approach as Alexander in his Ph.D. thesis. Alexander tried to split the design problems into solvable small patterns by applying information theory. He sorted out those that interacted with each other, and solved the problems of each group by drawing a diagram in which the interactions—either fit or misfit—of user requirements were resolved between the components within and among patterns.

In 1965, Sidney Gregory's[27] paper, included in *The Design Method* proceedings of the conference he organized in Birmingham, defined for the first time the concept of "design science." That conference contained papers on design research, as well as the design methods used in different engineering disciplines. The late Nobel laureate Herbert A. Simon from Carnegie Mellon University, invited to deliver the Karl Taylor Crompton lectures at the Massachusetts Institute of Technology in the spring of 1968, used this opportunity to present the thesis that had been central to his research. It was

published under the title *The Sciences of the Artificial* that same year.[28] He proposed applying the extensive scientific approach to the sciences of the artificial in economics as well as to engineering and other disciplines, in which the design of the artificial is the subject of its own discipline. The artificial here includes all kinds of the man-made things and organizations. He and his colleagues presented artificial intelligence (AI) in design at Carnegie Mellon University.

During that period, research approaches to design became common in Europe and the U.S. The conference/course, "The Teaching of Design—Design Methods in Architecture," was held in HfG in Ulm in April 1966, and following that at the 1967 *Design Methods in Architecture Symposium*[29] held in Portsmouth. Organized by Geoffrey Broadbent and Anthony Ward, the symposium looked at the design research approaches to design.

> Broadbent commented on the symposium as follows:
> The 1967 Symposium was held at a particular moment in history when general change in consciousness was taking place of the kind which Kuhn (1962) would have called paradigm shift. This was having profound effects on society and on social organizations in general including—which is important for us—the role of the designer in society.[30]

Design methods people were looking at rational methods of incorporating scientific techniques and knowledge into the design process to make rational decisions to adapt to the prevailing values, something that was not always easy to achieve. They were attempting to work out the rational criteria of decision making, and trying to optimize the decisions.

Some designers thought that their approaches were a waste of time. This view was not exactly true. The design problems in architecture and in engineering after World War II were severe. The postwar diminished male labor force was a very important influence, and required new production methods, and new designs to meet the new needs of the society in Europe and in the U.S. The Cold War with the Eastern Block countries gave impetus to new human requirements, with scientific approaches to design in this new era generated from political decisions.

As Broadbent[31] said after the Portsmouth Symposium in 1967:

> The Symposium had been set up by Tony Ward to include a specific confrontation between those whom he saw as behaviorists, representing a mechanized, quantified view of design and those (including himself) he saw as existentialist/phenomenologist (formerly Marxist) concerned, above all, "with the humanness" of human beings.
> His "behaviorists" included Bruce Archer; Tom Markus above all; Ray Struder, whose very title "The Dynamics of

28 H. A. Simon, *The Sciences of the Artificial*, 1 (Cambridge, MA: MIT Press, 1968).

29 G. Broadbent and A. Ward, eds., *Design Methods in Architecture* (London: Lund Humphries, 1969).

30 G. Broadbent, "The Morality of Design" in *Design: Science: Method* (1981), 309–328.

31 G. Broadbent in *Design: Science: Method* (1981): 309.

Behavior-Contingent Physical Systems" summarized what they were all about. Design was to be "scientific"—Struder was looking for a "unit of analyses in design measurable, in his words, against dimensions that are both relevant and empirically accessible." The designer has to start by analyzing human behavior, from which he could derive "quantities, qualities, and relationships."

Meanwhile, a design methods group was established at the University of California, Berkeley in 1967, and began to publish a newsletter called *Design Methods Group (DMG) Newsletter.* [32] This newsletter provided information about research in progress, as well as publications in the fields of design research covering planning, architecture, and industrial design mainly from the U.S. and UK, but seldom from Europe.

In June 1968, the DMG International Conference was organized at MIT. The purpose of the conference was identified in the "DMG Design Methods Group Conference Purpose and Program"[33] leaflet:

> The First Annual International Conference is a research conference in the theory and application of design, planning, and engineering methodology. The purpose of the conference is twofold: first to provide a format for researchers to present their current work for evaluation from their peers and, second, to encourage dialogue between the researchers and the practitioners who are interested in the application of this work. Because the conference is directed both at the researcher and the practitioner, the responsibility for the level of communication lies with the speaker.[34]

In 1973, The Design Activity International Conference in London, in 1977, the California-Berkeley Design Methods in Action Conference, and in 1976, the Portsmouth Changing Design Conference all were indicators of the interest by designers and neighboring disciplines in design research.

In West Germany in 1970, the Institute for the Basis of Modern Architecture (Institute für Grundlagen der Modernen Architectur) began to produce a series of publications called *Studies Related to Planning Methods* (*Arbeitsberichte zur Planungsmethodik*). These studies were following the design methods movement in the U.S. and UK.[35, 36, 37, and 38]

In the '70s, two leaders who were pioneers of design methodology announced a manifesto against the design methodology of the era. Christopher Alexander[39] said:

> The odd thing is that people have lost sight completely of this objective. They have very definitely lost the motivation for making better buildings. I feel that a terrific part of it has become an intellectual game, and it's largely for

32 (DMG) Newsletter, published by Sage Publications. Gary Moore was the editor of the first issue of the second volume; and J. C. Jones, Murray Milne, Barry Poyner, Horst Rittel, Charles W. Rush, and Henry Sanoff were the Editorial Committee. C. Alexander, M. Starr, G. Nadler, W. Issard, M. B. Teitz, and B. Harris were among the members of the Review Committee for the new publication.

33 DMG Design Methods Group, "First Annual International Conference Purpose and Program," MIT (Cambridge, MA: June 2-4, 1968).

34 Ibid.

35 Siegfried Maser, Horst Rittel, Jürgen Joedicke, Hans-Otto Shulte, John Luckman, West Churchman, Horst Höfler, and many others were among the writers of these publications.

36 IGMA, *Arbeitsberihte zur Planungsmethodik 1: Bewertungsprobleme in der Bauplanung* (Stuttgart/Bern: Karl Kramer Verlag, 1970).

37 IGMA, *Arbeitsberichte zur Planungsmethodik 4: Entwurfsmethoden in der Bauplanung* (Stuttgart/Bern: Karl Kramer Verlag, 1970).

38 IGMA, *Arbeitsberichte zur Planungsmethodik 6: Nutzbeteiligung an Planungprozessen* (Stuttgart/Bern: Karl Kramer Verlag, 1972).

39 C. Alexander, "State of Art in Design Methodology: Interview with C. Alexander" *DMG Newsletter* (March 1971): 3-7.

that reason that I've disassociated from the field. I resigned from the Board of Editors of the *DMG Newsletter* because I felt that the purpose which the magazine represents is not really valuable, and I don't want to be identified with them.

Even though he rejected the idea of design methods, he continued to apply his own pattern language to design problems and user design participation utilizing ready-made patterns, in various places of the world. Although he wrote the first comprehensive book, which comprised almost all of the methods relevant to design up to the 1970s, Christopher Jones first refused to be a professor of design discipline at the Open University, and then rejected design methods in the first issue of *Design Methods and Theories Journal* in 1977. He explained that his rejection aimed at the computer use, behaviorism, and continued attempts to fix all of life into logical frameworks.[40] He moved into another field of design, literature.

People like Churchman had warned at least eight or ten years earlier of the consequences of the illegitimate simplifications of the first generation design techniques. But the reaction had led to a kind of unintentional self-elimination. The first-generation design methodology had turned into a sort of academic subculture.[41]

Second-Generation Design Methods

Herbert Simon, in his book *The Sciences of the Artificial,* defined design problems as "wicked" problems, for which finding appropriate solutions was very difficult and each solution to a problem created new problems to be solved. Reactions against design methods by Christopher Alexander surprised newcomers to the field. Horst Rittel, calling the paradigm shifts in design "generations," saved the design methods, according to Nigel Cross[42] in his article. Horst Rittel's proposal of the idea of generations for design let newcomers find new ways for themselves. First-generation design methods were simplistic, not matured enough, and not capable of meeting the requirements of complex, real-world problems. The design methodologists were trying to apply OR models and systems theory to design problems in a very abstract way for every problem. The first-generation design methods were formulated and applied by scientists and designers. The objectives of the design problem also were identified by them during the design process, which caused rigidity in design decisions and unexpected failures. These simplistic methods were necessary at the beginning.

Horst Rittel proposed new argumentative methods as "second- generation design methods." His methods, argumentative method, and IBIS (Issue Based Information System) were problem identification methods, which were influenced by the British philosopher Karl Popper. These second-generation design methods began to compensate for the inadequacy of the first-generation design methods. User involvement in design decisions and the identification of their objectives were the main characteristics of the second-

40 J. C. Jones, 'How My Thoughts about Design Methods have Changed During the Years," *Design Methods and Theories: Journal of DMG and DRS* 11:1 (January–March, 1977).

41 H. Rittel, *The DMG 5th Anniversary Report* (1972).

42 N. Cross, *Design Methodology and Relationship with Science* (1993).

43 N. Bayazit, Abstracts: Architectural Design: "Interrelations among Theory, Research, and Practice," *Design Methods and Theories,* 12:3/4 (1978).

44 N. Bayazit, (Guest Editor of the issue), Papers: Architectural design. "Interrelations among Theory, Research, and Practice," *Design Methods and Theories* 13:3/4, (1979).

45 H. A. Simon, "Rational Choice and the Structure of the Environment," *Psychological Review* 63 (1956): 129–138.

46 L. B. Archer, *Systematic Methods for Designers* (London: The Design Council, 1965).

47 G. Pask, "The Conception of a Shape and the Evolution of a Design" in J. C. Jones and D. G. Thornley, eds., *Conference on Design Methods* (Oxford: Pergamon Press, 1963).

48 G. Broadbent, *Design in Architecture* (London: John Wiley and Sons, 1973), 115.

49 Leading design researchers of the era were Peter Cowan at the University of Sydney, Herbert A. Simon and Alan Newell at Carnegie Mellon University, and Horst Rittel at the University of California at Berkeley.

50 M. Langfort, *Personal Hygiene Attitudes and Practices in 1000 Middle-Class Households* (Ithaca, New York: Cornell University Agricultural Experiment Station, New York State College of Home Economics, 1965).

51 A. Kira *The Bathroom* (New and expanded edition), (Ithaca, New York: The Viking Press, 1966).

52 Cornell researchers also did various studies on housing. See G. H. Beyer, *Housing and Personal Values,* Memoir 364 (Ithaca, New York: Cornell, University Press, 1959); office furniture, as well as different energy-consuming activities of workers in E. C. Bratton, *Oxygen Consumed in Household Tasks* (Ithaca, New York: Cornell University Press, 1950); E. C. Bratton, *Some Factors of Cost to the Body in Standing and Sitting to Work Under Different Postural Conditions* (Ithaca, New York: Cornell University Press,1959); E Knowles, *Postures and Other Physiological Responses of the Working Surfaces in Household Ironing* (Ithaca, New York: Cornell University Press, 1943).

generation design methods. User participation was a new democratic approach parallel to the prevailing political movements of the era. The Design Participation Conference in Manchester was organized by Nigel Cross in 1971. As indicated by Bayazit:[43, 44]

User participation to P&D is a very wide and comprehensive subject, with its political, ideological, psychological, managerial, administrative, legal and economical aspects in relation to various countries. The concept of user participation is as wide and variable as that of democracy.

The success of the participatory design process depended on the designer's awareness of user values, and obliged professionals to collaborate with social scientists as well as anthropologists to carry out design research. There were some obstacles in the application of participatory design in larger-scale projects, such as those in urban planning.

Development of Scientific Research in Design

In the manufacturing industry, design has been formally acknowledged as a separate activity for at least the last 150 years. From the beginning of the twentieth century, the concept of design systems and operations was familiar to the people who developed and used the methods of work-study. In the U.S. in 1909 and 1917, Gilbert's motion study was based on the intelligent observation of people at work. Through the end of World War I, the equipment and machines in factories used by the war industries were relatively unsophisticated. During that war, new kinds of weapons such as aircraft and tanks came into widespread use, and were designed for mechanical efficiency. The first research studies focused on the design of aircraft to improve the performance of the product. Throughout the 1920s, industrial fatigue research became the most important subject. Volkswagen was another initiator of performance studies aimed at increasing the efficiency of the car for the German public. In 1937, Volkswagen sought to produce cheap as well as physically powerful and long-lasting cars. Thousands of repeated performance tests influenced their engineering as well as industrial design, and inspired the development of new and unusual designs. It became a good model for the design of cars and a host of other products.

Facing social and economic problems after World War II, and for the purpose of solving complex design problems and meeting user requirements, the fact of design was considered as a problem-solving and decision-making activity. The scientific developments during World War II made great contributions to the solutions of design problems, especially in the engineering disciplines. Multidisciplinary teams were set up consisting of engineers, industrial designers, psychologists, physiologists, and above all, statisticians. Especially on the engineering side after the war, it was

53 A. Forty, *Objects of Desire: Design and Society, 1750–1980* (London: Thames and Hudson, 1986), 131–132

54 Ibid., 131–132

55 S. Giedion, *Mechanization Takes Command* (New York: Oxford University Press, 1948).

56 M. Mead, *Cultural Patterns and Technical Change* (UNESCO, 1955).

57 J. Noble, "How and Why of Behaviour: Social Psychology for the Architect," *The Architects' Journal* (March 6, 1963).

58 F. J. Langdon, "The Design of Mechanized Offices," *The Architects' Journal* (May 1 and 22, 1963).

59 P. Manning, ed., *Office Design: "A Study of Environment, Department of Building Science,"* University of Liverpool (Liverpool: Pilkington Research Unit, 1965), 27.

60 Ibid., 45–51.

61 More than 928 different anthropometric measurements, as well as dimensional literature on dwelling equipment, under the title of "Anatomy for Planners" were collected by the National Swedish Institute for Building Research Ergonomic Studies were necessary in these countries because people in the past were sleeping in a sitting posture, and had bed lengths shorter than the height of an average person which was not healthy.

62 E. Berglund, *Bord* (Stockholm: Svenska Slöjdföreningen, 1957).

63 E. Berglund, *Skap* (Stockholm: Svenska Slöjdföreningen, 1960).

64 Styrelsen Kugl, *God, Bostad* I dagt och I morgon, (Stockholm: Bostada 1964).

65 L. B. Archer, *Systematic Method for Designers* (London: The Design Council, 1965).

66 S. E. Harrison, Work Study Officer of the North East Metropolitan Regional Hospital Board, conducted the trials. During the research study, no less than one million items of information were recorded. At the same time, sociologists under the direction of Joan Woodward of the Imperial College of Science and Technology were engaged in finding out the opinions of patients and staff about conventional and prototype bedsteads at King Edward's Hospital (Design of Bedsteads, King Edward's Hospital, London, 1967).

necessary to move faster and faster to reconstruct Europe from its rubble. Cybernetics developed during the war by Norbert Wiener as the science of management became the model for rational behavior employed in economics, and obtaining information and making decisions using computer systems.[45] Consequently, cybernetics influenced many design methodologists and design theoreticians. Design theoreticians such as L. Bruce Archer[46] and Gordon Pask[47] saw the similarities between designers' design behavior and the organisms' self-control systems, and developed their own theories accordingly.

The study of human performance and man-machine relationship developed great momentum. Ergonomics and work-study were well known by many people, and applied to designs during the war. Scientific management gave workers a healthier environment, and introduced new designs of office furniture, thereby improving worker comfort. Changing postures with furniture reduced fatigue, and made workers happier and more efficient.

As Broadbent[48] said:

> After the war, it became necessary, therefore, to identify their combined interest in such a way that they could continue to contribute to it with a real sense of purpose. So, in 1949, Murrell and others arranged an interdisciplinary meeting of anatomists, physiologists, industrial medical officers, industrial hygienists, design engineers, architects, illuminating engineers, and so on, out of which the Ergonomic Research Society was formed.

These experiences stimulated interest in design research in the 1950s.

Cornell University, MIT, the University of Sydney, Carnegie Mellon University, and the University of California were the centers for this development line, especially in the design science and computer aids to design by the leading theorists.[49] One of the first social research studies was conducted at the Cornell University Agricultural Experiment Station on one-thousand army personnel to investigate hygienic behaviors and attitudes.[50] That was followed by one of the ergonomics as well as cultural studies on bathroom and sanitary fixtures, which was conducted by Alexander Kira,[51] and influenced the sanitary fixture market with its new approach to human body and cleanliness concepts all over the world, starting in the U.S. and the UK.[52] Cultural anthropology and its influence on design began during the 1950s.[53, 54, 55, 56] In the UK, the application of social psychology to design started in the 1960s.[57, 58, 59, 60] In Sweden, various ergonomics studies were made on housing, especially on bedrooms and other home spaces.[61, 62, 63, 64] In the UK, Loughborough was another center for scientific research related to ergonomics. At the Royal College of Art, Misha Black and L. Bruce Archer were

doing extensive design research for industry. In his book, L. Bruce Archer[65] mentions research work on hospital beds that derived from work-study observations in the "Design of Hospital Bedsteads."[66, 67]

The Environmental Design Research Association (EDRA) was founded in 1970, and the first EDRA conference was organized by Henry Sanoff that same year, and continued annually, mainly in the U.S. Their research topics were concentrated on evaluative studies of architecture and environmental planning. The first collaborative studies for the investigation of user requirements were made by sociologists, psychologists, social psychologists, and design professionals, and began to develop research methods for the artificial. Also man-environment research (MER) began in various universities in the U.S., and new journals such as *Environment and Behavior* and the *Journal of Architectural Planning and Research* began to be published in the United States. Sometime later in Europe, the International Architectural Psychology Society (IAPS) was established, and served as the European counterpart of EDRA and MER.

Meanwhile, the Design Research Society (DRS) was founded in London in April 1966. Design Methods Group (DMG) and DRS started to publish the *DMG-DRS Journal* instead of the *DMG Newsletter* until 1979, when DRS started the *Design Studies* journal, edited by Nigel Cross since then. In 1980, the Design: Science: Method Conference was organized at Portsmouth, in which design research and the contribution of science to design were the subjects of discussion. The conference organizers put forward the question to all of the members of the Design Research Society, as did L. Bruce Archer in his paper in the conference entitled, "What Is Design Research that It Is Different from Other Forms of Research?"[68] At that same conference, the author of this paper presented the existing situation in design research. That paper was published in *Design Studies*.[69] We tried to categorize the research areas in that paper such as profession-based theories, user-based theories, user-profession-based theories, theories dealing with building appearance, and theories dealing with the profession. Also, fundamental design research tools and techniques up to that time were classified in the same paper. The Design Policy Conference brought together increasing numbers of design researchers in 1982 at the Royal College of Art. That conference was the most comprehensive one of that period. The influence of British philosopher Karl Popper showed itself on the design theory building and scientific formulations of design research.

Four years later, between 1986 and 1993, the Institute of Design (ID) at the Illinois Institute of Technology began to issue the *Design Processes Newsletter,* edited by Charles Owen. That newsletter was concerned with design research approaches of ID, design management, and design policy. It contained articles on a variety of topics of interest to the design community. They were presenting the

67 Kenneth Agnew, along with a supporting team, designed the bedstead in the Royal College of Art, as cited by L. B. Archer in "Systematic Method for Designers"(1965).

68 L. B. Archer, *Design: Science: Method* (1981).

69 N. Bayazit, N. Esin, and A. Ozsoy, "An Integrative Approach to Design Techniques," *Design Studies,* 2:4 (1981).

70 C. T. Larson, ed., SER2: *School Environmental Research,* University of Michigan (1965).

71 L. Mosley, "A Rational Design Theory for Planning Buildings, Based on the Analysis and Solutions of the Circulation Problems," *The Architects' Journal,* (September 11, 1963): 525-537.

72 T. A. Markus, ed., *Building Performance* (New York: John Wiley, 1972).

73 J. Gero, *Computer Applications in Architecture* (London: Applied Science Publishers, 1977).

74 J. Gero, "Artificial Intelligence in Design," *Proceedings of the Fourth International Conference on the Applications of Artificial Intelligence in Engineering,* Cambridge, UK (Southampton: Springer-Verlag, 1989).

75 J. Gero, *Artificial Intelligence in Design '91* (Oxford, UK: Butterworth-Heinemann, 1991).

76 J. Gero, *Artificial Intelligence in Design '94* (Boston: Kluwer Academic Publishers, 1994).

77 M. Asimow, *Introduction to Design* (Englewood Cliffs, New Jersey: Prentice-Hall Inc, 1962).

78 T. T. Woodson, *Introduction to Engineering Design* (New York: McGraw-Hill, 1966).

79 V. Hubka, *Konstruktionwissenschaft* (Design Science in English translation), *VDI-Zeitschrift* 116:11 (1974): 899-905, and 1087-1094.

80 V. Hubka, *Principles of Engineering Design* (Guilford, UK: Butterworth Scientific Press, 1982).

81 V. Hubka and E. Eder, "A Scientific Approach to Engineering Design," *Design Studies* 8:3 (1987): 123-137.

82 V. Hubka and E. Eder, *Design Science* (London: Springer Verlag, 1996), 49-66.

projects and the research works of their faculty, as a leading design research institution in industrial design in the world.

In the meantime, in official government organizations and in other international organizations such as National Bureau of Standards in the U.S., CSTB in France, the Building Research Station in England, the Center International de Batiment (CIB) in Holland, Government Research Centers in Sweden and Denmark, and in many other countries, user requirement studies began in the 1960s and continued up the 1980s. Research in Europe concentrated on housing design and performance problems, because there still was a great shortage of housing in Europe after World War II, and the prefabricated buildings were indispensable.

Prefabricated building design, and research on the coordinated building elements and the building layout optimization, were well-accepted research subjects in the universities as well as in the research centers. Building performance studies were initiated in government research centers and universities, mainly in engineering design, applying scientific methods to design problems in new housing construction. Various environmental characteristics of housing were subject to evaluation in these studies. In the U.S., during the Cold War, the government supported environmental studies on topics such as windowless buildings, and school environmental research (SER).[70] Starting in the 1960s, research areas such as acoustics, heat transfer, and climatic comfort in architecture were well accepted, and continued to develop.

Researchers began to produce interactive computer graphics systems. Wireframe and polygonal modeling schemes were developed. Mosley[71] developed one of the first layout optimization programs for hospital operating units. Beginning in the 1970s, computer scientists became interested in systematic design methods and design science. They were trying to program and evaluate building performance to justify scientific design decisions. At the National Bureau of Standards in the U.S., the first International Congress on Performance Concept in Building was organized in 1972. It brought a new perspective to design research in architecture. Thomas A. Markus[72] and Thomas Maver had been working on building performance at Strathclyde University. Thomas Maver, a computer-aided design programmer, started to work on the programming of environmental building performance evaluation programs. Also, Peter Cowan established the building research center at the University of Sydney in Australia. Building science and computer-aided design were well developed by the end of 1960s, and the beginning of 1970s. They still are leaders in the field of artificial intelligence in design.[73, 74, 75, 76]

On the engineering side, Morris Asimow,[77] Thomas Woodson,[78] Vladimir Hubka,[79, 80] Vladimir Hubka and Ernst Eder,[81, 82] introduced a new generation of systematic design methods. As Vladimir Hubka and Ernst Eder wrote:

The first evidence of change originates from the period of the Second World War, and from the reconstruction and construction period. [What] were the particular features of these situations which have caused the need for improvements? On one hand [there was] an unusual pressure toward performance in a highly developed industry, especially new and very demanding needs.... Up to [the] year 1967, we could only find some widely scattered and isolated groups or individual experts who proposed [a] certain solution for [the] improvement of [the] design work. The next period after about 1967 until today and especially in the seventies, can be labeled as the prime time for the initial development of design science.

Vladimir Hubka organized the first International Conference on Engineering Design (ICED, a series since 1981) in 1967. Vladimir Hubka established "Workshop-Design-Construction, WDK," and called their approach "design science," which we can call a theoretical scientific approach to engineering design methods. They were the representatives of the European engineering designers. In their own words, they differentiate themselves from English-speaking researchers:

Continental Europeans tend to being outward-looking and trans-national, but also more formal and systematic; English-speakers tend to become more insular and isolationist, with any "foreign" language as a perceived cultural barrier, but also more intuitive and casual, and less formal.[83]

Vladimir Hubka and Ernst Eder both spent several years in industry, working and/or leading design teams. They defined design science in the same book as: "The term 'design science' is to be understood as a system of logically related knowledge, which should contain and organize the complete knowledge about and for designing."

English-speaking engineering design methodologists were Morris Asimow,[84] John Christopher Jones,[85] Nigel Cross,[86] L. Bruce Archer,[87] T. T. Woodson,[88] Stuart Pugh,[89] David Ullman,[90] and many others.

In the U.S. in 1984, Nam Suh, who was then the assistant director for engineering at the National Science Foundation (NSF), created the Design Theory and Methodology Program. Among his goals in creating this program was developing a science of engineering design and then establishing design as an accepted field of engineering research. From 1986 to 1988, this program was directed by Susan Finger, followed by Jack Dixon.[91]

Some of the design researchers and design methodologists were working in the field of computer-aided design, and developing their methods in relation to architectural and engineering design problems, applying the models of OR and systems analysis. These

83 Ibid., 50.
84 M. Asimow, *Introduction to Design* (1962).
85 J. C. Jones, *Design Methods: Seeds of Human Futures* (2nd rev. ed.), (New York: Reinhold Van Nostrand, 1992).
86 N. Cross, *Engineering Design Methods: Strategies for Product Design* (Chichester, UK: John Wiley and Sons, 1994).
87 L. B. Archer, *Technological Innovation* (London: Science Policy Foundation Special Publication Series, 1971).
88 T. T. Woodson, *Introduction to Engineering Design* (1966).
89 S. Pugh, "The Design Audit: How to Use It," *Proceedings of Design Engineering Conference,* NEC, Birmingham: NEC, 1979).
90 D. G. Ullman, *The Mechanical Design Process* (New York: McGraw-Hill, 1992).
91 S. L. Newsome, W. R. Spillers, and S. Finger, *Design Theory '88* (New York: Springer-Verlag, 1989).

approaches caused some problems in the fields of design methodology and design research, because they were thought to be too restrictive in nature.

There was a close relationship between design research and the developments in the IT field, especially in cognitive sciences, and "artificial intelligence" (AI) and expert systems. Marvin Minsky,[92, 93] was one of the leaders in the application of cognitive science to AI. Studies on AI researchers affected the development of studies on designers, as experts. "Think-aloud" techniques and "protocol analysis" [94] were adopted by designers. Charles Eastman[95] was a computer-aided design practitioner as well as a design theoretician. He published an article related to intuitive bathroom design and, for the first time, focused on the designer's behavior. Donald Schön[96] at MIT opened a new paradigm in design research, and his book, *Reflective Practitioner,* did not seem to relate to computer science at first, but it actually was about the designing behavior of expert designers.

Immense efforts have been made, mainly by the scientists somehow related to computer-aided design, in the development of the cognitive aspects of expert designers all over the world.[97–101] One of the first contributions to this field was by Omer Akin,[102] at the 1978 "Architectural Design: Interrelations among Theory, Research and Practice" conference.[103, 104] His Ph.D. thesis, "Psychology of Architects," [105] at Carnegie Mellon University was one of the recognized research works and first publications in this field.

The 1980s and 1990s opened a new era in design research. Many U.S. departments of design began to establish new academic research units, which were brought about from the government's release of funds on design research, and the encouragement and demand by American industry. The "Ohio Conference on Doctoral Education in Design" in 1998 was one of the first research appeals to education in design (in industrial design and in graphic design) in the U.S. According to Buchanan:

> The *Proceedings of the Ohio Conference on Doctoral Education in Design* focus on the nature and current state of doctoral education in design around the world. This volume explores the foundations of design as a field of inquiry, the role of research in alternate models of doctoral education, the relationship between doctoral education and professional practice, and other issues that are central to the development of design as an emerging field of investigation. Included are discussions of many existing and planned doctoral programs around the world.[106]

Significant growth in all areas of design research took place during the 1990s. New professional demands on design research, and the new educational confrontations for restructuring knowledge changed the context of design. Universities around the world are developing models of doctoral education in design. Philosophies and

92   M. Minsky, "Steps toward Artificial Intelligence," Proceedings of the IRE 49 (1961): 8–30.

93   M. Minsky, *Semantic Information Processing* (Cambridge, MA: MIT Press, 1968).

94   K. A. Ericsson and H. A. Simon, *Protocol Analysis: Verbal Reports as Data* (Cambridge, MA: MIT Press, 1993).

95   C. Eastman, "On the Analysis of Intuitive Design Process" in G. Moore, ed., *Emerging Methods in Environment and Planning* (Cambridge, MA: MIT Press, 1970), 21–37.

96   D. A. Schön, *The Reflective Practitioner* (New York: Basic Books, 1983).

97   O. Akin, "An Exploration of the Design Process," *Design Methods and Theories,* 13 (1979): 115–119.

98   N. Cross, K. Dorst, and N. Roozenburgh, eds., *Research in Design Thinking* (Delft, The Nederlands: Delft University Press, 1992).

99   N. Cross, H. Cristiaans, and K. Dorst, eds., *Analysing Design Activity* (Chichester, UK: John Wiley & Sons Inc., 1996).

100 J. Gero, *Artificial Intelligence in Design* (1991).

101 K. Dorst, *Describing Design: A Comparison of Padigms* (Vormgeving Rotterdam: Grafisch Ontwerp en druk, 1997).

102 O. Akin, *An Exploration of the Design Process* (1979).

103 N. Bayazit, *Abstracts: Architectural Design: Interrelations among Theory, Research, and Practice* (1978).

104 N. Bayazit, *Papers: Architectural Design: Interrelations among Theory, Research, and Practice* (1979).

105 O. Akin, *Psychology of Architectural Design* (London: Pion Ltd, 1986).

106 *Doctoral Education in Design: Proceedings of the Ohio Conference,* (8–11 October, 1998).

theories of design are popular subjects for discussion. Foundations and methods of design research are being reevaluated. The form and structure for the doctorate in design still is under development. The relationship between practice and research in design has become an important focusing topic among the academic as well as the professional communities.

Conclusion

The history of design research with reference to design methodologies, as well as design science, is a wide and comprehensive subject that needs additional extensive research. Only a brief review of research history on this relatively new discipline of design has been covered here. Generally, articles and book chapters concerning state-of-the-art reviews, the history of the discipline, or original conference proceedings and other documents were used in this paper.

Design research and its relevance to design methodology, as well as scientific research, are reviewed. Most design research studies were made in architecture because of the requirements of the societies after World War II. Scientific developments during the war, and the shortage of resources in postwar societies obviously necessitated and gave impetus to the creation of new ways to solve existing problems. Future studies in various design disciplines may benefit from the experience and progress in disciplines concerned with building as well as engineering.

Here, I tried to look at design research and its relevance to design methods and design science from a Turkish perspective. Mutual influences of information technologies and design research were the requirements of the era, although that is not mentioned in many relevant publications. Another area of studying design research is the utilization of the methods of disciplines in such areas as psychology, social psychology, management, economics, semantics, and ergonomics. Here, only main starting points have been indicated concerning the various disciplines.

107 N. Bayazit, *Abstracts: Architectural Design: Interrelations among Theory, Research, and Practice* (1978).

108 N. Bayazit, *Papers: Architectural Design: Interrelations among Theory, Research, and Practice* (1979).

109 N. Bayazit , M. Tapan, N. Ayiran, and N. Esin, *Tasarlama (Dizayn) I. Ulusal Kongresi Bildirileri* (Istanbul: Istanbul Teknik Universitesi Mimarlik Fakultesi, 1982).

Epilog

Academics in Turkey were following the developments in the UK and U.S. on design methodology and the scientific approaches to design because the Ph.D. was an obligatory stage of academic life by law in every field—even in architectural design. Consequently, the Architectural Design Methods Chair was established in the ITU Faculty of Architecture in 1973. In Turkey, architectural design methods was recognized by the National Central Authority of Universities as an academic discipline that same year. The first international conference on design in Turkey, "Architectural Design: Interrelations among Theory, Research, and Practice," was held at ITU in 1978 in collaboration with DRS from the UK. Selected abstracts[107] and papers[108] of this conference were published in the U.S. journal *Design Methods and Theories.* Even though it must be confessed that the idea and the intention were very good, the conference received few papers concerned with design research and its relevance to design practice; but it gave an impetus to further Ph.D. studies in architecture.

In 1982 in Turkey, the First National Design Conference also was organized in the ITU Faculty of Architecture.[109] It was the first national design conference in Turkey covering the disciplines of architectural design, engineering design, and industrial design.

Document

Human-centered Design: Changing Perspectives on Design Education in the East and West
Richard Buchanan

Introduction

Design education is evolving rapidly in the People's Republic of China. In the era of the "planned economy," from 1949 to the early 1980s, there were few design schools, and those schools that did exist based their programs firmly on the arts-and-crafts tradition of China. As new ideas about the "market economy" emerged in the 1980s, new ideas about modern design also entered the country. This thinking is documented in an article by Zhou Zhi Wang, "Chinese Modern Design: A Retrospective," published in Design Issues *in the late 1980s (Vol. VI, No. 1). One of the founders of China's modern design education movement—and one of the most respected design scholars in China—Wang explains the shift from "arts-and-crafts" toward "form and function," a classic theme of twentieth-century design in the West. The uneasy relationship of traditional and modern approaches to design education in China continues to the present, but from the mid-1990s to 2003 the number of design schools in China increased rapidly to approximately 450. As the manufacturing capability of the People's Republic increases—the Pearl River Delta, adjacent to Hong Kong, is now the largest concentration of manufacturing in the world—the focusing question is whether and how China can be transformed from the maker of products designed elsewhere in the world to an original source of design. The answer to this question will be determined, at least in part, by the form that design education in China takes in the future.*

As the People's Republic of China prepares for full membership in the World Trade Organization, a special two-day conference, "Equipping for the Future: An International Conference on Design Education in China," was held at Shantou Technical University. Shantou University has special status among the institutions of higher learning in the People's Republic. It is the only private—or semi-private—university in the country, and it has been given a mandate to explore new approaches to education in a variety of fields. The purpose of the conference was to review the present state of design education in China, identify problems, and explore ideas about a new design education strategy for China. The document presented here is a keynote address by Richard Buchanan. Other keynote speakers were John Heskett, Andrew Whittle, and Kan Tai-keung. More than 400 individuals—students, faculty members, and program leaders—representing many of the leading design schools of China attended the conference. The public

presentations were followed by a day-long roundtable discussion in which Chinese design educators presented their ideas and responded to suggestions from the keynote speakers.

This is the first national conference on Chinese design education. Many other design conferences have been held in China over the past five or ten years, but this is the first to focus specifically on the nature and practices of design education in China. For this reason alone, the meeting is historically significant. However, it is significant for another reason. The organizers have framed this conference as an international meeting, and they have deliberately oriented our thinking toward the future. We want to discuss what changes must take place in Chinese design education if design itself is to play a significant role in preparing Chinese industry for competition in international markets.

This theme does not deny the many accomplishments of Chinese design throughout history. Nor does it seek to repudiate the historical development of design education in China and its current expression in the schools. We are all mindful—Chinese educators and international guests, alike—of the history of design and design education in China.[1] Indeed, more literature on Chinese art and design and Chinese design education is published in the West than in China itself—either on the mainland or in greater China as a whole. This is testimony to the importance that the international community places on Chinese art and design from the past.

However, the organizers of this meeting have asked us to take on a very difficult task. They have asked us to consider whether past practices and theory in Chinese design are suited to the new circumstances of international economic development. They have asked us to think about the changes in design education that may lead to a new expression of Chinese talent and design thinking. This is why our meeting is both national and international. It is a national conference because all of the design schools in China face a similar challenge of preparing for a new and stronger role in support of industry. It is an international conference because economic development will inevitably connect China to the rest of the world in many new and unexpected ways. It is wise to begin exploring the significance of this as soon as possible. Furthermore, the perspective of Western design education may help to identify some of the key issues for discussion in the community of Chinese design educators. This is not because anyone naively expects Chinese design education to follow or be led by Western models. Rather, Western experience may help China anticipate the problems of the future and find its own solutions. Educators in the East and West share many similar problems, but we do not have to reach the same solutions. Our solutions will be diverse and pluralistic, suited to different social and cultural circumstances as well as personal visions. It is my hope that there will be important lessons for western educators to learn from

1   For example, see Shou Zhi Wang, "Chinese Modern Design: A Retrospective," *Design Issues* 6: 1 (Fall 1989): 49-78. Also, see the special issue of *Design Issues* on "Design in Hong Kong, "19:3 (Summer 2003).

their eastern colleagues, lessons that we can take back and adapt to our own local situations.

What are the new circumstances that we face in common? What is the new environment that forces us to rethink design and design education in the East and West? In the simplest terms, the new environment is international competition in the marketplace. The most immediate signal of this new environment for China comes in 2005, when China becomes a full member of the World Trade Organization, with all of the obligations and opportunities that this represents. Will Chinese industry be ready to operate successfully in the new circumstances? Will China be competitive in the new environment of international trade?

The primary advantage of Chinese industry today is the low cost of labor. Many goods are now manufactured in China for companies based abroad because labor costs are low. In addition, Chinese industry also displays rising technological prowess, evident in a well-skilled and well-educated segment of workers. Chinese industry continues to adopt new technology and, increasingly, contributes to technological development. However, low labor costs and technological competence will not be enough for China to prevail in competitive international markets. They were not enough for Japan or South Korea, and they will not be enough for China over the long term. Labor costs will eventually rise and, to be honest, high technology is already one of the attributes shared by all of the leading industrial powers of the world. What will make the difference for Chinese industry in the future is the quality of design thinking that distinguishes its products and makes them desirable abroad and at home.

This is why we have gathered to discuss Chinese design education. We want to know what changes must take place in Chinese design education—what knowledge and skills will be needed—if graduates are to provide the essential difference that elevates Chinese industry. Indeed, we may also consider what knowledge and skills will help Chinese designers eventually move into positions of leadership in industry, something that is now happening in the West as a result of changes in design education and a recognition in industry of the many talents of well educated designers.

For my own contribution to this meeting, I would like to provide a brief overview of the historical development of design education in the West and compare this with development in China. Then, I would like to identify several fundamental issues that are driving change in Western design education and suggest connections with Chinese design education. It is not my goal to provide a formula for changes in Chinese design education. Rather, my goal is to point toward the fundamental issues and topics that I believe eventually will have to be discussed and resolved for Chinese design education to play a central role in the development of Chinese business

and industry in the new circumstances of international competition. Identifying fundamental issues for further conversation is the key to moving forward. I want to contribute to the dialogue that emerges from this meeting.

There is a fundamental similarity between the history of design education in the East and West. It may be obvious, but it must to be explicitly recognized if one is to understand the subsequent development of contemporary design education. Despite immense differences between the East and West, design education in both cultures began as apprenticeship.[2] By whatever method of selection, young people were apprenticed to masters, who oversaw their development, encouraged the most talented, and were eventually replaced by their students. This model of design education continues to the present as one of the avenues by which the young are introduced and cultivated in the ways of design thinking and making. Indeed, one of the keynote speakers of this conference, the highly distinguished designer Kan Tai-keung, entered the profession through apprenticeship and reached the highest levels of accomplishment and respect in the East and the West. By genius and natural talent he has grasped the principles of design more thoroughly than most others have. This is evident in his professional work as well as his writings.

Another important and obvious similarity between the East and West is the early and close association of design with the so-called fine arts. In one sense, I believe this association is an accident in both of our cultures. Design thinking could have arisen in association with other areas of learning such as philosophy, religion, politics or science. Indeed, as serious reflection on design develops in the future, I believe scholars will discover the rise of design in many other fields of learning and practice, broadening our understanding of the richness of design throughout culture. For now, however, we are most conscious of the rise of design through the fine arts, and this is not entirely mistaken. There is one good reason that we celebrate the association of design and fine art: both activities are concerned with "making." Designers and artists are concerned with "making" new works. In the West this is called "poeisis," from the Greek word that means "to make." Poeisis is the origin of the word "poetry" in the West, though in the earliest times of antiquity, "poeisis" meant all of the arts of making.[3] Comparing the East and West, it is important to recognize that the division of the arts of making has been important in Western culture, but in the East the arts of making have remained closely associated. In fact, they are so closely connected that the Western division of the arts appears strangely artificial to many people from the East. The interconnection of the arts in the East is a direct result of the dominance of dialectical thought throughout history. Dialectical thinking is certainly a significant thread in Western culture, but it is seldom the dominant mode of thinking.

2   R. Buchanan, "The Problem of Character in Design Education: Liberal Arts and Professional Specialization," *The International Journal of Technology and Design Education,* 11: 1 (2001).

3   R. Buchanan, "Rhetoric, Humanism, and Design," in *Discovering Design: Explorations in Design Studies,* edited by R. Buchanan and V. Margolin, (Chicago: University of Chicago Press, 1995).

The association of design and the fine arts led naturally to the next step in design education, also similar in the East and West. Design education became part of art education in general. Art schools and art academies were first established in the West in the sixteenth century. They were established independent of universities because university education at the time did not recognize the intellectual significance or cultural importance of design thinking. Design was not regarded as a domain of significant learning. In China, too, design education was incorporated within the institutional structure of art schools and academies. In the East and West, design was a stepchild of the fine arts, but it did have a home. The gradual rise of design in the twentieth century was strongly influenced by the ethos or character of art school education, and much of the development of design in the West in this period has been a struggle to discover the distinguishing qualities of design that make it an independent discipline or art. Obsession with style and self-expression is part of the legacy of design education in the art schools.

This is where design education in the West and in China diverges. Until quite recently, design education in China remained firmly within the domain of art school education. Although the ultimate goal was creativity, the emphasis was on imitation of masters, cultivation of style, and preservation of academic tradition. In contrast, there has been a remarkable broadening of design education in the West. The art schools remain as one of the threads of professional development, but design programs are now located in a variety of other disciplinary settings. Some are located within engineering departments and technological institutes, others are located within—or are dominated by a vision derived from—one or another of the social sciences, including management. Perhaps most important, a growing number of design programs in the West are best understood as "university" design programs, emphasizing the essential humanism of the design enterprise. The latter deserve special attention. They have formed around a "human-centered" approach to design.

We should take some care in understanding what "human-centered" means in this context. There is a reasonable sense in which all design throughout history has been, and is today, human centered. Design is an art of making products that serve people. Whether the knowledge and vision of the designer comes from the fine arts or from any other branch of learning, human beings are the center of attention. But the humanism of university design programs, as they are emerging in the West, gives a more specific meaning to human-centered design. This form of design education seeks a balance or harmony among the different kinds of knowledge needed to make effective and valuable products. It seeks to balance and integrate aspects of the fine arts, engineering, and the social sciences in the activity of design thinking. It seeks the center of balance among these factors rather than emphasizing one or another as primary.

For example, self-expression is not an end in itself for this form of human-centered design. Self-expression is only a means toward the deeper goal of serving other people. We serve other people by strengthening their individual dignity and supporting collective social values, all within the pluralism of human experience.[4]

The movement of design education into the university environment is the most important and least remarked development in our field in the latter part of the twentieth century and the beginning of the twenty-first century. It is well advanced in the West, and it is advancing in China. The implications of this relocation of design are still unfolding, but they will change design thinking in many ways in the future.

The fundamental issue driving change in Western design education is the search for knowledge. What knowledge is needed by designers if they are to work effectively in the new circumstances of world culture in the twenty-first century? Those circumstances involve great technological complexity and even greater human complexity. How do we bring new knowledge into design thinking? How do we give our students deeper knowledge of technology and human nature? It is no accident that design is moving into universities. Nor is it an accident that many art schools of design in the West are seeking closer ties with universities or with the different disciplines that make up university culture. Design is no longer a self-contained discipline that can exist in isolation. Designers must understand and work closely with colleagues in other disciplines. We may disagree about which are the most important disciplines for designers to understand—cognitive psychology, engineering, computer science, anthropology, drama, rhetoric, marketing, and so forth—but there is no dispute in the West that knowledge from other disciplines must now inform design thinking. This is part of the transformation of design from a trade activity to a significant discipline and cultural art.

The issue of creativity is equally important as a driving factor of change in design education in the West. This is a complex subject, and I will not attempt to summarize the diverse theories and practices that our schools explore. However, there are two observations on the West that may be directly relevant for Chinese design educators. The first observation is a widely held belief among Western design educators. While we believe that some individuals are born with genius and natural creative talent, we also believe that creativity in most students can be nurtured and taught. We seek to cultivate creativity among our students not through the imitation of the work of design masters but through the acquisition of design skills and, most important, through encounter with the problems faced by people in their daily lives. Hard work in acquiring fundamental design skills will come as no surprise to Chinese educators. Creativity without the discipline of design skills is almost meaningless for the design professions. But exercises of monotonous

4   R. Buchanan, "Human Dignity and Human Rights: Thoughts on the Principles of Human-Centered Design," *Design Issues,* 17: 3 (Summer, 2001): 35–39.

repetition in developing design skills seem to dull the creative edge of most people. Instead of sheer repetition, Western educators have found that the creative energy of students is enhanced by encountering real problems and real difficulties among the people that we seek to serve. We call this "creative problem solving," and we attempt to encourage every effort that gives the student confidence in seeking and expressing a solution. Over time, with widening experience and ongoing discussion with teachers, many students gradually focus their own efforts in creative ways.

The second observation on creativity in design is that it is not focused solely on form giving. Early in the twentieth century many believed that the creativity of the designer found expression only in giving visible form to communication and artifacts. Today, we recognize that form giving is only one of the manifestations of design talent. There are many areas of design in which a student may develop special creativity. This reflects a broadening of our understanding of design, based on the recognition of new skills and new methods in the design process. Indeed, the success of products is often based on the ability of a team of designers to work together in developing a new idea. This observation may have particular relevance to Chinese design education, where form giving—based on the skill of drawing—appears to be the focus of most school programs. Without question, drawing is an important skill for designers. But it is not the only skill, and it is not the skill that best reveals whether a student will become a fine designer. Many superb draftsmen in the West lack the creativity that distinguishes a fine designer. Drawing is a representation, but the most important question is what shall be represented? Having an idea to communicate is, in the end, a more important sign of creativity than the mere ability to represent what already exists.

The next issue driving change in Western design education is the curriculum. The studio remains the fundamental element of design education in the West, because it is the place where students integrate their diverse skills and knowledge in the act of making a new communication or a new product. However, other elements are now regarded as essential. These elements reflect wider and deeper understanding of the different kinds of knowledge that are needed by the designer in the new circumstances of our time. One element is sometimes called "concepts and methods of design practice." As the name suggests, this includes instruction in the many new methods and techniques that are now part of contemporary design practice. Human factors, cultural factors, and user research are some of the subjects taught in this element. The concepts and methods are taught individually, with an understanding that they will be integrated in the design studio as the student develops. Another element is called "design studies." It includes design history, theory, and criticism, as well as the aspects of business and economics that bear on design today. Our field is mature enough that education can include serious

reflection on where we have been and where we are going. The final element is best called "general education," in the tradition of Western liberal education. In the best design schools in the West, fully one-third of all instruction is taken in areas of study outside design. The subjects may include literature, the natural sciences, and the social sciences, as well as mathematics or technical subjects in engineering and computer science. The point is that students must have a breadth of learning if they are to work effectively in contemporary culture. How does Chinese design education address these curricular issues today and what will happen in the future?

Along with the issue of curriculum comes the issue of interdisciplinary study. In the past, Western education emphasized specialized study. The division among the disciplines was strong, and students were seldom encouraged to cross over into other areas of study. Today, design educators recognize the value of courses that combine one or more disciplines along with design. These are typically studio courses, and they are sometimes taught by several faculty members, each representing a different discipline. The reason is simple. In the work environment that our students will face, the ability to work with individuals from many disciplines is necessary. Are such courses available to Chinese design students?

The next issue driving change in Western design education is the nature of a product. What is a product of design thinking? In the past, the word "product" meant the outcome of industrial design—a tangible artifact. Today, "product" means any outcome of design work, whether a result of graphic design, information design, industrial design, or any other kind of design. This is important because in the West we are beginning to develop a new theory of products that applies to all areas of design. We may call this the "iceberg" theory, because it is based on the idea that a product is much more than its appearance. Style and form are the most evident features of a product, but what goes on beneath the surface is most important—and falls well within the domain of design thinking. A product must be desirable in form and style, but it must also be useful and usable to be successful in the marketplace. What is useful in a product is usually technical and often technological, based on careful study of people as they perform tasks and on the application of engineering to make a product that works. What makes a product usable is its fit to the hand and mind of the human user, and this is based on knowledge of human beings in general and on research into the way individuals work. Design schools that prepare students for stylistic and formal expression address only a small part of the discipline of design. The more important schools strive to integrate stylistic and formal expression with the ability to conduct user research, task analysis, and a variety of other technical activities suited to different branches of design. Once again, creativity is stimulated when the substance of a product—whether communication or industrial—is part of the environment of design thinking. How are

Chinese students being prepared for such work? Is design education in China formed around a rich concept of the nature of a product? The assumptions we make about products and human beings may be relevant only within an isolated population. Meeting the needs of the international marketplace depends on broadening our assumptions and exploring diverse realities.

The issues I have identified are fundamental in Western design education. They find immediate expression in undergraduate education. However, another major change in Western design education is the development of graduate programs and programs of design research.[5] If undergraduate programs have the goal of preparing students to enter the professions of design, graduate programs have the goal of bringing student preparation to the level of mastery of their discipline. Mastery comes in two forms. One is the mastery of professional practice, accomplished through "master's" programs that teach students the most advanced methods and techniques of design work in specific areas of design. The other is mastery of the discipline itself for teaching and research. This is the goal of the new doctoral programs in design that are emerging around the world. We are at a very early stage in developing doctoral programs in design, but each year we see the growing force of such programs in shaping design practice and design education. The development of design research will, in the long term, have a profound effect on the practice of design and on design education.[6] It is not too early for Chinese design educators to participate in shaping doctoral study and research.

Finally, the last issue I would like to identify as driving change in Western design education is the development of new areas of design practice. Foremost among these is "interaction design." Because this area of practice first reached consciousness in the West through the development of computers, it is often associated with digital culture in general. This is a misunderstanding. Interaction design is a new approach to design that has application in many areas of practice. It is prominent in designing the interaction between human beings and computers, but it is also prominent in new approaches to traditional media and traditional design problems. It is important for information design, service design, transaction design, many forms of print communication, new product development, corporate identity, industrial design, organizational design, and systems design. Interaction design is about the relationships among people, particularly as human relationships are mediated by all forms of products. Interaction design has brought the professions of design from a "posters and toasters" culture to a new culture of human-centered design. Western design educators do not always use the term "interaction design" to describe their new ventures in design thinking, but the concepts and methods of interaction design are a new foundation for a wide variety of work. What efforts are underway to develop new areas of design practice in China?

5   R. Buchanan, "Design Research and the New Learning," *Design Issues,* 17: 4 (Fall, 2001): 3-23.

6   The Design Research Society is the international learned society of the design research community, with extensive multi-disciplinary membership. Founded in 1967 in the United Kingdom, with an Executive Council and offices based in the UK, the society facilitates a research network in 35 countries. Faculty members and students who are interested in the development of design research will find the DRS web site very useful. The internet address is: http://www.dmu.ac.uk/ln/4dd/drs.html

Graphic design and industrial design appear to be the focus of most programs, but are there new ideas about information design and interaction design that are suited to Chinese culture? What place will new design practice have in the China of the future?

I would like to conclude with a deeper question about Chinese design education. What are the philosophical and theoretical roots of Chinese design and design education that will continue to influence the development of design in China? Can those roots lead to new forms of practice and education that are suited to the emerging environment of international competition in the marketplace? How will those roots help Chinese designers make an original contribution to design thinking that is more than an imitation of the West? Admittedly, these are difficult and challenging questions for which no quick answer can be given. However, I believe they are the beginning and the end of the road on which Chinese design is now moving. We all look forward to the continued discussion that will shape Chinese design in the future.

Why Designers Should Study Foreign Languages
Carma R. Gorman

The National Association of Schools of Art and Design (NASAD), the accrediting agency for about 240 art and design programs in the United States, is the organization that sets many of the standards to which U.S. degree programs in design are supposed to adhere.[1] NASAD maintains, for example, that undergraduate graphic design students should be able to understand design from "a variety of perspectives," including "linguistics [and] communication and information theory," and that they should be able to "describe and respond to the audiences and contexts which communication solutions must address, including recognition of the physical, cognitive, cultural, and social human factors that shape design decisions."[2] NASAD also mandates that all art and design undergraduate programs must strive to develop students' capacity "to identify and solve problems within a variety of physical, technological, social, and cultural contexts," and help students acquire an increased understanding of "a broad range of cultures and history."[3] NASAD further expects graduate art and design students to learn to "solve contemporary problems in all aspects of the visual arts, and to explore and address new questions and issues."[4]

None of these mandates is surprising or controversial. Ultimately, all that they suggest is that it is desirable to produce students who are not only technically competent and artistically creative, but who also are able to articulate and solve problems, to think critically about language and the act of communication, and to recognize and attend to social and cultural factors that affect design. However, although these are skills that most design programs in the country probably would acknowledge as desirable, design coursework does not always include in-depth discussion of linguistics, communication and information theory, sociology, or anthropology. Nor does NASAD mandate outside coursework in these subjects for either undergraduate or graduate students in design. General education requirements and electives may address some of these subjects; for example, most universities and colleges now require students to take at least one "multicultural" or "diversity" course that is supposed to explore the notion of cultural difference. And certainly students at larger universities have access to (though they do not necessarily take) specialized courses in linguistics and intercultural communication, although such course offerings often are not available at smaller colleges or in specialized art and design schools.

1   Occasionally NASAD works in collaboration with professional organizations in design; for example, the American Institute of Graphic Arts (AIGA) and NASAD collaborated on the writing of the degree objectives for graphic design curricula.
2   *National Association of Schools of Art and Design Handbook 2003-2004* (Reston, VA: NASAD, 2003), 91.
3   *NASAD Handbook,* 73.
4   *NASAD Handbook,* 114.

Design students who take a large number of studio courses—and most do—therefore may have very little time in their schedules for classes that are specifically intended to develop cultural awareness or to directly address language and communication.[5]

Fortunately, however—through the relatively painless step of instituting a foreign language requirement for all design students—educators and accrediting agencies such as NASAD can ensure that students will engage in a form of learning that will make them more knowledgeable about language, more creative in their thinking, and more culturally sensitive. Although some design educators no doubt will protest that their curricula are so jam-packed that they couldn't possibly add more required courses to their programs, let me explain that I am not suggesting that students must become good readers or conversant speakers of another language. These are indisputably valuable skills for designers (or anyone else), but the investment of time and energy required to achieve this level of proficiency probably is *not* the best use of most design students' time in school. Rather, as language educators have frequently argued, "there are permanent values to be gained from foreign language training that lie beyond the retention of specific material and within the grasp [even] of those students who will never have the opportunity to become proficient in language skills."[6] Three of these "permanent values" seem particularly relevant to design education: (1) the ability to think critically about language and communication systems generally, as well as about English specifically; (2) the opportunity to break out of the cognitive patterns or mindsets that English (or any native tongue) imposes on monolingual speakers, thereby increasing students' capacity for innovative and creative thought; and (3) the potential to decrease students' ethnocentrism to a healthier level by teaching them enough about the thought patterns and values of other cultures that they can appreciate the fact that, really and truly, not everyone sees the world the same way they do.[7]

1 Given that a number of design theorists have lamented a contemporary tendency among designers to *"mistake symbols for what they symbolize "* to think of the vehicles of meaning (whether pictures or words) as "transparent," [8] and to be fearful or dismissive of language and text, it seems that the design professions would be well-served to produce students who are savvy about language, and refute William Drenttel's exclamation that many designers "don't know how language works at all!" [9] Fortunately, foreign language study is a readily available means of making students more reflective and critical about language and communication. In fact, as foreign language professor Robert Fradkin has contended, realistically speaking, "[Foreign] Language learning is... for most college students the only opportunity to find out about language in general, to acquire knowledge that, ideally, will make them better communicators in speech and writing and

5   These subjects often are included in design curricula and syllabi, but relatively few design instructors have extensive formal training in these fields of study themselves, so they may not always be the best-qualified persons to teach these subjects to their students.

6   Carolyn A. Durham, 'Language as Culture," *The French Review* LIV:2 (December 1980): 219-224.

7   There are, of course, many more than three reasons to study foreign languages; Alan C. Frantz in his essay "Seventeen Values of Foreign Language Study," *ADFL Bulletin* 28:1 (Fall 1996): 44-49 (available online at "Seventeen Values of Foreign Language Study"(www.ade.org/adfl/bulletin/v28n1/281044.htm) [accessed March 3, 2003]) describes some of the most frequently used justifications for foreign language study and provides a good bibliography of writings on the subject, mostly from the perspective of foreign language instructors.

8   Michael J. Shannon, "Toward a Rationale for Public Design Education," *Design Issues* VII:1 (Fall 1990): 35.

9   William Drenttel, "The Written Word: Designer as Educator, Agent, and Provocateur," *Communication Arts* (March/April 1993); reprinted in *Design Issues: How Graphic Design Informs Society,* edited by D. K. Holland (New York: Allworth Press, 2001): 67–71.

perhaps clearer thinkers."[10] The reason foreign language study is so effective at fulfilling these aims is that it allows students "to arrive at a certain distance from the way our own language organizes our experience," which, in turn, affords them perspective on the ways that symbolic systems are embodied in language.[11] And, as language professors Julius Moravcsik and Alphonse Juilland have contended, "The study of languages accomplishes one of the ideal aims of a liberal education: it reveals those fascinating and problematic aspects of everyday experience which are taken for granted by the unreflective."[12]

For example, when as an unworldly, middle-class Midwestern teenager I began to study Spanish in high school, I was completely flabbergasted to learn that Spanish speakers had no word for "like" (as in "I like that chair"). How could a language not have a word that meant "like"? It seemed very strange to me that in the construction *me gusta la silla* ("the chair pleases me")—the closest equivalent in Spanish to "I like the chair"—it was the object rather than the person that served as the subject of the sentence, and that in effect was the active agent. If I say in Spanish that a chair doesn't please me, it seems as if it is the *chair's* fault, whereas by saying in English "I don't like that chair," the fault appears to be my own (perhaps my tastes are too sophisticated or too vulgar to appreciate the chair). This different way of assigning agency (or blame) was troubling to me at the time, I think, because it challenged my fundamental belief—no doubt largely shaped by the English language itself—that only live creatures can do things such as *like* and *please* because only creatures with brains have wills of their own. But although it's hard for an English-speaker to understand, this seemingly fundamental distinction between "live" and "inert" entities is not one that is maintained in all cultures, and in Spanish, the *me gusta* construction is part of a broader practice of speaking of inert objects (or rather, those objects that English speakers would consider inert) as "alive," in that they are gendered masculine or feminine and spoken of using the same pronoun and possessive forms that are used for people. Thus, if a Spanish speaker were watching an appraisal of an eighteenth-century chair on *Antiques Roadshow* and were to comment that *ella tiene las piernas hermosas*—literally, "she has beautiful legs"—it would not be clear whether the speaker meant the chair or the appraiser. The bedrock distinction between live and inert things that is maintained in English is not present linguistically in Spanish and, as a result, in Spanish the world seems a far more animate (and anthropomorphic) place.

It is difficult to imagine that this kind of linguistic difference does not have implications—even if only subtle ones—for the ways in which people from different cultural groups think about objects and concepts. Thus understanding the way that seemingly boring things such as pronouns and syntax shape the way humans conceptualize their world—in other words, understanding how language

10   Robert Fradkin, "Watch Your Metalanguage," *ADFL Bulletin,* 25:2 (Winter 1994): 30-36; 34.

11   Jean A. Perkins, "The Value of Foreign Language Study," *ADFL Bulletin* 20:1 (Sept. 1988): 24-25.

12   Julius Moravcsik and Alphonse Juilland, "The Place of Foreign Languages in a Curriculum for Liberal Education," *ADFL Bulletin* 8:4 (May 1977): 10.

"speaks" us, as well as how we speak it—should be very useful to a designer. I imagine that if I were to design a product for use in another country, my training in Spanish would make me more likely to ask astute questions about how widgets were thought of and spoken of there (masculine or feminine or neuter? live or inert? etc.) and as a result, I might pick up some information that would be valuable to me in my conceptualization of the project. In addition, I think that studying Spanish (or any other language) provides some useful perspective on how one might tweak English to make it work better as a mode of communication. ¡What a great idea, for example, to signal at the *beginning* of a sentence whether it will be a question or an exclamation! ¿Why not do it in English, too? Or following the example of Spanish's useful neutral singular possessive *su*—which means either "his" or "her" or "its"—why not come up with a new word to replace the awkward "his/her" construction that many people use today in English in order to avoid the grammatically incorrect plural "their" and the sexist singular masculine possessive "his" (thereby realigning the English language to accord more closely with contemporary gender politics)? These are the kinds of questions that monolingual students are unlikely to ponder. Without learning how other people speak and write and read and think, it is hard even to become conscious of what the inadequacies and possibilities of English are, much less to critique them.

Although even a semester or two of Spanish—which, relatively speaking, is quite similar to English in terms of alphabet, syntax, and vocabulary—could teach a design student a great deal about language and culture, an even more eye-opening form of education is taking a language that has very little in common with English. When I took a trimester of Japanese my senior year of college, for example, I was bowled over by even the simple fact that there are three different writing systems in Japanese—*kanji* (Chinese ideographic characters), *hiragana* (a syllabary that originally was created for use by women, but which now is used in combination with *kanji* for nearly all mundane forms of writing), and *katakana,* a more angular set of characters that refers to exactly the same sounds as *hiragana,* but which is used in its place in some scientific and official documents, as well as to phonetically "spell" foreign words. The implications of this tripartite system are still astonishing to me; namely, that the differences between native and foreign words, informal and formal documents, and (at least in the past) feminine and masculine sensibilities (and levels of education) are important enough that they must be maintained by using three totally different sets of characters. Katie Salen has noted that Western designers often have marked national, cultural, and racial difference through their choice of typefaces—and if nothing else, foreign words are usually italicized in English—but compared to the distinctions that written Japanese maintains between categories, the examples Salen points out seem almost subtle.[13] In addition—at least in the past—Japanese

13 Katie Salen, "Surrogate Multiplicities: In Search of the Visual Voice-Over" in *Graphic Design & Reading: Explorations of an Uneasy Relationship,* edited by Gunnar Swanson (New York: Allworth Press, 2000): 75-89.

writing systems clearly denoted one's class or level of education, because those who were not well educated, if they wrote at all, wrote phonetically using the *hiragana* syllabary, while those who were well-educated wrote using the ideographic *kanji.* And as anyone who has taken even a semester of Japanese or Chinese realizes, it takes many years of study to learn enough characters to be able to read even a newspaper.

Learning about the kinds of distinctions that are formalized through Japanese writing systems, I believe, makes one appreciate much more consciously the ways in which English and its written forms shape writers' and readers' perceptions about class, nationality, gender, and the like. I think that for many monolingual English-speaking designers, studying even one term of Japanese would be of immense value, in that it would allow them to think afresh about the ways they could—or already do—communicate in English. The possibilities of the alphabet and of pictographs, rebuses, typefaces, and handwriting styles all seem much clearer and richer after one has had the experience of reflecting upon how written language works in a different culture.[14]

2 In addition to gaining valuable insight into the way language works, students who study foreign languages can increase their potential for innovative thinking. This is because reading, writing, and speaking in another language usually involves operating within an alien universe characterized by unfamiliar distinctions in modes, voices, tenses, genders, levels of formality, declensions, writing systems, syntax, etc., which forces learners to acquire not only a new vocabulary, but also a new way of categorizing and relating things, people, and ideas. As a participant on the IDFORUM@YORKU.CA discussion list recently put it, "Language is the tool by which human knowledge, experiences, and approaches are stored and transmitted… [so] the language which defines the problem or situation has to have a direct effect on the approac[h] to the situation." [15]

An example of the way that language can condition people's thinking—often without their conscious awareness of it—was given to me recently by a colleague in ceramics, who told me how surprised he was to learn that the substance he knows simply as "slip" (liquid clay) is, in Japanese, denoted by a term (*keshō-tsuchi*) that translates literally as "cosmetic clay." [16] Similarly, the Japanese verb meaning "to make up" or "to apply makeup" (*keshō wo suru*) is used in the ceramics world to mean "to apply slip." [17] This terminology was revealing to my colleague because it suggested a whole host of connotations that are not present in the English word "slip"—such as beautification, femininity, deception, superficiality, and/or the masking of imperfections—and he felt that these associations did indeed condition the ways in which Japanese potters thought about and used slip (hence his feeling of enlightenment when he discov-

14 In her excellent book *Handwriting in America: A Cultural History* (New Haven, CT: Yale University Press, 1996), Tamara Plakins Thornton discusses some of the ways in which Anglo-American handwriting styles historically have marked distinctions between social classes and sexes; however, handwriting is not now (nor has it ever been) a subject of aesthetic criticism in this country to the extent that calligraphy has been in Japan.

15 Manish Joshi, "Re: Design and Language," message posted Wednesday, May 21, 2003 at 6:48 AM CDT to the IDFORUM@YORKU.CA (Industrial Design Forum) listserv, which is sponsored by York University in Canada.

16 My thanks to Harris Deller for providing this anecdote and for putting me in touch with a number of helpful bilingual ceramists, including John Neely (see below).

17 In Japanese, *keshō* is the term for "makeup" or "cosmetic" (*keshōhin* are cosmetic products such as powder, lipstick, and perfume). I am grateful to ceramist John Neely for explaining the usage of these Japanese terms, and for providing a number of similar examples. He notes that *keshō o kakeru* (approximate translation: "covering with makeup") "is perhaps the most common expression for applying slip," and that "the technique of using red iron oxide or an iron bearing glaze applied just to the rim of a pot is called *kuchibeni,* which usually refers to lipstick… it is written with two Chinese characters that mean 'mouth red.'" Personal correspondence with author, July 30 and August 10–11, 2003.

ered what the Japanese term actually meant). As this example points out, the words people use for materials, ideas, and processes can limit or color their uses of them, without their even being aware of it, because language sometimes provides no other words for—and thus no alternate ways of thinking about—a given thing or idea. Unless we learn a word in another language that challenges our own language's construction of reality, it is virtually impossible for us to realize how preconditioned our own way of thinking was.

Thus even if design students learn only a basic vocabulary in another language—and/or a specialized vocabulary applicable to their area of practice—I firmly believe that having even those few alternate terms (and ways of thinking) at their disposal would significantly boost their ability to think creatively and innovatively—or at least to approach problems from outside the constraints of English ways of thinking about the world. As French professor Carolyn A. Durham has written, one of the benefits of foreign language study is that students learn that "meanings do not coincide in two languages, even for cognates, and they come to understand how arbitrary linguistic symbols are. They realize that words refer to cultural phenomena, unrelated to objective reality or to a natural order." [18] Learning a smattering of even just one language really does open up new possibilities for approaching and formulating both problems and solutions. For example, by learning the Japanese word for slip, my colleague acquired a deeper understanding of the logic of Japanese ceramics. And presumably a Japanese ceramist—accustomed to thinking of slip primarily as a cosmetic device—might find the less overdetermined English word "slip" a rather liberating way of describing one of the fundamental materials of his/her craft.

3 In addition to raising their awareness of language and potentially helping them to "think outside the box," foreign language study has yet another very valuable use even for those design students who never attain competency. In short, foreign language study can make people more culturally sensitive and less ethnocentric. Given that foreign language instructors now almost universally agree that the best way to teach language is to pair instruction in vocabulary and grammar with a discussion of the culture of the language's speakers, foreign language study has become an excellent way of learning about the history and values of people from other cultural backgrounds, as well as a point of departure for reflecting on one's own culture's history and values. As one language instructor has astutely stated, "Monolingual Americans tend to assume that all peoples are very much the same, and that all cultures can be understood in the context of the English language. Breaking out of this linguistic prison makes students very much more suspicious of seemingly simple comparisons that rely on a single language for expression. They become sensitive to differences in ways that monolinguists can never achieve. Learning a foreign language places

18   Durham, "Language as Culture," 222.

them in the very shoes of the other culture, forces them to follow its patterns rather than their own, and enables them to understand and express concepts that are truly foreign to their own experience." [19]

I experienced an "Aha!" moment of this sort in the high school Spanish class I mentioned earlier. I was surprised to learn that Spanish marked class/rank/age distinctions not only through the presence or absence of honorific titles such as *Señor* or Profesora, but also by distinguishing between a "formal you" (the word *usted,* abbreviated with a capital letter as *Ud.,* used for addressing someone respectfully and formally) and a "familiar you" (the lowercase *tú,* used primarily for addressing family members, friends, children, and perceived social inferiors). Believing, as I'd been taught, that all people were created equal—and being pretty much oblivious to the notion of class distinction due to the white, middle-class homogeneity of my hometown—I was outraged by the fact that I would have to choose even my pronouns and possessives based on the rank of the person I was addressing (which meant that I would actually have to *decide* what kind of relationship I had to the person and what our relative ranks were before even saying something as simple as "How are you?" or "I like your new hairstyle"). In other words, the relative ranks and the nature of the relationship between speaker and addressee colors a speaker's choice of words much more profoundly in Spanish than it does in English which, for all practical purposes, dropped the distinction between the informal/familiar "thou" and the formal/polite "ye" centuries ago.[20]

Knowing about the pervasiveness of rank/familiarity distinctions in the Spanish language may seem far removed from the kind of expertise that a designer needs, but it does point out that even in these increasingly informal times, in some cultures rank or social position still really does matter—it permeates nearly every sentence people speak—and that does have ramifications for the design of, say, dining room tables and office furniture. Knowing what I do about Spanish and English, I would be willing to bet that it is more important in Spanish-speaking countries than it is in English-speaking ones to maintain sex and rank distinctions through things such as desk size and chair size (i.e., the boss having a bigger desk than the employees or the father sitting in an armchair at the dining table while the other family members sit in side chairs). I do not know if my guess is correct, but the point is that acquiring even basic reading, writing, and speaking skills in another language can alert an attentive student to the distinctions that are important in that culture—distinctions that a designer might not otherwise be aware existed, because they might not be ones that are expressed (or that are even expressible) in the designer's own language. By gaining "a glimpse of a rich world for which there is no English equivalent," [21] design students—whether or not they ever acquire true proficiency—can become more cognizant of the existence of cultural difference, a desideratum that is currently preached by NASAD, but that is (like

19 Perkins, "The Value of Foreign Language Study," 25.

20 *Oxford English Dictionary Online,* 2nd edition, s. v. "thou" (www.dictionary.oed.com; accessed July 10, 2003).

21 Durham, "Language as Culture," 222.

22 NASAD currently mandates foreign language study only for graduate students in the fields of art history and design history. No foreign language requirements exist for design practice programs at either the undergraduate or graduate levels. The closest thing to a language requirement for designers is the wording of the description of the research-oriented MA or MS in design or design studies, which requires that students be "competent in the use of languages and technologies appropriate to their field of study." However, this phrasing allows the institution granting the degree to decide if language study is necessary. (Similarly, section XV.G. of the *NASAD Handbook* clearly states that language requirements "are determined by the institution based on the objectives of the program.")

linguistics and communication theory) not directly addressed in curricular requirements.[22]

The ability to think critically about language—and about the worldviews that languages necessarily impose upon their speakers—is, I think, only possible once one has learned enough of another language to be able to look at English from the outside. Thus I believe that both graduate and undergraduate students in design—especially those in graphic design, product design, and information design—should be required to take at least one year's worth of rigorous college-level language instruction, ideally in a language that uses a writing system other than the Latin alphabet, since the less like English their second language is, the more likely they will be to experience a profoundly different way of speaking and thinking (I can say without hesitation that none of the five European languages I've studied taught me as much about the nature of writing systems, communication, and cultural difference as my one trimester of Japanese did).[23] Given the many benefits of foreign language study, design educators' all-too-common resistance to—or deafening silence about—requiring it of their students is not only unfortunate, but also self-defeating. In a profession such as design, in which the ability to think critically, creatively, and globally is so valuable, educators, accrediting agencies, and practitioners should all encourage language study as an effective and expedient way of providing design students with knowledge about, and critical perspectives on, both language and culture.

23 Thus German, Spanish, Italian, Latin, Portuguese, Dutch, etc. would *not* be highly recommended, whereas most Asian languages and—among the widely taught European languages—Greek and Russian would be. In addition, some of the Scandinavian languages, such as Norwegian and Finnish, which have very different cases and modes from English, also would be fine choices, even though they do make use of variants of the Latin alphabet. Realistically, though—for the sake of course availability—requiring any foreign language would be better than requiring none; however, design programs (and NASAD) could still strongly *recommend* that design students study a language that uses a different writing system than English does.

Packaging Jewishness: Novelty and Tradition in Kosher Food Packaging
Elliott Weiss

...it is fair to say that, through his food, the Frenchman experiences a certain national continuity. By way of a thousand detours, food permits him to insert himself daily into his own past....[1]
>   Roland Barthes

Many packaged food companies construct their product identities using mythological tropes as a means to link their products with a particular idea. By linking their product to notions of tradition, the manufacturers of mass-produced foods obfuscate the real and eminently modern conditions that make packaged foods possible. References to tradition help to obscure the paradoxical effect in which the very mass production processes that make a packaged product possible are the same processes responsible for eroding traditional production methods and practices. The commodification of tradition through marketing is a way for makers of packaged foods to endow their products with the kind of artisanal aura that, by definition, is unavailable to objects of mass production. Since any actual link to the premodern past has been disrupted by the effects of modernization, advertisers construct mythical product genealogies as substitutes for real histories.[2] This paper examines the role of nostalgia in the design of package labels. It will focus on a particular phenomenon within a particular category of products. I am interested in the dissemination of cultural values through the mass market, specifically, in the commodification of Jewishness or *yiddishkeit* through the use of mythological devices in kosher packaged foods.

To a certain degree, packaged kosher foods exist as a paradox. It embodies the dichotomies of traditional lifestyles in a modern world. It is the reification of an ancient ritual and, at the same time, an emblem of modern convenience. It is the intersection of the rational and irrational, the practical and impractical, and the esoteric and the banal. One might wonder if it isn't the stark contrast of values expressed in the gesture of packaging and marketing something so symbolic as kosher foods that makes the arena of the label so inviting to nostalgic expressions.

As the above quote of Roland Barthes shows, however, a longing for the past, represented though a dramatization of culinary culture, is not exclusively a product of a Jewish-American worldview. Barthes saw nostalgia as a sign of the modern condi-

1   Roland Barthes, from "Toward a Psychosociology of Contemporary Food Consumption," reprinted in Carole Counihan and Penny Van Esterik, eds., *Food and Culture: A Reader* (New York: Routledge, 1997), 24.

2   Barthes's neo-Marxist analysis described the effect this way: "...the product as bought ~~that~~ that is, experienced— by the consumer is, by no means, the real product; between the former and the latter there is a considerable production of false perceptions and values." from "Toward a Psychosociology of Contemporary Food Consumption" reprinted in *Food and Culture: A Reader*, 2.

tion, and as an essential bourgeois malady. As Svetlana Boym put it in *The Future of Nostalgia,* "nostalgia is not necessarily opposed to modernity... rather it is coeval with modernity itself. Nostalgia and progress are like Jekyl and Hyde: alter egos."[3] I would like to suggest that it is the combination of the loss of traditional lifestyles and the notable social mobility of Jews since the great migrations of the late-nineteenth and early twentieth centuries that have made them especially prone to nostalgic yearnings. Sam Levenson described the effect in his 1980 article on New York's famous Second Avenue Deli, "The very menu is a remembrance of things past, of a Jewish way of life all but destroyed by upward mobility."[4] For Jews in America, "Progress didn't cure nostalgia but exacerbated it."[5]

This scenario, in which the significance of tradition intensifies as its very existence becomes challenged is allegorized in Sholem Alechem's *Tevia's Daughters.* Written at the time of the great Jewish migrations out of Eastern Europe, it expressed the anxieties of a generation confronted with the effects of modernity and the dangers of assimilation. A half-century later, the story would take on new significance as *Fiddler on the Roof* (the Broadway play followed by the film version) when Jews took their place in mainstream America. While, for immigrant Jews at the beginning of the century, *Tevia's Daughters* represented nostalgia for something lost, *Fiddler on the Roof* represented for late-twentieth century Jews nostalgia for something never possessed.

The appearance of *Fiddler on the Roof* in movie theaters three decades ago attests to the disappearance of connections to life of the *shtetls* of the Old World and the tenements of the New World. For its post-immigrant audience, *Fiddler on the Roof* the film represented not merely a longing for tradition, as the following excerpt shows, but rather a longing for the longing of tradition. "We have a tradition for everything," Tevia exclaims, "for sleeping, for eating, for working, how to wear our clothes.... You may ask, 'How did this tradition get started?'.... I'll tell you... (pause).... I don't know. But it's a tradition, and because of our traditions, everyone knows who he is and what God expects us to do."[6] For Tevia, the very essence of Jewish identity is based not simply on the performance of rules governing seemingly banal activities such as eating, but particularly on the awareness of the traditional dimension of those activities. Tevia's confession of his ignorance as to the origin of the traditions suggests the ahistorical and essentially mythic character of nostalgia. Here, in *Fiddler on the Roof,* the obsession with yearning, with nostalgic musing, becomes an aspect of the late-twentieth century, post-immigrant Jewish character. Tevia's exaltation of tradition, or rather the sentiment of an audience primed for such a viewpoint, "points to a paradox of institutionalized nostalgia: the stronger the loss, the more it is overcompensated with commemorations; the starker the distance from the past, and the more it is prone to idealizations."[7]

3   Svetlana Boym, *The Future of Nostalgia* (New York: Basic Books, 2001), xv.

4   The Sam Levinson Quotation appears on the coffee cups of the Second Avenue Deli, Manhattan.

5   Svetlana Boym, *The Future of Nostalgia,* xiv.

6   *Fiddler on the Roof*

7   Svetlana Boym, *The Future of Nostalgia,* 17.

This paper considers the labels of kosher packaged foods as a mode of discourse, and as a platform for the dissemination of "institutionalized nostalgia." As "commemorations of loss," the labels of some kosher packaged foods are "prone to idealizations" of the past. It is important to note here that, while all kosher foods refer directly to Judaism, the religion, the marketing for some kosher packaged foods also may represent Jewishness, the culture; that is to say, Judaica. When Judaica is one of its ingredients, the consumption of kosher packaged foods is not merely a physiological act, it is a semiological one as well: the consumption of Jewish signifiers. While the consumption of kosher foods is a code of conduct, the packages of kosher foods and their advertisements are themselves a code, a signal which announces identity through an accumulation of signs. Traditional customs, beliefs, values, language, and even memories comprised the field of usable material for the marketing of some kosher products.

Throughout much of the twentieth century, kosher food companies repeatedly sold the notion of tradition along with the foods they produced. The Joseph Jacobs advertising agency, a New York agency specializing in the "Jewish field," used this strategy so frequently that the commodification of tradition became a traditional means of selling products to their clients' Jewish clientele.[8] The mainstream-but-kosher companies represented by Joseph Jacobs infused their kosher products' identities with *yiddishkeit* by advertising with Jewish themes in Jewish publications or on Jewish television programs, particularly in the New York City area. These companies restricted Judeo-centric imagery from the package labels of their products, reserving it for the copy in the advertisements in the Jewish press.

What is important in this kind of advertising is the presence of the word "tradition," which alone was powerful enough to resonate with Jewish consumers. Domino Sugar, for example, promised the kosher observer a sweeter *seder* "with Domino ... the traditional Passover sugar." Maxwell House Coffee sold itself as "The taste of TRADITION," and Tetley Tea ads exhorted the kosher consumer to "treat" their "family and guests to the traditional tea for Rosh Hashanah." Breakstone's "Temptee" seduced the kosher shopper

Figure 2
The Orthodox Union's "hechsher." Copyright
Orthodox Union, New York, NY. Reproduced by
permission. (tm)

Figure 3
Jar lid for Mother's products.

9   Defined as the symbol printed on the
     label of kosher foods that certifies its
     approval for having met kosher guide-
     lines. The Orthodox Union is the largest
     of the many kosher certifying agencies.
     The products under their supervision can
     be recognized by their symbol: a capital
     "U" inscribed within a capital "O." From
     the Joseph Jacobs Co. archive.

10   Jack Kugelmass, "Green Bagels: An
     Essay on Food Nostalgia and the
     Carnivalesque," *Yivo Annual* 19 (1990):
     69.

11   Sholem Ash, *The Mother* (New York: G. P.
     Putnam's Sons, 1937), 140.

with the hedonist view that "Life is full of delicious tradition," imploring her to use their cream cheese to "spread one (a delicious tradition) around!"

Although the manufacturers of mainstream kosher products restrict references to yiddishkeit to the confines of the Jewish press, smaller "enclave" kosher companies could afford to extend their marketing tactics beyond mere advertising to the arena of the package itself. In terms of package design, mainstream kosher companies relied solely on the *hechscher* of certifying agencies such as the Orthodox Union to target Jewish consumers.[9] In a sense, because of a self-imposed moratorium on using ethnically charged imagery, mainstream companies are obliged to "pass over" associations that are too Jewish. As opposed to the ethnically cleansed labels of mainstream kosher products, enclave kosher package labels employ a spectrum of imagery which dramatizes "a particular definition of Judaism" through the use of "ethnic hyperbole" comprising a phantasmagoria of stereotypes representing Jews, particularly Jews in relation to food.[10]

Where Jewish food is concerned, a mother is not far away. In the 1937 Yiddish novel *The Mother,* Sholem Ash is simultaneously filled with joy and sorrow as he laments over the memory of his mother's "most wonderful strudel." "I'll never have that again," Ash writes, "I wrote a poem about that."[11] In this characterization, mothers are what memories are made of. As the stuff of memory, the mother becomes elevated to the status of demigoddess, an ideal to whom no mortal can ever compare. Inspired by a divine muse, the culinary production of the mother becomes a paragon by which every morsel is measured and never equaled. Package labels employing the mother theme serve to conjure an image of motherliness as an abstract concept. Rather than representing a specific person in history, the images represent, through general types, an ahistorical persona. The idea of the mother being conveyed is a timeless, mythical construct; a kind of *ur-mutter* which, at the same time, is everyone's mother and yet nobody.

In conjunction with the imprimatur of certifying agencies such as the Orthodox Union, the mother theme found on the labels of kosher packaged food forms a multilayered hechscher or seal of approval implying an additional, if mythical, underwriting authority. Rather than depicting a mother on the labels of their products, Mother's brand suggests "her" presence through their slogan: "FROM THE SPOTLESS KITCHENS OF MOTHER'S." By associating itself with motherliness, "Mother's" suggests that their products are accountable to maternal vigilance. The slogan metonymically transfers the irreproachable qualities of motherly integrity and the sanctity of her kosher kitchen to the site of the processing plant. Rather than being synthesized through modern processes in a laboratory environment, the food in the Mother's package is conceptualized as handmade in the *haimisch* or homey setting of "Mother's kitchen,"
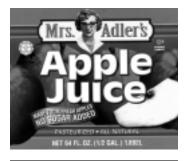
Figure 4
Mrs. Adler's Apple Juice

Figure 5
Mrs. Adler, the "baleboosteh."

where you might be told "You could eat off the floor it's so clean." The product promises what was, for Sholem Ash, merely an ideal: not only are Mother's kosher foods "like mother used to make," they are the foods that mother made.

Interestingly, there is no attempt to represent the mother of Mother's on the labels of their products. Instead, the mother is left as an abstraction, as if her representation were to constitute a violation of the second commandment. She is a concept of the minds eye, "imaginable" and yet (un)image(able) beyond the graven image.

With products from Mrs. Adler's line of kosher foods, the consumer is given a representation of a particular mother-type. Although there is no indication as to whether the woman on the label is indeed a mother, the connotation is abundantly clear. Mrs. Adler is represented as a kind of *baleboosteh* or meticulous manager of the house. She is depicted as a conservative woman, a vestige of traditional values. Mrs. Adler's well-groomed appearance from her string of pearls, to her discrete ear rings, to her 1950s vintage glasses and her tightly done hairdo gives the impression that she is strict and overbearing, even *yekkish* (rigid, annoyingly perfectionist). As a baleboosteh, Mrs. Adler is a woman for whom "cleanliness was not second to godliness; it was second to nothing." [12]

The domestic division of labor of postwar suburban Jewish life allocated the mother greater power in the family since the father was busy at work. While the father was away "putting food on the table," the mother was at home, literally putting food on the table. This is part of the stereotypical image of the Jewish mother of the postwar era. Jewish comedians from the period routinely turned to the pathology of the smothering mother as a source for tragicomic material, and as a rationale for their often neurotic behavior. As is illustrated in the following skit by Jack Carter, food becomes the quintessential medium through which Jewish mothers instill guilt in an attempt to repair the severed umbilical cord that keeps their sons emotionally tethered. Carter describes a scene at the breakfast table of a Jewish home, where the kids are eating their morning cereal while "the mother is filling up a bag with sandwiches, and pears and apples, and pies and cheese."

> She puts it under your arm and when you get to the bus she yells, "Don't forget to come home for lunch." Isn't it true whenever you go to your mother's, she has food ready? It's murder. You can never catch her short. She has eighty courses ready, and she's always running up on her feet, and then they stand behind you like an umpire.
> "How's the chicken liver?"
> "Fine." "It needs salt, pepper; you don't like it?"
> "No, I like it; I like it."
> "Don't eat too much, there's soup coming." [13]

12   Leo Rosten, *The Joys of Yiddish* (New York: McGraw Hill, 1968), 30.

13   Jack Carter quoted in Riv-Ellen Prell, *Fighting to Become Americans: Assimilation and the Trouble Between Jewish Women and Jewish Men* (Boston: Beacon Press, 1999), 147. A compilation of Jewish jokes by Hershel Shanks provides one joke which aptly characterizes an example of "food-abuse" and its psychological ramifications. "A Jewish man goes to see a psychiatrist and says: 'Everyone reminds me of my mother. My wife, the newscaster, even your secretary reminds me of my mother. I'm obsessed. I go to sleep and I dream about my mother. I wake up, can't get back to

Figure 6
Bubbies Sauerkraut.

Figure 7
Bubbie, the "yiddishe mama."

The mystical aura surrounding matriarchal symbolism in modern Jewish folklore perhaps is best depicted in the label for "Bubbies" kosher sauerkraut ("Bubbie" is a Yiddish endearment for grandmother). The pictorial devices used here identify her as a representation of an earlier notion of Jewish motherliness, the *yiddishe mama.* The yiddische mama is a figure particularly associated with Jewish women from turn of the century immigration; she is a relic of the old country. Here the tandem association of the mother plus photography equals memory. The trope of nineteenth-century photographic effects helps to suggest a temporal location that is generations old. The label for Bubbies takes the pictorial conventions of the yiddishe mama to the realm of camp. Nothing could be farther from the aniconic discretion of the label design for Mothers than Bubbies baroque profusion of old-fashioned signifiers. As if one could miss the thrust of the nonverbal suggestions, the makers of Bubbies spell it out for the shopper. "'Traditional' raw cabbage, uncooked" is printed not only on one but both sides of the Bubbies portrait. A flourishing cartouche frames the central portrait, and "Traditional" is printed in italicized script. Even the storage information is patterned after the ungainly prolixity of nineteenth-century patent medicine labels: "Refrigerate until the last portion is enjoyed."

With their careful consideration of all aspects of the package label including trivial details in the copy, Bubbies is intent on selling tradition as much as they sell food. However, it is the portrait of Bubbie on the label that is the most effective tool for transforming sauerkraut from a common, gray vegetable product to a transmitter of the abstract idea of tradition. The nineteenth-century cameo motif is used to suggest images from Victorian era photo albums. The oval frame allows her body type to be made more clearly evident. She is a stocky woman whose corpulence belies her passion for her trade having tasted all of her delicacies several times before they reached the table.

Like Mrs. Adler, the Bubbie's hair is neatly combed to the side. Her stern expression helps us to identify the period, and is likely the result of both the slow shutter speed of early photography as well as the strict codes of conduct of the Victorian era. All of the cues tell us that Bubbie is an immigrant; her identity as a yiddishe mama is unquestionable. The picture of the Bubbie reminds the shopper of a bygone era, a simpler time before the simplification of domestic labor, a time when everybody's mother prepared her own meals from scratch. This is the miraculous Jewish "obermother" from immigrant Sarah Rilke's memory who could, as she claims, "milk her pots as though they were cows. They never denied her anything," Rilke insists. "She gave them cold water, and the pots yielded yesterday's carrot soup anew .... When the pots heard mother sigh, it was as though she had repeated a secret incantation over them with which she adjured them to supply the pitiful meager bit of nourishment which was all she demanded for her large brood." [14]

sleep, and I have to go downstairs and have a glass of tea and a piece of toast.' The psychiatrist says, 'What? Just one piece of toast for a big boy like you?'" Hershel Shanks, *101 Best Jewish Jokes* (Washington, DC: Moment Press, 1999), 15. Another excellent and hilarious (though politically incorrect) portrait of can be found in Dan Greenburg's book, *How to Be a Jewish Mother: A Very Loving Training Manual* (Price Stern Sloan Publishers, 1965).

14 Sidney Stahl Weinberg, *The World of Our Mothers: The Lives of Jewish Immigrant Women* (Chapel Hill, NC: University of North Carolina Press, 1988), 162.

Like the label glued to the sauerkraut jar, such nostalgic meanings stick to the product; the product takes on the valences associated with "bubbieness." This process of association is described by Robert Goldman, author of the materialist critique, *Reading Ads Socially*, as "Abstracting and separating photographic records of unspecific actors and actions from their lived, organic context, these photographs become signifiers in search of a signified." [15] The bubbie photograph functions as inspiration for the consumer's imagination, to aid in fabricating a pseudo-historical lineage between traditional methods of production and modern habits of consumption. The label of Bubbies "manufactures an artificial tradition of historical meaning" by appealing to the consumer's sentiment with a romanticized characterization of the bubbie's imagined immigrant life.[16]

In spite of the hardships they encountered, or perhaps because of them, the immigrants who came through ports including Ellis Island a century ago often are perceived as possessing a character of a higher standard. The products of their labor, the residue of human striving under adverse conditions, bear an aura of authenticity. By associating their product with the products of immigrant labor, the makers of Bubbies graft a notion of authenticity to a mass-produced packaged food. Contrary to the tacit claims intimated by the label, Bubbies sauerkraut is not produced in small batches in your grandmother's kitchen, but rather on an assembly line. With the nostalgic references on the label for Bubbies, the facts of material production are not merely glossed over but subverted.

In addition to "commodifying tradition" trough a carefully crafted marketing scheme, Bubbies sauerkraut effectively sanctions the kosher ritual itself by linking positive images of tradition with a kosher food. Like advertisements that, according to Robert Goldman, "offer to sell us back idealized images of ourselves as we would like to be (or think we ought to be)," the label for Bubbies markets a particular definition of Jewishness, one which values a notion of tradition as a tradition itself.[17] The celebration of tradition for tradition's sake by practicing *kashruth (the system of the kosher diet)* through the purchase of kosher packaged foods becomes not only a meaningful way to observe, but also to celebrate Jewish identity. In contrast to the time when the rejection of kosher ritual was rationalized because it was traditional, products such as Bubbies sauerkraut allow the consumer to rationalize kosher as a appropriate expression of one's Jewish identity for the same reason, because it is traditional. It matters not whether the portrait representing the bubbie on the label for Bubbies sauerkraut is an actual likeness of the originator of the product. What does matter is that the imagery is coordinated with the other rhetorical tropes to suggest "traditionalism." [18]

In order to convey a sense of tradition, the Manischewitz Company recently updated their package labels, replacing the old modernist design with a new folkish sentimentality. Like the other mother products mentioned above, the new line of Mrs.

15 Robert Goldman, *Reading Ads Socially* (London: Routlage, 1992), 92.

16 Ibid., 92

17 Ibid., 102.

18 The portrait is in fact the grandmother of the company's owner.

Figure 8
Mrs. Manischewitz Latke Mix.

Figure 9 (above)
Mrs. Manischewitz, the "liberated house-
wife."

Figure 10 (right)
Top: Text bubble on the front of the package.
Bottom: List of ingredients on the side of the
package.

Manischewitz packaged foods feature a portrait of the company's matriarch Mrs. Manischewitz is portrayed with all the gentility of a modern Protestant-American woman including lipstick and earrings, and a hairdo that would not look out of place on the head of a First Lady, say Betty Ford or Pat Nixon. Unlike the dour stoicism on the face of the sauerkraut bubbie, Mrs. Manischewitz eagerly beams at the would-be shopper, her painted lips parting to reveal her perfect dentition. This is not a woman who appears enslaved by the hardships of daily meal preparation because she *has to cook* like her grandmother. Rather Mrs. Manischewitz is a liberated woman who's modern lifestyle affords her the luxury of smiling because she wants to cook like her grandmother, even if that means opening a package once or twice a year. But in spite of the modern appear-ance of Mrs. Manischewitz, the label is replete with sentimentalized references to tradition.

Besides using the word "homestyle" to intimate a folkish sensibility, the label includes a text bubble emanating from the cameo of Mrs. Manischewitz with the words "My Bubbie's recipe!" Despite the fact that the real recipe for the latke mix includes ingredients such as diglycerides, sodium bisulfate, and partially hydrogenated cottonseed oil, Mrs. Manischewitz's reference to her bubbie serves to highlight the suggested "premodern" authenticity of the recipe by attributing it to her grandmother. Moreover, like pealing an onion, the true attribution of the recipe can never really be possible because, as the statement "My Bubbie's recipe!" implies, another matriarchal layer can always be uncovered, that is, her bubble's recipe is, in fact, the recipe of her bubbie and her bubble's bubbie. The recipe therefore is generations old. The timelessness of the text endows the recipe with a quasi-sacerdotal aura. The reenactment of the recipe, the preparation of the latke mix, thus becomes akin to religious ritual, its performance validates the consumer as a member of the chosen people.

Mrs. Manischewitz exists before us on the box of Homestyle

Latke mix as the conduit through which tradition flows. The reverse side features a letter written by Mrs. Manischewitz to her deceased grandmother. The style of the letter (even the letter format itself serves as an index to the past), the use of incomplete sentences in a sort of stream of consciousness, the shifting tense, and subject matter suggests the reverie of memory recall. A diffused black and white drawing emerges from the background of the letter, and provides the visual component of the memory. "Dear Bubbie," the letter starts,

> Nobody loved me quite like you.... The holidays, I can still smell the latkes. Zadie smiled every time we came to visit. The Stone Avenue Talmud Torah on Rosh Hashanah. Moishe Oysher. What a voice. Wonderful memories. Precious. I can still smell the latkes. Your great-grandson Eric is 21. A man. Graduating from Brown. Who would have believed ... from a shtetl to the Ivy League. You would be so proud. I can still smell the latkes. Crisp and hot. Sour cream or applesauce. It didn't matter. Bubbie. I love you. I miss you so much.

Mrs. Manischewitz's sentimentalized latke soliloquy to her dead grandmother underwrites her authority as the genuine transmitter of tradition with her pathos serving as her credentials. Through the medium of food, the package, like a genealogical record, traces the matriculation of Jews in America from their origins as disadvantaged immigrants to their status as successful (and nostalgic) mainstream Americans.

In the Manischewitz package, Jewish participation in activities once associated with gentiles serves as an indicator of assimilation and social mobility. Here, the attainment of mainstream social status is defined by the latest generation's acceptance to the Ivy League, once known as an institution of cultural elitism and exclusion. Yet, the successful integration of Jews is matched by a sense of yearning for the past. Mrs. Manischewitz's euphoric praise of her son's achievements is commingled with melancholia and a sense of loss. Despite changes over time, or rather because of them, the need to recall the past becomes ever more important, and packaged food offers itself as a tool for that purpose.

The celebration of Jewish achievements in terms of social acceptance and material wealth is symbolized by the new possibilities afforded by "He'Brew" Beer, namely, the initiation of Jews into beer culture. Gone are the days when it was commonly assumed that "Jews eat to celebrate, non-Jews drink." [19] With He'Brew, the celebration of "celebrating by drinking" begins as the final phase of assimilation draws to a close. But in order to cast beer drinking as a Jewish activity, the makers of He'Brew created a label filled with references to tradition.

19 Jack Kuggelmass, "Green Bagels: An Essay on Food Nostalgia and the Carnivalesque": 66 and 73.

Using quasi-Chagallian pictorial conventions, the image on the front of He'Brew features a "rhino-centric" caricature of a Jewish immigrant (nasally well-endowed and myopic) rising above a fabled skyline, part San Francisco, part old Jerusalem, and part European shtetl. The streets are decorated with the domed and star-bedecked tops of synagogues. Caricaturing the triumphant arrival of the chosen people to the Promised Land, He'Brew transposes the ironic image of the poor, bearded, and disheveled immigrant upon entry to Ellis Island to modern-day California. Here, the Promised Land is conceptualized as both a place (Northern California) and an idea (mainstream, middle-class America).

He'Brew employs Hebraic-style script to connote tradition and to signal Jewish ethnicity. The typographical punning used here resembles the label for Traditional wine in the 1950s, in which tradition not only is suggested through the name of the product but by the style of its script.[20] But even if the actual meaning of the word has no particular link to tradition, the use of such a font can yoke together disparate meanings "ethno-typographically" to suggest *yiddishkeit*.

But He'Brew's use of parody goes well beyond the punning use of Moses condensed in its brand name. In the He'Brew label, no opportunity is missed, no space is wasted on purely practical information. From the slogan at the top to the storage information

at the bottom, the microbrew's label is an open microphone from which the makers of He'Brew do their standup comedy routine. With He'Brew beer, the kosher ritual becomes incorporated into a kind of ritualistic Jewish satire. As a sort of ethnic self-awareness that takes the form of parody, He'Brew expresses what I'd call a "Jew-ish" sensibility.[21] It's not important that a company simply incorporates stereotypes as part of its own identity, but rather that its identity is based on the transformation of stereotypes into playful self-mockery. He'Brew's jesting dramatizes a particular definition of what it means to be American and Jewish, and parodic rhetoric is part of that definition.

The product description on the label of He'Brew begins with a lampoon on the first of the four questions in the Haggada service for Passover, marketing the Jewish ritual as an American ritual of consumption. "Why is this beer different from all other beers?" asks the Genesis Ale Company. The answer, of all places, is at the "Beginning":

> In the beginning, there was an idea, and it was good: A microbrew to compliment the Jewish-American experience. Whether at the Shabbat table or at the deli counter, He'Brew can accompany the sacred rites and rituals of life or simply inspire moments of joy and delight.

By allowing observant Jews to imbibe in the latest American trends such as the microbrew phenomenon, He'Brew does indeed compliment the Jewish-American experience. The Jewish-American experience as the "Genesis Ale" Company, acknowledged on the label, encompasses a broad spectrum of "sacred rites" ranging from the holy observance of kashruth to the wholly unobservant ritual of the kosher-style deli.

In the long-winded product description printed on the side of the label, He'Brew makes explicit reference to the issue of Jewish mobility in America, particularly to a "post-New York" Jewish experience:

> Our first creation is Genesis Ale. Barley is one of seven Biblical species that celebrate the bounty of the Land of Milk and Honey (Deut. 8.8), and He'Brew draws a symbolic link to our own Garden of Eden in Northern California. A smidgen of Middle East, a dash of American West.

By recalling the classic Diaspora narrative, He'Brew beer conflates the history of Jewish mobility into one grand epic, leading from biblical exodus to its most recent manifestation as urban flight to the Garden of Eden, Northern California. In the never-ending saga of Diaspora, He'Brew replaces the former modern Garden of Eden, New York City, with its postmodern version, California. He'Brew beer allegorizes the social transformation and geographic translocation of the Jews as a migratory and foreign people at the beginning of

21 Drawing upon English playwright Johnathan Miller's famous retort when asked about his ethnicity. He replied, "In fact, I'm not really a Jew. Just Jew-ish."

Figure 13
Delancey Dessert Co. Rugelach.

22   Jack Kuggelmass, "Green Bagels:
     An Essay on Food Nostalgia and the
     Carnivalesque": 73.

23   Susan Stuart, *On Longing: Narratives of
     the Miniature, the Gigantic, the Souvenir,
     the Collection* (Baltimore: Johns Hopkins,
     1984), 151.

24   Interestingly, the Delancey Desert
     Company is neither located on Delancey
     Street nor is it, strictly speaking, a
     bakery. Rather, it acts as a distribution
     center operating out of the basement
     of a highrise apartment building, where
     outsourced baked goods are packaged
     and shipped.

25   *Merriam-Webster's Collegiate
     Dictionary,* Tenth Edition (Springfield, MA:
     Meriam-Webster Inc., 1995), 1302.

26   Susan Stuart, *On Longing*, 151.

27   Roland Barthes from "Toward a
     Psychosociology of Contemporary Food
     Consumption," 24.

the last century in the Ghettos of the Lower East Side, to the Jews as upwardly mobile, thoroughly American, and geographically diverse at the century's end.

By removing themselves from the social fabric of New York, ex-New Yorkers provided themselves with the kind of distance necessary for a nostalgic appreciation, as well as a parody of their cultural heritage. As Jack Kuggelmass described the experience of the patrons of Sammy's Romanian Steak House in New York's Lower East Side, "It was only through a break in the physical and social connection to the Lower East Side that there could have emerged a nostalgic tie to the area." [22]

The characteristic of "Lowereastsidedness" is used to connote authenticity in the textual rationale for the *rugelach* made by the Delancey Dessert Company. "These rugelach, baked daily on the Lower East Side, are among the last remaining remnants of the vibrant Jewish culture.... Rolled into their many folds and lodged between the crispy, flaky dough is the rich taste of tradition...." Again, the Lower East Side takes on legendary significance. In this conceptualization, the rugelach contain the essence of the Lower East Side. The Lower East Side is more than just a place where they are made; it is an ingredient from which they are made. In between the rhetorical folds and flakes on the package, food and tradition are conflated; rugelach become transcendent, and tradition is concretized and consumable. In a kind of metonymic transformation, the rugelach do more than symbolize the Lower East Side. These rugelach are samples of the Lower East Side. Torn from their place of origin, they function as souvenirs which, in their "many folds," envelop the present within the past.

But in the nostalgic construct envisioned by the Delancey Dessert Company, the Lower East Side exists only "as narrative." [23, 24] The Lower East Side, as it was known in its heyday, is exhumed through the act of telling. It is "an imaginary and indefinitely remote place," a real utopia.[25] In a kind of rhetorical slight-of-hand, the past and present are allowed to coexist on a package of rugelach. How else could these rugelach be a "remnant" of a culture that is "vibrant"? The appeal of a non-place such as the Lower East side is derived from its passing away. Just as utopias continue to hold promises as long as they remain unachievable, "The place of origin must remain unavailable in order for desire to be generated."[26] In exchange for its actual but ephemeral existence, the Lower East Side is reconstructed as narrative for eternity.

Despite the simple homey or *Hamish* quality invested in the Delancey package, the product actually is marketed to higher income shoppers at specialty markets. Through the product description on the back of the package, the contents themselves morph into containers of meaning representing a set of qualities, values, and ideas "in order to signify materially a pattern of immaterial realities." [27] The package membrane here serves not merely as a shell to protect

its contents, but as a skin which changes its color allowing these humble Yiddish pastries a veritable plethora of polysemic possibilities. The language on the package transforms rugelach from food to conundrum. "What are rugelach?" (The very question tells us that they are more than pastry.) "Rugelach are: old world, revolutionary, creamy, flaky, down to earth, very Hester Street, very Columbus Avenue, Hamish, haute ...." For consumers with disposable income, the quaintness of lower-class tenement culture has exchange value for the promotion of "haute" cuisine.[28] Roland Barthes identified a similar effect in advertising for French food, where notions of high and low culture become synthesized under the rubric of the product. "The historical theme," says Barthes, "which so often was sounded in our advertising, mobilizes two different values: on the one hand, it implies an aristocratic tradition ... on the other hand, food frequently carries notions of representing the flavorful survival of an old, rural society that is itself highly idealized."[29]

The romanticized vision of the Lower East Side described in the label text is reinforced by the photographic imagery on the front of the package. An elderly man and woman hold trays of what appear to be the deserts they just baked. The costume of the subjects, as well as the pictorial conventions, "age" the photo and authenticate the product within. The sartorial past tense of these figures makes them fossils from a bygone era.[30] The woman wears a simple dress, the man a white shirt and a white paper hat like the kind worn by "soda jerks" in depression-era candy stores. Despite the fact that this photo is not antique but contemporary, photographs such as this "turn the past into an object of tender regard, scrambling moral distinctions, and disarming historical judgments by the generalized pathos of looking at times past."[31] Here, the hard and unforgiving edges of history, including the suffering tenement conditions which were a hallmark of life on the Lower East Side, become chamfered into the rounded, supple corners of myth. The photo's soft gradient edges represent the process of "looking at time past" not with the eye, but with the mind's eye. In the mode of vision presented by the Delancey Dessert Company, reflection on the past (in this case, the pseudo-past) is akin to dreaming. Like the monochrome photograph, the vague and indistinct aspects of dream and memory become black and white.

Although the attitudes expressed in the Delancey package and the label for He'Brew beer are rather different, both spring from the same social phenomenon. From East European shtetl to New York City tenement to suburban subdivision, Jews migrated geographically, but they also migrated socially. The movement toward mainstream American values, such as the convenience of packaged food, was also movement away from life of "simpler times." Nostalgia in the form of package food labels offers the consumer a chance to "insert himself" as Barthes might say, "into his own past." What matters though is not whether the package convinces the consumer

28   In "Toward a Psychosociology of Contemporary Food Consumption," Barthes notes the popularity of featuring "peasant stew" in the photographic pages of the major ladies' magazines. See, *Food and Culture: A Reader,* 27.

29   Roland Barthes, "Toward a Psychosociology of Contemporary Food Consumption," 27.

30   "Fossils" in a figurative sense, of course, especially since the woman in the photo still is alive according to Zvi Lavi, the owner of Delancey Desert Co.

31   Roland Barthes, "Toward a Psychosociology of Contemporary Food Consumption," 24.

that this or that product is authentic. Rather, it is the prevalence of such packaging which serves as a diagnosis for a social phenomenon. After all, is it not the desire to return to one's past which indicates that one has somehow been dispossessed of it?

Design Issues: Archive
Gretchen Lagana

The archives of *Design Issues: History Theory Criticism* are located in the University Archives of the Special Collections Department, Richard J. Daley Library, University of Illinois at Chicago (UIC). This is because *Design Issues* was originally published for UIC's School of Art and Design, College of Architecture, Art and Urban Planning. Additionally, many of its editors and early contributors were associated with UIC, including Victor Margolin, John Massey, Martin Hurtig, John Greiner, Lawrence Solomon, Leon Bellin and John Cullars. University Archives is the University's official depository for its records and publications of historic value, along with selected professional and personal manuscripts of faculty, staff, students and alumni.

The collection totals some 27 linear feet and consists of drafts of articles and reviews in typescript and on computer disk; correspondence; meeting and agenda notes, review books and journals, miscellaneous books on design, biographical and miscellaneous visual materials.

The archive is more that just a record of the journal's activities. It charts the rise of the journal, from its beginnings in 1984, as a unique voice in the national and international design network; offers a first hand view of the development of the field of design, including design practice and design education, over the past 20 years; and identifies issues as well as the professional and academic voices associated with them.

Design Issues is only one of many design collections located in the Special Collection's Department. Others include the records of the New Bauhaus/Institute of Design, and John E. Walley Papers, and the R. Hunter Middleton Chicago Design Archives. Named after Chicago type designer Robert Hunter Middleton, the Middleton collection is devoted to Chicago design and designers. It was organized in the early 1980s to support the University's design academic programs in recognition of the importance of design history as a field of scholarly study. Holdings consist of individual collections with special emphasis on graphic, industrial, and communications design, from the period of Chicago's New Bauhaus through the present. They comprise a variety of formats—manuscripts, books, periodicals, photographs, audio and videotapes, artifacts—along with an extensive range of printed graphic materials. Currently there are over fifty individual collections. The recently organized African-American Chicago Design Archive, which aims at collecting the personal papers, design work and business records of Chicago's

African-American designers is another important component of the Department's design collections.

Anchored by the *Design Issues* archive, the UIC design collections comprise a rich and varied resource for anyone interested in design history. For more information contact the Special Collections Department:

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