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Introduction

Designers shape experience. Designers construct identity. Designers organize collective efforts and animate the potential latent in social situations. Designed objects mediate human interactions and provoke emotional responses among users. Design researchers draw out the knowledge embedded in practice and objects and render it accessible to others. Each of these statements generates lively discussions within the design community and provides fodder for books, conferences and workshops. All of these concepts are present in this issue and reflect this journal's commitment to the belief that our understanding of design can be enriched through a process of thoughtful, rigorous and sustained investigation into the multiple ways that design manifests itself in the world. In the lead article for this issue Kristina Niedderer describes a concept she labels the "Performative Object." More than the manipulation of behavior through design, the author contends that the idea of the Performative Object suggests ways to reconceptualize the users experience such that mindfulness and social reflection and not just consumption become identifiable goals of the design. Niedderer's article is noteworthy for the systematic manner in which she goes about identifying a phenomenon, defining it, drawing upon the insights of other disciplines in order to develop our understanding of it and finally suggesting the implications of her research for other designers. Artemis Yagou's study of architectural lighting fixtures in Greece during the 1930s demonstrates that the history of designed objects involves more than the history of form. Design history refines our understanding of how the process of modernization unfolded in different places at different moments in the modern era. Annaleena Hakatie and Toni Rynnänen turn our attention to an important aspect of professional practice: the interaction between design consultants and their corporate clients. What happens after the congratulatory round of handshakes is over and the parties get down to the business of designing for business? As with the article by Niedderer, it is as much the authors' investigatory method (in this case the tools and techniques of ethnographic studies) as their conclusions that are of interest. Carissa Kowalski Dougherty's contribution to this issue asks the reader to consider questions of identity as mediated through the design of album covers for the jazz records in the 1950s and 60s. Album covers she argues stamped the music with a visible identity; significantly, she asks, "Whose identity?" The visible "blackness" of jazz covers she argues reflected an

increased manipulation and commodification of black identity by the entertainment industry more than it did the growing participation of black artists and designers in American culture. *Design Issues* has often featured articles that focus critical attention on the writings of important design commentators including figures little known to the English speaking segment of the design community. In this issue Fedja Vukic examines seminal essay by Vjenceslav Richter and Bernardo Bernardi that appeared originally in Croatia (then part of Yugoslavia) during the 1950s and 60s. Vukic helps the reader come to terms with the terms formgiving and visual worker in the socialist context of the era. Chanpory Rith and Hugh Dubberly's piece on the work of Horst Rittel is more than a brief reminder of Rittel's role in the founding and development of the Design Methods Movement. They provide an annotated bibliography of Rittel's key contributions to the enrichment of our understanding of design. An annotated bibliography is an invaluable tool that facilitates the process of growing the entire field of design studies. Book reviews are another tool and this issue includes probing reviews by Richard Buchanan, Igor Marjanovic and Dmitri Siegal. Tools, descriptive categories, modes of analysis, and models of research: these are the building blocks of knowledge and practice. As it has since its inception, *Design Issues* remains committed to fostering the entire field of design studies through the presentation of material that enriches our understanding of design in all its rich complexity.

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Dennis Doordan
Victor Margolin

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1. Paul B. Thompson, Kyle Powys Whyte. 2011. What Happens to Environmental Philosophy in a Wicked World?. *Journal of Agricultural and Environmental Ethics* . [[CrossRef](#)]

Designing Mindful Interaction: The Category of Performative Object

Kristina Niedderer

This is a revised and extended version of a paper called "Designing the Performative Object: A Study in Designing Mindful Interaction Through Artefacts" that was presented at the *International Conference FutureGround* sponsored by the Design Research Society and Monash University in Melbourne, Australia in 2004.

This research is concerned with design as a means for creating mindful interaction through the use of objects in social contexts. The assumption is that artifacts can stimulate the user's behavior by means of their function, thus causing mindful reflection and interaction. At the core of the study was the identification of a new category of products with these qualities of interaction, which I have termed "performative objects." The paper presents part of a larger study.¹ It presents a summary of the research problem and the concept development, testing, and considerations on the usefulness of the proposed concept for design.

Genesis of the Research Problem: Discovering Performative Objects

The research problem evolved from observations and reflections on my own practice in silver and tableware design. The starting point for this research was a project called "Social Cups," which I did in 1999. The social cups were designed to actively explore the social interaction within which they are used, and to make the user aware of this interaction and reflect on it. The shape of the cups resembles a champagne glass without a stem and base. Instead, the cups each have a little connector that enables them to be connected and thus stand. When at least three cups are connected, they form a stable unit. In this way, people are encouraged to explore their interactions when using the cups (Figure 1).

1 K. Niedderer, *Designing the Performative Object: A Study in Designing Mindful Interaction Through Artefacts* (Ph.D. thesis, University of Plymouth, UK, 2004).

Figure 1
"Social Cups," Kristina Niedderer, 1999.
(All photographs by the author.)



The piece raised some debate about the potential and value of the object to influence interaction. There were doubts about perceptions of predictability with regard to use, as well as considerations about the potential of design as a social mediator. Both doubts as well as expectations were raised centering on my intervention with function, which somehow subverted the norm. This sparked the desire for a systematic inquiry into the phenomenon described. The assumption was that some objects could influence interaction more actively than others due to the manipulation of function. The aim was to better understand the characteristics of these kinds of objects, their impact and design, and if they could be useful as a wider concept for design.

To articulate and frame my inquiry, I called the group of objects that I wanted to investigate “performative objects” (POs) because I assumed that they would make their users perform in a particularly mindful way. The concept of mindfulness refers here to the attentiveness of the user towards the social consequences of actions performed with the object.

The conjecture was that we can design artifacts that communicate and cause mindfulness of others in the context of social interaction by means of a modification of function, and that such artifacts should be called performative objects. Furthermore, the claim was that POs have not yet been recognized as a separate category, and therefore they have not yet been put to their full potential use. The core of this study involves identifying POs as a separate category of definable design objects.

In the conjecture of the PO, I made three (as yet) unsubstantiated assertions. First, that there are POs. Secondly, that they represent a separate category of definable design objects. And third, that these objects have not yet been put to their full potential use. In order to identify POs as a separate category, it first was necessary to find out what POs are by defining their characteristics. Then it was necessary to distinguish them from other categories of objects in order to show their originality. Finally, the benefits of proposing this new category were assessed. This resulted in the following research questions:

1. What are “performative objects”?
2. Can we distinguish them as a separate, new category?
3. What are the consequences of identifying and designing them?

In summary, the questions ask for the development and testing of the concept of the performative object with regard to its realization and its distinction from other categories of objects. The next step was to determine the strategy for the inquiry.

Inventing the Performative Object:

A Naming and Classification Study

Most important, the activity of proposing the PO as a new category determined the research as a naming and classification study. Fawcett² explains that naming and classification are descriptive theories. They “are needed when nothing or very little is known about the phenomenon in question,” and they “state ‘what is.’” With regard to the study of POs, the task of the naming was to identify and qualify the phenomenon under question (Question 1: What are ...?). The task of the classification was to identify how the phenomenon relates to other (related) phenomena (Question 2: Can we distinguish ...?). Accordingly, the first part of the study was used to develop the concept of the PO: the second part was used to test the concept.

The concept development was based on a review of the literature and developments in the field. It served to define the characteristics (key concepts) of the concept (theory) of the PO. The key concepts are interaction, mindfulness, and function, and have been identified in the genesis of the study. For the testing, it was necessary to decide whether to conduct it empirically or theoretically. This was determined by what the testing had to show, i.e., that the concept of the PO is possible and probably existent, and that it is original. In order to show that the PO is possible, it was necessary to demonstrate that it is possible to cause mindfulness by means of function. In order to show that the concept is original, it had to be demonstrated that these kinds of objects do not already exist as a category with another name.

Establishing the originality of the concept and category of the PO is an essentially theoretical process, which was achieved through a comparison of examples. Establishing the possibility of the existence of POs could be conducted through either conceptual analysis or empirical testing. I decided in favor of the theoretical route, establishing the characteristics of POs through conceptual analysis. The aim was to develop a framework with which to test the concept of the PO theoretically through comparison. This framework may serve in future for the evaluation of related work on an empirical level.

For the conceptual analysis and comparison, I used a number of drinking vessels as core examples because of the distinct position of the drinking vessel in the context of social interaction, and because the simplicity of the object helped to demonstrate the concept of the PO in simple terms. The choice of the drinking vessel also provided coherence with the examples from which the research originally evolved. Additionally, a small number of examples from product and interaction design have been used to show the significance of the PO as a general design concept.

2 J. Fawcett, *The Relationship of Theory and Research* (Philadelphia: F. A. Davis Company, 1999), 15.

The Concept Development:

Defining the Characteristics of the Performative Object

The following presents a summary of the concept development of the PO.³ The concept development comprises a literature review of the three key concepts of interaction, mindfulness, and function in the context of design. The relationship of the three key concepts has been established with the conjecture of the PO in the genesis of the study, and is understood to be such that interaction is the context in which mindfulness may occur, caused by the performative object's function. In the process, interaction also becomes the object of mindful awareness. Through the discussion of the three key concepts, a comprehensive understanding of the concept and category of the PO was developed.

Interaction in Design

The current association with interaction in design is that of human-computer interaction (HCI) in "interaction design," often also associated with "experiential design."⁴ With regard to this, Buchanan⁵ remarks that:

There is a common misunderstanding that interaction design is fundamentally concerned with the digital medium. It is true that the new digital products have helped designers focus on interaction and the experience of human beings as they use products. However, the concepts of interaction have deep roots in twentieth-century design thinking and have only recently emerged from the shadow of our preoccupation with "visual symbols" and "things."

In due course, Buchanan⁶ defines the whole of interaction design more broadly as:

... focusing on how human beings relate to other human beings through the mediating influence of products. And the products are more than physical objects. They are experiences or activities or services, all of which are integrated into a new understanding of what a product is or could be.

This view provides the basis for my understanding of interaction in design, which evolved from interests in the impact of the artifact/object on social interaction within and through use. This understanding suggested a triangular relationship between person/human – artifact/object – person/human (Figure 2).

The further analysis of interaction in the context of design showed that interaction can be understood either with reference to the design process (e.g., designer-user-interaction), or with reference to use (e.g., human-object-interaction/human-object-human-interaction).

3 K. Niedderer, *Designing the Performative Object* (2004), 36–74.

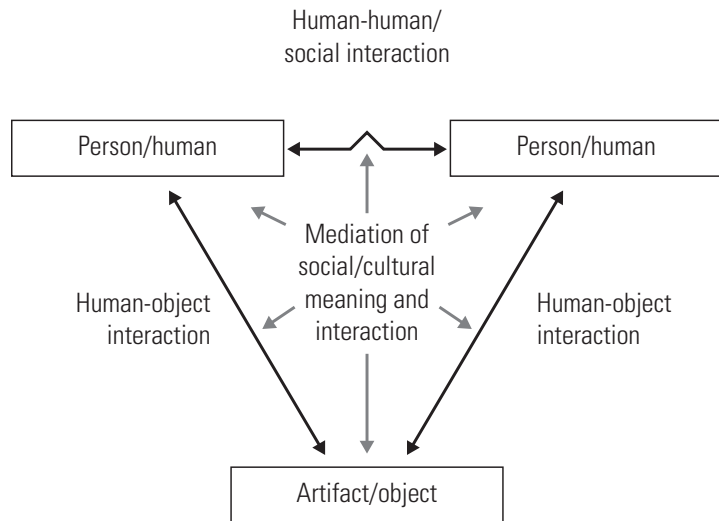
4 See, for example, N. Shedroff, *Experience Design 1* (Indianapolis, IN: New Riders Publishers, 2001).

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

6 *Ibid.*, 11.

Figure 2

The Triangular Relationship of Interaction



Looking at interaction in terms of use, emphasis commonly is put on interaction with the object or medium and its technological aspects, and on a functional and/or ergonomic level, rather than on aspects of human social interaction which it may facilitate. For example, mobile phones are designed and developed with regard to the technical potential and simplicity of use (i.e., with regard to efficient functionality, rather than with regard to the social consequences of use or abuse). Attention to efficient functionality also can be found in “user-centered design,” usually with an emphasis on ergonomics and anthropometrics.^{7,8} Although more recent approaches⁹ take the aspect of the “well-being” of the user into account, and aim to enhance it, human-human interaction (i.e., user interaction) usually is not considered as the source of this “well-being” in the context of the use of design. “Well-being” refers here to the “state of being happy, healthy.”¹⁰ As a result, objects are designed to make people independent rather than to make dependency and care acceptable as an integrated part of use.

In reviewing current design developments, only a small number of experimental design projects could be identified to explicitly explore interaction (two of which I will discuss in the following sections). Also, their potential has not yet been commonly recognized and explored, and the existing approaches to user-interaction do not show a coherent basis.¹¹ This raised the question of how, in principle, an object could be designed to raise awareness and reflection (i.e., mindfulness of the social consequences arising from its use). In order to find out whether and how design objects could be used to cause mindfulness, I reviewed the concept of “mindfulness.”

7 J. Panero and M. Zelnik, *Human Dimension and Interior Design* (London: Architectural Press, 1979).

8 D. A. Norman, *The Design of Everyday Things* (New York: Basic Books, 2002).

9 S. Boess, *An Indian Who Doesn't Know How to Grow Maize: Reflecting on a Designer's Experience of User-centered Designing* (Ph.D. thesis, Staffordshire University, UK, 2003).

10 Ibid., viii.

11 K. Niedderer, *Designing the Performative Object*, 38–44.

Introducing the Concept of Mindfulness in Design

Mindfulness is a term that is increasingly used in psychology and education.^{12, 13} It is described as an attitude of both awareness and attentiveness. Mindfulness as a state of awareness or consciousness implies my presence to the moment, where I look *at* my experience, rather than *through* it.^{14, 15} Depending on the context, I can be conscious of my surroundings or myself, or of something or someone. Mindfulness in the sense of attentiveness usually occurs in the context of social interaction, where it is associated with caring attention towards a person.^{16, 17} This shows that mindfulness has two components: one is that of awareness or consciousness *per se*. The other is that of awareness or attentiveness “of something,” (i.e., the phenomenal content).¹⁸ One is the frame of mind, while the other is its content.

Although desirable as an attitude, it seems that mindfulness is not an easy thing to achieve. Langer raises the question why we are not always mindful and how we could promote enduring mindfulness.¹⁹ Independently, Langer²⁰ and Udall²¹ draw the conclusion that we need to break through established patterns of perception and experience (i.e., preconceptions) in order to achieve mindfulness in new situations. This raises the further question of how to break open established patterns of perception. The answer is that, whether deliberately or accidentally, this breakthrough to mindfulness usually seems facilitated through an external agent,^{22, 23} and that this external agent must be capable of disrupting consciousness in order to break open common patterns of experience and preconceptions.

This turns attention to what form this external agent may take. While it may be possible to achieve mindfulness through education and training (e.g., in the medical profession, nursing, and other forms of care), by its nature, mindfulness remains elusive where this educational context (external agent) is not provided. To take an example from design, in sustainable design much of its effectiveness depends on implementation, which usually is achieved through education, and often reinforced through law. For example, a few years ago, Germany was trying to stop the flood of plastic shopping bags. Therefore, by order of the government, nationally, the use of fabric bags was introduced. To start the scheme, in the first year, the fabric bags were issued for free while a charge was placed on plastic bags. In due course, the scheme was adopted very quickly by the population.

The dependency of mindful behavior on educational measures raised the question whether the design object could be designed to act as external agent without an educational context (i.e., whether it could be designed to cause a breakthrough in perceptions and thus mindfulness by its own means). Insights from observation of the use of objects have led me to the assumption that objects can be designed to cause mindfulness by their own means, and that it

12 E. J. Langer, *Mindfulness* (New York: Addison Wesley Publishing Company, 1989).

13 N. Udall, *An Investigation into the Heuristics of Mindfulness in Higher Art and Design Education* (Ph.D. thesis, University of Surrey, UK, 1996).

14 *Conscious Experience*, T. Metzinger, ed. (Paderborn, Germany: Schöningh / Thorverton, UK: Academic Imprint, 1995), 8–21.

15 N. Udall, *An Investigation into the Heuristics of Mindfulness in Higher Art and Design Education*, 11–12.

16 E. J. Langer, *Mindfulness*.

17 J. K. Burgoon, “Mindfulness and Interpersonal Communication,” *Journal of Social Issues* (Spring 2000). Online at: www.findarticles.com.

18 *Conscious Experience*, T. Metzinger, ed., 8–21.

19 E. J. Langer, *Mindfulness*, 121.

20 *Ibid.*, 19–42.

21 N. Udall, *An Investigation into the Heuristics of Mindfulness in Higher Art and Design Education*.

22 E. J. Langer, *Mindfulness*, 81–114.

23 N. Udall, *An Investigation into the Heuristics of Mindfulness in Higher Art and Design Education*, 107.

is a modification of function that can cause a disruption of experience and thus mindfulness. For example, in the “Social Cups” (cf. Figure 1), it is the way in which a disruption of function (in this case the aspect of standing / non-standing) requires the users to interact with each other in order to operate the object. Consequently, I have investigated function as the third key concept under the assumption that it is the means by which mindfulness can be caused.

Causing Mindful Interaction through Function

Above, I have proposed a change within function as means to cause mindfulness. Before I can make a change, I need to know what the starting point is. If function is to be the starting point, the first step is to clarify what I understand with function. I have examined different definitions and usages of the term “function” elsewhere²⁴ in order to determine how function with regard to the characteristics of POs can differ from the function of ordinary design objects. Suffice it to say that the notion of function in design commonly designates the object’s practicality in use, and that the aspiration for its optimization indicates that design objects are mostly approached with an understanding of efficient functionality.

Within this understanding of efficient functionality, an understanding of function has evolved which often has been expressed as “form follows function” or “function follows form.”²⁵ However, this dictum obscures the nature of function which is not “present” in the same way in the object as for example form. Both the material (pragmatic) and immaterial (symbolic) side of function become apparent in Ligo’s distinction of five different aspects or levels of function.²⁶ On what I call the pragmatic level, Ligo distinguishes “structural articulation,” which refers to the object’s material structure; and “physical function,” which refers to the utilitarian task / value of the object. On what I call the symbolic level, he distinguishes “psychological function,” which is explained as pertaining to the user’s emotional response to the object; “social function,” which refers to the nature of the activity that the object provides with regard to the social dimension; and “cultural-existential function,” a more profound cultural symbolic which includes the existential being of the individual.

Ligo’s classification shows that, although the material form is one mode through which function becomes apparent, function is not equal to the form nor is it fully visible in the form. Rather, it becomes fully visible in its second mode, in action / use, which is pinpointed in the definition of function as “the special kind of activity proper to anything.”²⁷ The definition characterizes function as an immaterial quality that is bound to the dynamic use of the object. In this sense, function might be understood as “the plan of action that the object represents”²⁸ in which designer and user share their understanding about the intended purpose of the object.

24 K. Niedderer, *Designing the Performative Object*, 61–69.

25 J. Michl, “Form Follows What?” This paper was published under the same title in *Magazine of the Faculty of Architecture & Town Planning* 1:50 (Winter 1995) (Technion, Israel Institute of Technology, Haifa, Israel): nr. 10, 31–20 [sic]. Online at: <http://geocities.com/athens/2360/jm-eng.fff-hai.html>.

26 L. L. Ligo, *The Concept of Function in 20th Century Architectural Criticism* (Ann Arbor, MI): UMI Research Press, 1984), 21–75.

27 Oxford English Dictionary Online (Oxford University Press), <http://dictionary.oed.com>. (2004), 3.

28 S. M. Pearce, *On Collecting: An Investigation into Collecting in the European Tradition* (London: Routledge, 1995), 166.

To summarize, I have argued that design objects are mostly approached with an understanding of efficient functionality and that, with this understanding, objects provide a “plan for action,” which normally is laid down in the object’s function. In this sense, if function implies the preconception of a plan of action and if mindfulness can be caused by a disruption of preconception and the experiences linked to it, then we can conclude that a disruption of function could cause a disruption of this preconception of action and the experiences linked to it, and thus cause mindfulness. In other words, I argue that a modification of function in the sense of a disruption-of-function can be used to break through patterns of perception and preconception, and to cause mindfulness.

Before I move on to illustrate this theoretical discussion through a discussion of examples, I need to introduce one more detail into the argument of function as a means for causing mindfulness. In the above section on mindfulness, I have distinguished the context and content of mindfulness (i.e., as awareness and content of awareness). I have argued that a disruption of function can cause mindful awareness. What I have not yet talked about is what might constitute the content of this awareness. Indeed, in the analysis of examples, it becomes apparent that a second step is needed which provides a content or theme, and which also has the task of compensating for the disruption of action. I have called these two steps the “disruption” and “thematization” of function, which can be linked to the pragmatic and symbolic levels of function, respectively.

Summary of the Concept Development

The concept development has shown that it is possible to theoretically define the category of POs. Its characteristics are mindfulness (aim/affect/result) and a modification of function (means) through which this mindfulness is achieved. The review in the original study²⁹ also has shown that a category of PO had as yet not been defined.

The Comparative Analysis: Demonstrating Existence and Originality of Performative Objects

On having defined the characteristics of POs, the question was whether one could also identify these characteristics in actual examples. The following section provides a summary of the theoretical testing of the concept of PO through analysis and comparison of examples with regard to identifying these characteristics. The aim of the comparative analysis is, first, to demonstrate that POs exist (i.e., that it is possible to identify a modification of function in the examples as a basis for causing mindfulness). Secondly, the aim of the comparison is to show that the category of PO is original (i.e., that we can distinguish POs from other object categories by means of their characteristics, e.g., art objects, ritual objects, and design objects that are not POs). Thus, the characteristics of function (means) and

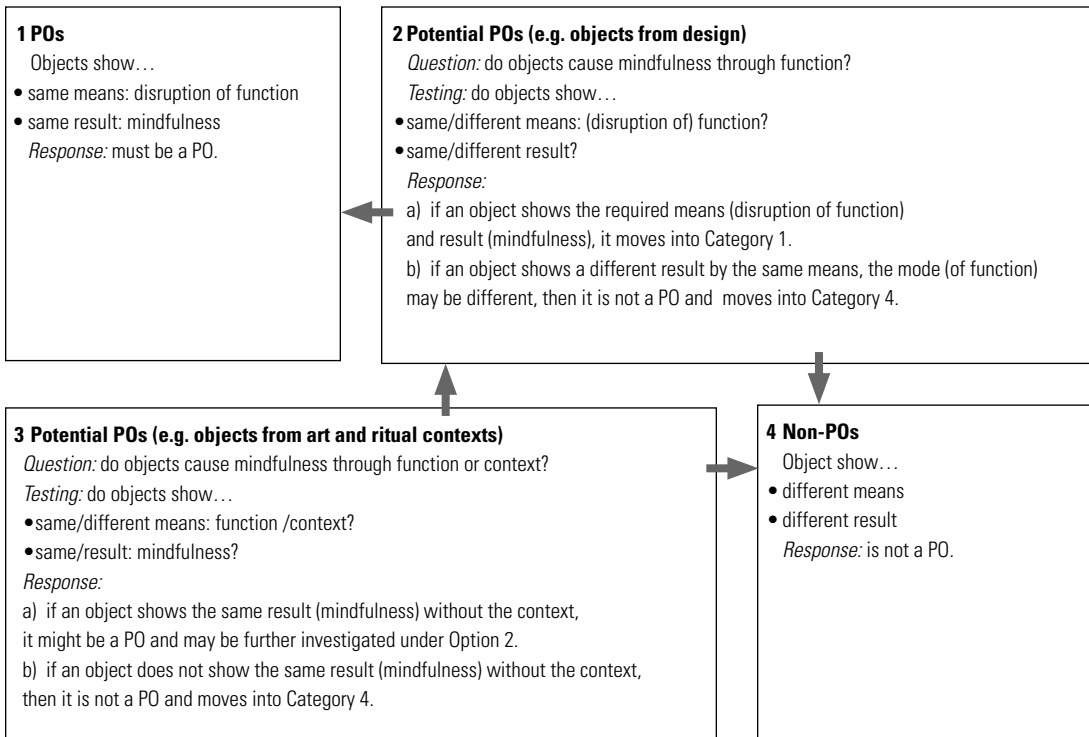
29 K. Niedderer, *Designing the Performative Object*.

mindfulness (result), which have been identified in the concept development, provide the framework for the comparison. (Figure 3). It was expected that objects which cannot be identified as POs on the basis of their function either do not cause mindfulness (e.g., any design objects that are not POs) or cause mindfulness by other means such as a different context (e.g., art or ritual objects).

Figure 3

Performative Square

For the testing, every example is treated as a potential PO and put either into Category 2 or 3 to be analyzed and moved accordingly to the outcome of the analysis into Category 1 (PO) or 4 (non-PO).



The first step in the analysis and comparison of objects is the investigation of whether the objects show a disruption of function. The recognition of a disruption presupposes the recognition of a norm and a deviation from that norm. This recognition is further dependent on the context. Assuming POs to be a kind of design object, they would have to operate in the usual context of design, which was identified above as the context of efficient functionality. For example, if we think of the drinking vessel as a design object, a standard water glass provides something like a norm of usage for cold beverages (Figure 4). It is designed to maximize comfort and efficiency within use concerning all aspects of function (e.g., size and volume, handling and safe standing). In this way, it guarantees “transparent” use.



Figure 4 (above)
Water glass.

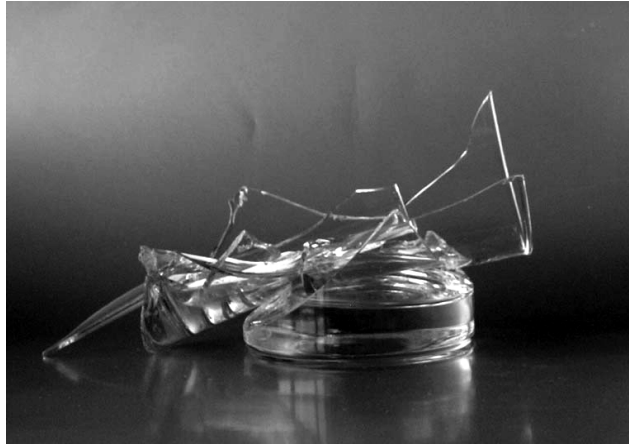


Figure 5 (above right)
Broken water glass.

It is important to acknowledge the context because things are perceived differently in different contexts. For example, the display of a half-full water glass on a shelf would not draw anyone's attention if it were in a kitchen. But if the same glass is called "An Oak Tree" and/or displayed in the context of an (art) gallery,³⁰ we allow time to notice the glass and its meaning. Mindfulness therefore can be created through the institutional context of art, which is "a certain set of coordinated social practices."³¹ However, the concern here is with objects that can cause mindfulness in the context of everyday use, and not in the institutional context of art.

In everyday context, one recognizes a disruption of the norm of efficient functionality, for example, in a broken glass (Figure 5). Here the disruption of the pragmatic function causes a disruption of the pattern of action. This is bound to lead the user to some kind of reflection. In the first instance, this will be a reflection on the object; thereafter, it is likely to be a reflection on self as Norman³² has shown in his psychological analysis of objects. He found that, where design objects do not function how we expect, most of the time we do not first question the object but our own abilities to handle them. Thus, malfunctioning (e.g., of broken or badly designed objects, may cause mindfulness of self). However, since they do not allow the resolution of the disruption, the questioning of self and of the object seems bound to end in resignation or negative feelings. This begs further questions of how the result of the disruption can become a positive and desirable (mindful) experience within the use of the PO.

The example of the broken glass has shown that something more than a mere disruption is required to cause mindfulness in the desired sense. From the analysis of examples, it has emerged that, in addition to the disruption, a means of compensating for this disruption is required, which I have called a "thematization of function."

30 See, for example, M. Craig-Martin, *A Retrospective 1968–1989* (London: Whitechapel, 1990).

31 N. Carroll, *Philosophy of Art: A Contemporary Introduction* (London: Routledge, 1999), 227.

32 D. A. Norman, *The Design of Everyday Things* (New York: Basic Books, 2002), viii.



Figures 6 and 7
"Libation Cup," Kristina Niedderer, 2001.

For example, in the "Libation Cups" (Figures 6 and 7), the function of holding liquid is disrupted in a similar way as with the broken glass. However, the users can close the five holes with their fingers, thus restoring the function of the cup. The additional action required draws the user's attention to the cup, and causes reflection on its design and use, and on an additional level of meaning of this use. We therefore can conclude that we can cause mindfulness through materiality.

We can distinguish the twofold process of function that causes mindfulness (i.e., that causes awareness, and guides reflection) in further examples. In the "Social Cups," the rounded foot causes a disruption (not-standing), which can be compensated through the connectors (Figure 8).

We encounter the same phenomenon in "La Grolla" (Figure 9), which is a traditional drinking vessel from the north of Italy. It is still in use today, and can be ordered in the local trattoria. "La Grolla" is served with the number of spouts according to the number of diners who pass the vessel around and drink directly from the spouts. The action symbolically links the diners. The question arises whether this is a ritual object or performative object. Perhaps, in this case, the context might be decisive. Within its traditional context, "La Grolla" might work as a ritual object, reinforcing values rather than causing reflection, especially since it seems to offer just one way of use. On the other hand, the action seems to be embodied in the function of the vessel. Therefore, in a new context, its functional arrangement might cause reflection within use and cause participants to question their interaction; thus mediating interaction in a new way.



Figure 8
"Social Cups," Kristina Niedderer, 1999.



Figure 9
"La Grolla"

The example of “La Grolla” raises the question of what distinguishes the PO from a ritual object. The difference becomes clear when we think of the probably best-known ritual object in Western culture: the chalice. Although visually significant, I would argue that the chalice does not show a disruption of function. Instead, mindfulness is caused by the ritual context. If it was not the context but the object, how could some Christian groups use an ordinary glass to the same effect of causing mindfulness? Or how could a trophy cup, which shows a striking similarity to a chalice of the same period, be used in an entirely different and secular ritual?³³

In summary, the comparison has shown that it is possible to distinguish the category of PO, and to identify its characteristics of mindfulness in relation to a modification of function. Therefore, different levels of mindfulness can be achieved (i.e., mindfulness of the interaction with the object and/or of interaction with other people through the object).

The Significance of the Category of Performative Object for Design

In the following, I discuss two examples from product and digital interaction design, respectively, to show the wider significance of the concept of performative object for design. In terms of design products, only a few outstanding projects could be identified outside the domain of “digital interaction design” that start addressing the product’s consequences for human social interaction. One such exception is the bench “Come a little bit closer.” It is a product of the Droog Design group^{34, 35} and was designed by Nina Farkache in 2001. The bench consists of a steel frame. The top surface is made up of glass marbles, which act as ball bearings and on which the actual seating surfaces “float.” Because the seating shells are not fixed to the frame of the bench, but glide on the ball bearings, the design allows users to physically move closer without changing seats. The design plays with people’s habitual behavior in public places, which is to keep a certain distance from people whom we do not know, and therefore to sit down at opposite ends of a public bench. Through its design, the bench allows and symbolically suggests decreasing spatial distance if, in a waiting situation, the wish emerges between the strangers to decrease social distance and to engage in conversation. In this way, the bench questions and makes us mindful of our perception and behavior towards other people in public spaces. Concerning the interpretation of this object, while without the knowledge of the concept of PO, we would be able to appreciate the design for its clever and witty solution. But knowing about the category of the PO, we now are able to understand and explain its underlying conceptual and functional mechanism. This means we can relate the underlying behavioral concept (people keep distance) to specific functional elements of the object (seating shells are not fixed [disruption] but glide on the ball bearings [thematization]). With this understanding

33 H. Schadt, *Goldschmiedekunst: 5 Jahre Schmuck und Gerät* (Stuttgart, Germany: Arnoldsche, 1996), 115 and 138.

34 R. Ramakers, *Less + More: Droog Design in Context* (Rotterdam, NL: 010 Publishers, 2002), 57.

35 *The International Design Yearbook 2002*, R. Lovegrove, ed. (London: Laurence King Publishing, 2002), 62–63.

of how conceptual ideas and physical phenomena link, both the social significance of POs, as well as the scope for potential application of POs in design, should become clear.

With the last example, I want to reemphasize the social significance of POs. I have chosen this last example from digital interaction design because, recently, there have emerged several institutions or project groups with an interest in exploring interaction design in a wider sense (e.g., D&AD³⁶, the Interactive Institute in Sweden, or Ivrea³⁷ Institute for Interaction Design in Italy). In this arena, we find remarkable approaches such as “Brainball,” an interactive game for two people which has been developed by the Interactive Institute with the objective of increasing relaxation.

“Brainball” consists of a headband with electrodes that reads a player’s brain activity using an electroencephalogram (EEG). Two players sit opposite each other at a table, each wearing a headband. In the middle of the table from one short end to the other is a clear plastic surface with a small steel ball rolling on top of it. When either of the players presses the “start” button, the ball rolls away from the person who is most relaxed and toward the other player. The only way for the other player to defend is to become more relaxed. When the ball reaches one end, the game is over.³⁸

This object combines the subversion of function and the aspirations for social impact, which we have seen in the previous example, to maximum effect. What makes it special is that the player can only move the ball when *more relaxed* than his/her counterpart. Thus, this game turns common expectations and behavior in the most unexpected way “upside down,” and the fundamental nature of the issues raised becomes explicit. In this example, the effect seems particularly striking because the action (of moving the ball) can only be accomplished when actually achieving the “new” attitude (of becoming more relaxed), which additionally and dramatically reveals the psychology of the participants. Questions arise such as: “Can we feel relaxed on demand in order to win?” or “Do we lose the aim to win when we are relaxed enough that we might be able to win?” or “Do we even have to give up the wish to win in order to achieve the necessary state of relaxation?” thus revealing what is at stake. This is not just another object— another function—but essentially questions what we understand by function, by how things work. With regard to the object, it questions our outcome-related thinking, and directs it towards process-related thinking (which Langer proposes with regard to achieving mindfulness³⁹). This, in turn, questions the understanding of how one relates to the other participant, because the ordinary belief that more determination is needed to succeed no longer works. This shows that the subversion of function can be employed to question essential issues, such as our understanding of relating to others through competition.

36 D&AD *SuperHumanism Conference* 2001 (Online debate at: www.dandad.org/content/super/index.html) (2003).

37 Ivrea (Online at www.interaction-ivrea.it) (2003).

38 S. Ilstedt Hjelm, “Research + Design: The Making of Brainball,” *Interactions* 10:1 (2003): 26–34. Also available online at: <http://smart.interactiveinstitute.se/smart/publications/pubs/brainballInteractions.html>.

39 E. J. Langer, *Mindfulness*, 33.

It seems that, in this sense, POs can have ethical implications that impact our social values, our interactions and interrelations, and thus on society as a whole. It also seems that the concept of the PO is applicable in a number of different design situations. Although I have only been able to deal with a small number of examples, with a primary focus on the drinking vessel, I have been able to include a small variety of other examples from digital and non-digital design. Thus, the last example from digital interaction design raises expectations of a fertile field for application.

Conclusion

This is a report of a larger study. Therefore, it was only possible to provide a summary of the main concepts and argument. The outcome and contribution of the study is that we can define the characteristics of POs (i.e., mindfulness as caused by a modification of function) and that we can distinguish POs as a separate category of definable design objects by means of these characteristics. We also can project the consequences for both society and designers. With regard to society, the aim of the PO is to shift consumption towards a more mindful (i.e., socially-reflective approach), thus transforming the role of the user or consumer into that of the participant. The implication for the designer lies in a change in the design process, which requires starting the process with the observation of social situations and behaviors.

This study offers a number of possibilities for further research into the concept of the PO. It provides the theoretical basis for empirical testing, including the design, development, and empirical evaluation of POs. Future research may further be concerned with the application of the concept, for example, its application to interactive design might be of particular relevance. Research into its application also may be concerned with changes in the design process, and with ethical issues which arise with regard to the responsibility of the designer. Finally, in the longer term, a study might seek to assess the benefits for society concerning sociability and community.

City Lights: A Detail of Greek Interwar Modernism

Artemis Yagou

Footnotes begin on page 26.

Introduction

This paper deals with a minor expression of the Greek modernist heritage, namely a morphological family of lighting fixtures which appears systematically in urban buildings of the 1930s. Through the study of these objects, the author has traced certain aspects of the modernization of the Greek urban space, and identified ways in which such aspects have been expressed in small-scale design.

In this study, it is assumed that design is a fundamental way of receiving and absorbing modernity.¹ Design represents the silent quality of industrially produced objects, and has a vital but not much acknowledged role in daily life.² Especially with scientific and technological innovations, industrial design is the conduit through which such innovations pass into everyday life.³ The absence or degradation of this link robs modern life of much technological or scientific progress. The objects examined in this essay represent a material expression of views about electrification, a phenomenon which entered the everyday lives of most Greek cities during the interwar years (1922–1940). The use and character of design in this specific product area provide valuable insights into the local reception of technological innovations, and of modernity in general. Although the aesthetic quality of these objects is not underestimated, they are treated primarily as evidence of a historical process.⁴

This research belongs to a broader project about the emergence of design activities in interwar Greece.⁵ The interwar period in Greece (“*Mesopolemos*”) practically started with the so-called Minor Asian catastrophe of 1922 (following the Greek-Turkish War), and ended with the beginning of the Second World War. The displacement from Minor Asia and settlement in Greece of one and a half million people caused major social problems, which were reflected in intense political instability. Yet at the same time, the local economy was invigorated by the often skilled and relatively cheap labor provided by the refugees. Population mobility led to a significant increase in housing needs which, in turn, contributed to a prosperous construction sector and to the development of urbanism. Between 1924 and 1930, the country witnessed its highest level of industrialization up until that time.⁶ During that period, capitalist methods of production became consolidated in Greece, and industrialization was acquired in a *sui generis* form that reflected the historical, social, and

economic particularities of the country, and may be described as a cross-fertilization of capitalist and precapitalist modes.⁷ Furthermore, as a result of the major political, social, and economic upheavals, the Greek interwar period was marked by a sense of its transient and contradictory character.⁸ The morphological concerns of contemporaries echo the social instability following the extensive population mobility and the rapid rise of urbanism. Perhaps a major feature of such concerns was the search for an identity and the concomitant need for differentiation, which left a clear imprint on the urban space.⁹

Modernization and the Home

During the interwar period, extensive housing construction was one of the most visible effects of the refugee influx and increased internal immigration from the countryside to the cities, especially to the capital city of Athens.¹⁰ Cities symbolized culture, modernity, and the improvement of individual and collective life. Modernity in architecture became identified with the issue of social modernization,¹¹ the latter being defined as a controlled transition to a new reality. Urbanity coded the new form of social organization and its natural space.¹² In the thirties, newly-built, modern homes became the material embodiments of this ideology: "To become modern, we must appear modern. We become more modern when the exteriors of our buildings appear more modern."¹³ The first blocks of flats were expressing "Europeanization" in daily life, as well as a connection to the European currents of thought about a new democratic society.¹⁴ The city also was connected to increased opportunities for social progress and for upward mobility on the social scale.¹⁵ It has been observed that "innovative architecture, decorative or hard-core modernism, expresses upward social mobility, the progress and prosperity of the middle class. [...] Modernism is distinct from decorative architecture not in terms of wealth, but it expresses the aggressive innovative drive of a middle social group trying to assert its identity. A segment of the lower socio-economic classes introduced modern elements into 'mass' architecture as a symbol of the middle class vision of a better life."¹⁶ Thus, we identify a dimension of popularization of the modern,¹⁷ as elements of the modernist, formal vocabulary combine the taste of the private client with that of the art of the engineer or craftsman.¹⁸

Technological developments incorporated into urban housing in the preceding period also contributed to elevating the social significance of the home: "As the issue of water supply and production of abundant electrical energy had been solved for Athens, the residence of the period was offering to its inhabitants, for the first time, all the comforts of modern civilization."¹⁹ Nevertheless, morphological adaptations related to imported technologies were

accompanied by an inability to participate substantially in these technical achievements, and perhaps constituted an indirect beautification of this inability.²⁰

Electrification constituted the most radical change in the technological infrastructure in the interwar years. During this period, electrification was widely dispersed throughout the Greek urban space. Between 1922 and 1940, numerous small, local electric power plants were established, and the use of electricity gradually expanded in all areas of financial and private life.²¹ Between 1935 and 1939, electricity consumption for illumination for private clients doubled.²² The use of electricity constituted an important innovation²³ and, in fact, electricity became identified with modernism.²⁴ Electric lighting emphasized space, and endowed it with a new, symbolic value. At the same time, it expressed a social differentiation, real or imagined.²⁵ A newspaper article of that period described an Athens pastry shop as “electrically lit and aristocratic.”²⁶ The implications of such a description became more important in the private use of electricity. Those who could afford electricity at home were perceived as being high on the social ladder. The domestic use of electricity constituted an indicator of upward social mobility, or implied such an intention.²⁷ The use of electricity for illuminating the entrance of a house was a symbolic declaration by the house owners.²⁸ The house entrance was the borderline between private and public, as well as a showcase of the social standing and respectability of the residents. For these reasons, great attention was paid to the home entrance and its decoration.²⁹ The Athenian interwar house or block of flats revealed significant concern for this important transitional space, attached special attention to detail, and featured examples of high-quality design.³⁰ The technology of electrification, in particular, became the object of exceptional design treatment.

Lighting Fixtures of 1930s Residences

This is where the lighting fixtures examined come into the picture. They appeared in houses and apartment buildings during the thirties, in numerous variations of a standard, modernist type. The basic type was an orthogonal form, practically a “box,” with edges made of wrought iron and surfaces of glass (Figures 1–2). They were miniatures of the new residences, the apartment buildings that often were called (and often still are called today) “boxes.”³¹ Electricity, which was a novelty and therefore caused insecurity, was embedded into a familiar orthogonal shape representing rationality. This may be interpreted as a symbolic attempt to subsume the electric light, the uncontrollable and still unknown technological energy, to an understandable and controllable form. Furthermore, the standardized form may have been symbolically connected to the general institutional homogenization of the space that was being attempted at that time in Greece through various related regulations.³²



Figures 1 and 2

Research in the specialist technical press of the period has failed to identify any explicit references to specific influences from foreign designers. It is, however, possible to trace certain similarities to preexisting fixtures representing European modernism. I will identify a number of objects whose similarities with the Greek interwar fixtures are not coincidental. First of all, art deco French fixtures from the twenties, made of wrought iron and opaque glass.³³ Very similar to these are the fixtures by the Dutch designer Gerrit Rietveld, made of steel frame and glass (around 1935).³⁴ Also, fixtures identical to what was used in the Greek streets in the thirties may be found both indoors and outdoors at the residence of the architect Ernst May in Frankfurt installed during the twenties.³⁵ Another related, formal design family was expressed by the fixture designed by Rietveld for the Hartog residence in 1922,³⁶ and by that designed by Walter Gropius for his office in the Bauhaus in Dessau.³⁷ Such objects perhaps were familiar to architects and engineers who had studied abroad or were kept informed of what was happening there, for example, through bibliography.³⁸ Influences by the modern movement also were consolidated in Greece due to a major event: the organization in Athens of the fourth CIAM (Congrès International d'Art Moderne) in 1933. The CIAM was attended by key figures of the modern movement such as Pierre Chareau, Wells Coates, Siegfried Giedion, Le Corbusier, Fernand Léger, Laszlo Moholy-Nagy, and Otto Neurath, among others. This meeting set the foundation of what was going to be "The Athens Charter," a very influential text for architecture and town planning in the decades to follow.³⁹

Regardless of the real or imagined influence by forms that preexisted abroad, the orthogonal type acquired in Greece its own dynamics, and was developed in numerous variations (Figures 3–10). We observe morphological experimentations on the proportions of the rectangular shape, as well as variations based on other geometric shapes (e.g., squares, polygons, and even circles). At first sight, these forms appear quite standardized and would easily lend themselves to mass production. The simple, one would say elementary, forms

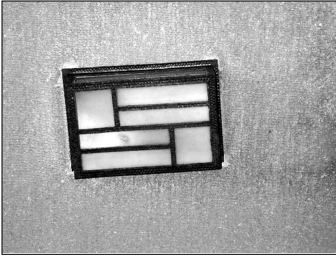


Figure 3

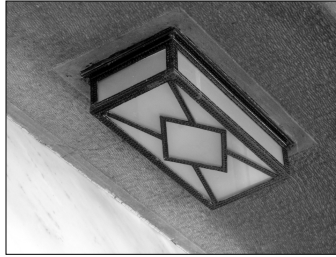


Figure 4

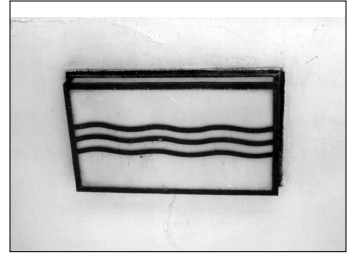


Figure 5



Figure 6

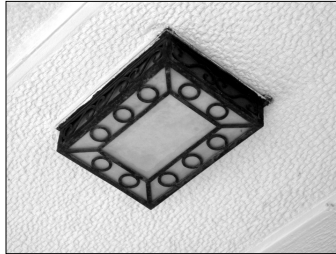


Figure 7



Figure 8

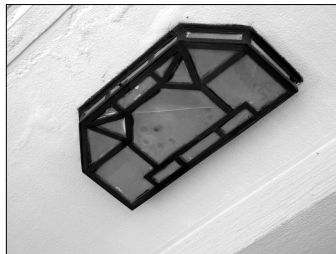


Figure 9



Figure 10

suggest the potential for industrial production which would, of course, lead to depersonalization and standardization of the product. Greek technical experts of the time already were familiar with mass production applications of construction elements for use in architectural designs.⁴⁰ However, the production of these lighting fixtures moved towards differentiation and personalization, rather than standardization. This was not irrelevant to the low-tech, craft-based, and highly personalized process of house construction. The multitude of variations eloquently illustrates the individualized character retained by the production process of the built environment.⁴¹ Residence owners would collaborate with the engineer, contractor, or craftsman who was in charge of building the house, and would order a different version of the basic type, thus expressing their own taste and stressing their individuality. This practice resulted in a very extensive variety of fixtures designed along the same basic form.



The formal sources of inspiration for these variations were very diverse. Many versions resulted from the application of various styles, especially neoclassicism, art nouveau, and art deco.⁴² Every single example constituted the domain of personal preferences, and represented the resistance of the craft mode of production, since every fixture had to be manufactured as one-of-a-kind or, in case of large buildings, in very limited runs. Sometimes, the fixture transcended the state of an autonomous object and attempted to become incorporated into the structure of the building itself, or even replace that structure (Figures 11–12). It also is interesting to note the presence of such modernist fixtures in older residencies following historic styles, especially the neoclassical. These fixtures perhaps were placed a posteriori above the neoclassical home entrance, so that the message of modernization and social success would not go unnoticed. Also, the design of the fixture often was identical to respective designs of the door, the railings of balconies, or windows, so that all the metal elements of the façade would match.

Nowadays, numerous examples of such fixtures survive in Athens, dispersed throughout various neighborhoods typical of the urban expansion of the 1920s and 1930s: Historic Centre, Exarchia, Kolonaki, Keramikos, Patissia, Kypseli, Gyzi, Ambelokipi, and Pangrati, but also in suburbs such as Halandri and Psychiko. The wear and tear of time, as well as replacements by modern fixtures, is evident. The formal type also frequently appears outside Athens; in urban centers such as Thessaloniki, Volos, Trikala, Nafplio, and Pyrgos, and in other places. Modern design spread beyond the capital, along with urbanization and modernization trends.

Variations of Modernity

We observe, at this point, an aesthetic and ideological compromise or negotiation taking place on the level of small-scale design. On the one hand, there was an expression of modernization through the use of modernist, standardized, formal patterns. On the other hand, this employment of imported features was subject to individual adaptation, following the personal tastes of the house owner. The forms perceived as modernist and international were adapted to suit individual aesthetic preferences. This was an assertive expression of the middle-class or lower middle-class citizen, who wished to differentiate himself from the others, as well as from the mass

character of the public space. It also was an attempt to merge and perhaps reconcile two seemingly incompatible extremes: a basic structure which could be recognized as undoubtedly modern was combined with special features or details expressing individuality and autonomy. Such fixtures represent a social formation dominated by the middle-class, a society of "small landlords."⁴³ After all, this was a very conservative society in which small, private ownership prevailed and set the tone for social, economic, and other developments. The central feature of the Greek society in the interwar years was the quantitative and qualitative dominance of the "petit bourgeois." This feature reflected the fact that Greece had undergone a fragmented, unstable, and incomplete modernization, and retained strong pre-capitalist attributes.⁴⁴ In the case of building production, the domination of the "small landlord" and the individually-tailored production of houses meant that the owner could have a very significant input in this process by negotiating with the technical expert, architect, or contractor.

The above observations may be linked to more general research findings with respect to the emergence of modernity in the Western World. In their introduction to a collection of case studies attempting to rethink the history of industrialization in the West, Sabel and Zeitlin refer to the widespread practice among European firms of selectively rejecting and accepting particular elements from foreign innovations. This leads them to accept alternative ideas of modernity where, as opposed to the claims of conventional historiography, epochs do not have a fixed beginning or end. Instead, continuity and change are intertwined in every historical epoch, and incremental, gradual change represents a more valid pattern than that of clear-cut breaks between master narratives. The concept of shifting, overlapping, and interpenetrating orientations, blending what was before and what was to come, is more appropriate in describing the transition between competing models of organization.⁴⁵ Scranton reaches similar conclusions in his study of American consumer society. His findings indicate a greater diversity in urban industrial structures and histories than usually is appreciated, and suggest the existence of as yet unrecorded, structured variations.⁴⁶ Cultural historian Jeffrey Meikle has also formulated a classification of the strategies of modern societies for coming to terms with change. The strategy of directly appropriating icons of modernity into one's own personal environment is interpreted as a way of taming their threatening aspects.⁴⁷

It appears valid to relate such arguments to the present study of Greek architectural and design manifestations of modernity. In this vein, the light fittings of interwar petit-bourgeois housing in Greece declared their modernity through an aesthetics which was not only morphologically hybrid but, at the same time, embedded within a system of production that might be considered as un-modern or even anti-modern. Elitist, formal design patterns of the modern move-

ment became appropriated and adapted by the Greek bourgeoisie as details of a localized, personalized, popular architecture. Greek architectural theorist Giacomacatos speaks of the idiosyncratic diffusion of a “modernism of all the people,” especially in Athenian private architecture.⁴⁸ Variations of modernism which challenge dominant, hegemonic narratives also may be traced in other areas of design production.⁴⁹ Design, like other cultural manifestations, has a relative autonomy and defines its own languages while, at the same time represents broad tendencies within a political economy.⁵⁰ Calotychos, an academic of the Greek Diaspora, asks: “If [...] Greeks manipulated European forms for their purposes in socio-political sites, is it not likely that they did so with cultural forms too?”⁵¹

Conclusion

In my opinion, the objects in question have a quality and charm that stand the test of time. They present consistency in the application of design language on the small scale, and manage to express the transitive and often contradictory character of their time. Gravitating between public and private, industry and craft, modernity and tradition, they express the fragile balance of the turbulent and insecure interwar years. These lighting fixtures, of course, constitute a minor issue, a detail in the public space. Other kinds of objects, exclusively imported, were more appropriate to express modernity, and carried the main burden of familiarizing the public with modern ideas and lifestyle in interwar Greece. I am, naturally, referring to automobiles, trams, electric poles, and other imported, industrially produced objects, which had a catalytic influence on the form and function of the Greek public space. This influence is largely unrecorded and remains to be explored, in order to reveal a wider picture of Greek material culture in its course to modernization. In this context, the formal family of lighting fixtures presented in this paper has expressed, through its hybrid and contradictory character, the dominant inertia between the old and the new in interwar Greece, a state which characterized both local society and design. Today, in the beginning of the twentieth-first century, as the country experiences another difficult transition, the buildings of the 1930s disappear one by one through another wave of urban development and are replaced by new blocks of flats. Although the modernist lighting fixtures are continuously being reduced as Athens evolves, the remaining ones continue to delight the observant passerby in the busy metropolis. Above all, following the present interpretation, they provide an indigenous and highly expressive assertion of what it meant to be “modern.”

- 1 Gui Bonsiepe, *Interface: An Approach to Design* (Maastricht: Jan van Eyck Akademie, 1999), (101) "Design can be seen as an attempt to create the conditions for modernity"; and (129) "Design is the driving force of modernity"; as well as Gui Bonsiepe, "Industrial Design in the Periphery" in *History of Industrial Design: 1750–1850: The Age of the Industrial Revolution / 1851–1918: The Great Emporium of the World / 1919–1990: The Dominion of Design*, Carlo Pirovano, ed. (Milan: Electa, 1991).
- 2 Penny Sparke, *An Introduction to Design and Culture in the Twentieth Century* (London: Allen and Unwin, 1986), xix–xx.
- 3 Bonsiepe (1999), 41.
- 4 Victor Margolin, *The Politics of the Artificial – Essays on Design and Design Studies* (Chicago: The University of Chicago Press, 2002), 164.
- 5 This research was partially funded by the State Scholarships Foundation (I.K.Y.) through a post-doctoral grant (2002–2003). All pictures were taken by the author in Athens, with the exception of picture six, which was taken at the city of Volos.
- 6 Thomas W. Gallant, *Modern Greece* (London: Arnold, 2001), 135–159.
- 7 On this issue, see: Nikolaos Mouzelis, *Modern Greece: Facets of Underdevelopment* (Athens: Exantas, 1978). [in Greek] (English edition: London: MacMillan, 1978).
- 8 Alkis Rigos, *The 2nd Greek Democracy 1924–1935, Social Dimensions of the Political Scene* (Athens: Themelio, 1999), 24. [in Greek]
- 9 Nikos Vatopoulos, *The Face of Athens* (Athens: Potamos, 2002), 123. [in Greek]
- 10 For the "construction explosion" of the 1920s, see: Vatopoulos, 141; and Christina Agriantoni, "Engineers and Industry: An Unsuccessful Meeting" in *History of Greece in the 20th Century, 1922–1940 The Interwar Years*, Christos Hadziiossif, ed. (Athens: Vivliorama, 2002), 268–293. [in Greek]
- 11 Andreas Giacomacatos, "From Conservatism to Populism with a Stop at Modernism: The Architecture of the Modern" in *Architecture of the 20th Century – Greece* (Athens: Greek Institute of Architecture/Deutsches Architektur-Museum/Prestel, 2000), 35. [in Greek]
- 12 Vilma Hastaoglou, "The Emergence of the Neo-Hellenic City: The Conception of the Modern City and the Modernization of the Urban Space" in *Venizelism and Urban Modernization*, George Mavrogordatos and Christos Hadziiossif, eds. (Rethymno: University of Crete Press, 1992), 93. [in Greek] Furthermore, it is noted that: "The application of modern aesthetics acquired thus symbolic dimensions. Through this application, the Greek society was declaring that it could understand the elements that formed the concept of modernization: it could handle the machine and machine production, it was aware of the properties of industrial materials, it appreciated their aesthetics. In other words, the country was going along international developments." George Parmenidis and Erossini Roupá, *Bourgeois Furniture in Greece, 1830–1940: A Century of Construction of Design Rules* (Athens: National Technical University of Athens Press, 2003), 480. [in Greek]
- 13 Panayotis Tournikiotis, "Modernism and Modernization in Greek Interwar Architecture" in Philippides, 34.
- 14 Vatopoulos, 169.
- 15 Hastaoglou, 100.
- 16 Panayotis Nikolaides, "New Architecture: Form and Social Spirit" in *Urban Housing of the '30s: Modern Architecture in Pre-War Athens*, Dimitris Philippides, ed. (Athens: Nireas, 2001), 27. [in Greek and English]
- 17 Tournikiotis, 33.
- 18 See, for example: Philippides, 14–15, and Nikolaos Holevas, *The Architecture of "Transition" in Interwar Athens* (Athens: Libro, 1998), 24 and 30. [in Greek]
- 19 Kostas Biris, *Athens from the 19th to the 20th Century* (Athens: Melissa, 1995), 313. [in Greek]
- 20 It has been pointed out that: "These aspects of the movement almost did not touch Greece of the '30s, which was restricted to introducing related formal aspects and not interested in following the concomitant technological innovations. The obvious conservatism of Greek society together with the backwardness of local technology restricted the field merely to formal experimentation." (Philippides, 12)
- 21 Nikos Pantelakis, *The Electrification of Greece, from Private Initiative to State Monopoly (1889–1956)* (Athens: Cultural Foundation of the National Bank of Greece, 1991), 32. [in Greek]
- 22 Pantelakis, 306.
- 23 Alikí Vaxevanoglou, *The Social Reception of Innovation: The Example of Electrification in Interwar Greece* (Athens: Neohellenic Research Institute/ National Hellenic Research Foundation, 1996), 48. [in Greek, with French summary]
- 24 Pantelakis, 19.
- 25 Vaxevanoglou, 59–60.
- 26 *Kathimerini* (Athens daily newspaper, February 16, 1924). [in Greek]
- 27 Dimitra Vassileiadou, Themistoklis P. Roukis, and Sakis Spyridis, *The Beginnings of Consumer Society in Interwar Greece* (unpublished seminar paper) (Rethymno: University of Crete), 2001. [in Greek]
- 28 Similarly, for the United States, Scranton observes: "For a time, having a car or being 'on the phone' announced both one's wealth and/or status and signaled modernity [...]," Philip Scranton, "Manufacturing Diversity: Production Systems, Markets, and an American Consumer society, 1870–1930," *Technology and Culture* 35:3 (July 1994): 485.
- 29 Philippides, 16.
- 30 For the aesthetics and function of entrances in interwar blocks of flats, see Nikos Moiras, "The Entrance to Apartment Buildings of the Interwar Period" in Philippides, 43.
- 31 See Elias Eliou, "Of Praiseworthy Boxes," *Neoellinika Grammata* (1937): 33–36. [in Greek] Also, Hastaoglou, 102–103 and 107–109, for analogies with the organization and homogenization of urban space on the basis of a repeated orthogonal element: the block. For the basically arbitrary, but ideologically loaded, use of orthogonal shapes in mass-produced technical objects, see also Artemis Yagou, "Shaping Technology for Everyday Use: The Case of Radio Set Design," *The Design Journal* 5:1 (2002): 2–13.
- 32 Aleka Karadimou-Yerolymou and Nikos Papamihos, "Space Regulation: Political Initiatives and Institutional Arrangements" in Mavrogordatos and Hadziiossif, 118–119.

- 33 Designed by Georges Champion and produced by Studio Gué (Georges and Gaston Guérin in Paris), *'20s Decorative Art*, Charlotte and Peter Fiell, eds. (Cologne: Taschen, 2000), 545.
- 34 Peter Vöge, *The Complete Rietveld Furniture* (Rotterdam: O10 Publishers, 1993), 101.
- 35 Fiell and Fiell, 206–207.
- 36 Vöge, 31.
- 37 Herbert Bayer, Walter Gropius, and Ise Gropius, eds., *Bauhaus 1919–1928* (New York: Museum of Modern Art, 1986) (first published in 1938), 42.
- 38 Giacomacatos (2000), 30, mentions the names of major Greek architects who had studied abroad, mainly in France and in German-speaking countries. Foreign approaches had a lasting influence through the dissemination among Greek architects of specialist French and German magazines (Giacomacatos [2000], 36). Regarding foreign influences, see also Hastaoglou, 94–95; Karadimou-Yerolymou and Papamihos, 116–117; and Savvas Kontaratos, “Modernism and Traditionalism: From Post-War Reconstruction to the Penetration of Post-modernism, 1945–1975” in *Architecture of the 20th Century – Greece*, 48.
- 39 Nikolaos Kitsikis, “The IV Conference of New Architecture to Take Place in Athens, 29 July–13 August 1933,” *Technika Chronika* 38:15 (July 1933): 691–694. [in Greek] The IV CIAM activities are extensively recorded in the special, trilingual monograph issue of *Technika Chronika* 44–46:15 (October–November 1933): 995–1194. [in Greek] On the Athens Charter, see Guy Julier, *The Thames and Hudson Encyclopedia of 20th Century Design and Designers* (London: Thames and Hudson, 1993), 55–56. For a recent evaluation of CIAM influence in Greece, see Giacomacatos (2000).
- 40 Dimitris Papalexopoulos, “The Engineer and the Design of Space: Avant-Garde or Modernization” in Mavrogordatos and Hadziiosif, 138.
- 41 Karadimou-Yerolymou and Papamihos, 125.
- 42 “If the ‘orthodox’ Modern Movement as it appeared at the international Weissenhofsiedlung exhibition (Stuttgart 1927) required the use of clear geometric forms with white rectangular shapes, excluding any trace of decoration, in practice different variations arose in varying degrees with other contemporary trends, such as the angular Art Deco (a product of the 1925 Paris Exhibition), simplified classicism, or the local vernacular idiom.” (Philippides [Introduction], 17). It has been observed that “the image presented by most buildings of this period has arisen from a vague and disparate conglomeration of influences leading, finally, to a hybrid ‘Mass Architecture.’” (Nikolaides, 19).
- 43 Karadimou-Yerolymou and Papamihos, 127. See also Hastaoglou, 109.
- 44 Rigos, 157–175.
- 45 Charles F. Sabel and Jonathan Zeitlin, “Stories, Strategies, Structures: Rethinking Historical Alternatives to Mass Production” in *Worlds of Possibility: Flexibility and Mass Production in Western Industrialization*, Charles F. Sabel, Jonathan Zeitlin, Maurice Aymard, Jacques Revel, and Immanuel Wallerstein, eds. (Cambridge: Cambridge University Press, 1997), 1–36.
- 46 Scranton (1994) and Philip Scranton, “Multiple Industrializations: Urban Manufacturing Development in the American Midwest, 1880–1925,” *Journal of Design History* 12:1 (1999), 45–63.
- 47 Jeffrey Meikle, quoted in Margolin, 210.
- 48 Andreas Giacomacatos, *History of Greek Architecture – 20th Century* (Athens: Nefeli, 2004), 51. [in Greek]
- 49 Leontidou discusses Mediterranean alternatives to modernism in the field of urbanism. Based on the writings of Antonio Gramsci, she describes the appropriation of in-between spaces in south-European cities. Lila Leontidou, “Alternatives to Modernism in (Southern) Urban Theory: Exploring In-between Spaces,” *International Journal of Urban and Regional Research* 20:2 (1996): 180–197.
- 50 Jeremy Aynsley, *Nationalism and Internationalism* (London: Victoria and Albert Museum, 1993), 14.
- 51 Vangelis Calotychos, *Modern Greece – A Cultural Poetics* (Oxford: Berg, 2003), 97.

Managing Creativity: A Gap Analysis Approach to Identifying Challenges for Industrial Design Consultancy Services

Annaleena Hakatie and Toni Ryyänen

1. Introduction

This article is an attempt to shed light on the situations and challenges met by the design consultant and the client company through a case in point as the collaboration advances. To examine these challenges, we used the ethnographic material collected during the design research project¹ as monitored in one of the product development projects involving a client and an industrial design consultant. The research method applied was gap analysis,² which, in our context, also served as a theory of interpretation.

Faced with future challenges, an industry is supposed to show structural reform as well as the ability to produce client- and user-oriented solutions, along with innovations aesthetically distinct from those of competitors—and in a cost-efficient way. This is not an easy task, but industrial design is a definite asset in facing the competition, because competence in design is what bridges the gap between the user's perspective and technology-oriented product design. Creative industry also has been adapted to drive economic growth both in Finland and the rest of Europe. This creativity is supposed to result from the networks established between leading groups of experts in information technology, culture, and the biosciences. Creative industry also can be generated by extending the range of competence in enterprises, which means increased cooperation among creative professionals such as industrial designers.

1 This research project (2002–2004) was financed by the National Technology Agency of Finland, TEKES (www.tekes.fi). In investigating design as an element in company competence, particular attention was paid to the way in which design was included in company activities. The subjects were four global Finnish enterprises; leaders in their field; representing

transportation systems, construction elements, and the paper and timber industry. All of these enterprises had experience using outside design consultants. One of the aspects considered was the interaction between the consultants and their client companies, as well as their contribution to the achievement of the design objectives.

2 Valarie A. Zeithaml, Leonard L. Berry, and A. Parasuraman, "Communication and Control Processes in the Delivery of Service Quality," *Journal of Marketing*, American Marketing Association (April 1988): 35–48.

Finland is regarded as a world leader in design, but this competence is not used effectively in industry. Design of a high standard is associated with the well-documented Finnish design tradition in furniture and household utensils, as well as the creative efforts of individual designers, rather than procedures adopted by company organizations.³ The proportion of the Finnish gross national product contributed by the culture sector⁴ thus far has only been about four percent. Everyday corporate life leaves no room to design, and only a few companies have experienced industrial design developing into a distinct field of competence within the organization.⁵ Industrial design usually is outsourced, often incidentally, and related to a single project. Most of these outsourcers do not regard in-house industrial design as a vital competence or a competitive advantage; hence industrial design often is neglected in resource allocation.⁶

The narrow and competitive clientele present a challenge to design consultants. This situation keeps their turnover low which, in turn, weakens their capacity to seek growth in the international market. Furthermore, it is worth noting that the consultants and their clients only rarely manage to establish long-lasting partnership relations, the benefits of which would be unquestionable both in cost-efficiency and quality, compared to unsystematic, project-based operations. This challenge is not peculiar to Finland. On the whole, design consultants do not share the track record of their colleagues of fostering and maintaining long-term client relationships.⁷

Relatively little research has been done on industrial design consultant-client interaction and its major challenges. Industrial design studies have focused on the significance of confidence and openness between partners for the emergence of innovations.⁸

3 Pekka Korvenmaa, *Muotoiltu Etu I & II. Muotoilu, teollisuus ja kansainvälinen kilpailukyky* (English translation: *Designed Advantage I & II: Industrial Design: Industry and International Competitiveness*) (Helsinki: Sitra, 1998).

4 The culture sector includes art, communication, advertising, and entertainment.

5 There is no accurate information available on the use of industrial design in Finland. Of the Finnish companies participating in the organizational survey of the industrial design field, fourteen percent had in-house industrial designers. These mainly were concentrated in medium-size and large companies (Piira ja Järvinen 2002). Nokia is the only company with substantial industrial design resources (approximately two-hundred designers). Polar Electro has the next largest in-house design capacity (six designers). In

Finland, an internal design department of five people is regarded as a considerable investment. There are about five enterprises in Finland that have made investments of that size, and the remaining fourteen percent identified by the organizational survey employ only one or two designers.

6 Daniel Buchner, Harry West, and Gianfranco Zaccai, "Getting Design: Bringing External Design Resources into an Organization," *Design Management Journal* (Spring 2000): 54.

7 Philippa Aston and Isla Johnstone, "Transforming Design Consultancies through Learning," *Design Management Journal* (Summer 2003): 72–77; and William H. Faust, "Building and Fostering Long-term Client Relationships," *Design Management Journal* (Spring 2000): 41–45.

8 Margaret Bruce and Catherine Docherty, "It's All in a Relationship: A Comparative Study of Client-design Consultant Relationships," *Design Studies* 14:4 (October 1993): 402–422; Margaret Bruce and Birgit H. Jevnaker, *Management of Design Alliances: Sustaining Competitive Advantage* (Chichester: Wiley & Sons, 1998); Christine Ennew and Martin Binks, "Impact of Participative Service Relationships on Quality, Satisfaction, and Retention: An Explanatory Study," *Journal of Business Research* 46 (1999): 121–132; and William J. O'Connor, "Good Chemistry: Client and Consultant Relationships to Uncover the Big Idea," *Design Management Journal* (Spring 2000): 27.

However, most industrial design studies discuss models for progress in R&D projects, emphasizing either the marketing efforts or the technological aspects.⁹ On the one hand, these models certainly give a good idea of the essential stages or tasks of R&D as a unidirectional, single-organization activity. On the other hand, they fail to grasp social roles and events, or structural and cultural elements; all of which affect the quality and success of the result produced by R&D, considered an interactive, multilevel activity.

The companies are not necessarily aware of the challenges to their own client organization presented by their use of outside industrial design services. Thus resource management does not comply with the jointly agreed upon requirements supposed to be met in the partnership. Network studies have recognized that inter-organizational cooperation does not emerge by itself, but calls for people with a good track record, and the ability to interact with the inter-organizational teams, and to create an open and confidential atmosphere.¹⁰ The parties must be able to foster learning environments that allow the explication and combination of tacit knowledge, and the sharing of new knowledge.¹¹

2. Utilizing Design Services—A Challenge Only for Design Consultants?

The interaction between design consultants and their clients considering the competence in their organizations recently has been discussed as a challenge for consultants rather than as demands on the range of skills and learning in the client organization. The research findings suggest that the design consultants are not sufficiently able to package and sell their skills and knowledge and their challenges seem to culminate in the management of the interface between them and their clients.¹²

9 Roy Rothwell, "Innovation and Firm Size: A Case for Dynamic Complementarity," *General Management* 8:3 (Spring 1998); Karl Ulrich and Steven Eppinger, *Product Design and Development* (New York: McGraw-Hill, 1995); and Rachel Cooper, Margaret Bruce, and Delia Vazquez, *Design Management: A Guide to Sourcing, Briefing, and Managing Design for Small- and Medium- Sized Companies*, Design Council Report (London: The Design Council, 1998). See also Margaret Bruce and Delia Vazquez, "Defining a Design Manager's Role in Food Retail, International" *Journal of New Product Development and Innovation Management* 1:2 (1999): 167–79.

10 Jeffrey Dyer and Kentaro Nobeoka, "Creating and Managing a High-Performance, Knowledge-Sharing Network: The Toyota Case," *Strategic Management Journal* 21 (2000): 345–367; Gianni Lorenzoni and Andrea Lipparini, "The Leveraging of Interfirm Relationships as a Distinctive Organizational Capability: A Longitudinal Study," *Strategic Management Journal* 20 (1999): 317–38; and *Managing Industrial Knowledge: Creation, Transfer, and Utilization*, Ikujiro Nonaka and David J. Teece, eds. (Thousand Oaks, CA: Sage, 2001).

11 Ikujiro Nonaka and Hirotaka Takeuchi, *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation* (New York: Oxford University Press, 1995).

12 The organizational survey of industrial design firms in Finland uncovered the threats perceived by design consultants in the immediate future. They regarded their lack of competence in marketing and sales, small size, inadequacies in management, and lack of competence in business activity as major factors retarding their development. Sampsa Piira and Juha Järvinen, *Teollisen muotoilun toimialakartoitus 2002* (Helsinki: Designium, 2002), 11. See also Anne Rindell, "Suunnittelijanäkökulma muotoilupalvelujen kehittämiseksi" in *Muotoiltu etu 2. Muotoilu, teollisuus ja kansainvälinen kilpailukyky*, Pekka Korvenmaa, ed. (Helsinki: Sitra, 1998).

According to Tuulenmäki,¹³ the challenge for the design consultant is to identify the intentions of the client organization, and to take action finding means that are practicable in the client's situation. Tuulenmäki identifies two stages at which the design consultant comes to the client company. First, the emergence stage, when the R&D process is only starting, and new ideas are opportunities to control the development positively. This can be seen as an asset for product improvement. Second, the product program stage when the major part of the plans have been finalized, the main features of design have been determined, and the project has proceeded to the implementation stage. The first stage probably is largely characterized by the generation and demonstration of new ideas and concepts while the second involves tight schedules, fixed deadlines for product launch, and possibly serious financial consequences.

The Proactive Design-Research Project,¹⁴ based on ethnographic research, takes a different approach to the question. The findings of this project suggest that the industrial design consultant rarely is used for pre-planning of R&D, irrespective of how the consultant identifies the stage on arrival at the client company. On the whole, the emergence stage seems rather technology-oriented, and the aim is almost without exception to start an R&D project immediately. When the major challenge for industrial design, even for strong, internal organizations, is to increase their capacity for anticipation and take project initiatives, the problem for the design consultant identified by Tuulenmäki involves rather the ability of the client organizations to change their established practices concerning the initiation of R&D in general. The operations at the emergence stage also are hampered by the attitude of the client company's management. The design consultancy services have been considered

13 Anssi Tuulenmäki, "Finnish Design Consultancies and Their Services" in *From Design Services to Strategic Consulting: Improving Core Competence of Finnish Design Consultancies*, Jaana Hytönen, Juha Järvinen, and Anssi Tuulenmäki, eds. (Helsinki: Designium, 2004), 24–26.

14 The Proactive Design research project was a collaboration between the University of Art and Design Helsinki and the University of Helsinki.

something to be subcontracted in association with R&D, a hierarchic relation in need of control, where the subcontractor provides the product, or some part of it, as the client intended.¹⁵

Effective use of the potential provided by industrial design consultancies demands resources for organizing shared activities and communication, and the integration of design into R&D. Forest¹⁶ is an instance of a Finnish enterprise that has worked out an operations model in order to overcome the problem of managing the interaction between the organizations. Forest tries to make sure that the outside designers know how to manage the processes, relate to the people concerned, and obtain tacit knowledge. The senior industrial design manager employs assistants from design consultancies or recently graduated young designers for the “rooming-in” period. These apprentices work at Forest as temporary employees for this period, and some of them later become regular partners in Forest’s industrial design network.¹⁷ The integration of the industrial design consultancy services into the daily operations of client organization calls for established structures, skills, and knowledge, as well as resources.¹⁸

The quality of the cooperation, and thus its results, are impaired by the fragmented and unclear division of commitments between the client organization and the industrial design consultant. Their cooperative procedures are not up to standard nor are they adequately resourced or competent in organizing, integrating, and managing their design activities in a network. However, the possibility of influencing the network management from the design consultancy side is limited, first, because of the sheer size difference compared to the customer side. Second, the professional motivation and education, focused mainly on producing design solutions, limits

15 Annaleena Hakatie, “Muotoilu alihankinnan kehittäminen” (English translation: “Developing Outsourcing of Industrial Design”) in *Teollinen muotoilu teknologiateollisuudessa: esimerkkejä sovellusalueista, yhteissuunnittelun käytännöistä ja vakiintumisesta* (English translation: *Industrial Design in the Engineering Industry: Illustrating Application Areas, Practices of Participatory Design, and Entrenchment*). Ulla Mutanen, Jaakko Virkkunen, Annaleena Hakatie, and Alekski Aaltonen, “Loppuraportti: Proaktiivinen muotoilu – hanke” (English translation: “Final Report of Proactive Design Research Project”), 2005.

16 The name is a pseudonym.

17 Annaleena Hakatie, “Kohti kumpuuta eli kuinka kehittää muotoilun alihankintasuhdetta—esimerkkinä Koneen ja Metson muotoilun alihankinnan toimintatavat” (English translation: “Towards Partnership: How to Develop the ID Subcontracting Relationship—The Cases of Practices at Kone and Metso”) in Mervi Hasu, Turka Keinonen, Ulla Mutanen, Alekski Aaltonen, Annaleena Hakatie, and Esko Kurvinen, *Muotoilun muutos* (English translation: *Transformation of Industrial Design*) (Helsinki: Teknologiateollisuus ry, 2004).

18 The coordination of industrial design usually is handled by a single person; often a project manager whose background, competence, and motivation determine the nature of the cooperation and the development of the relationship. The task area and commitments of the contact person also define the scope of utilizing the external industrial design service. See Annaleena Hakatie and Virva Haltsonen, “Managing Industrial Design Capability in Strategic Nets.” (Paper presented at the 2005IDC, International Design Congress—IACDR 2005 in Younlin, Taiwan, November 1–4, 2005).

efforts towards network management issues.¹⁹ The managerial and organizational work is planned to engage the managing director of an industrial design consultancy agency for only about thirty percent of his or her time, as illustrated by the following quotes:

Thirty to forty percent of my time goes to the management part. (Interview November 11, 2002 with the Managing Director of an industrial design agency)

I suppose that the joint owner and I use something like thirty percent of our time for management and all that kind of “boring” bureaucracy. (Interview December 11, 2002 with the Managing Director of an industrial design agency)

The network management often depends on incidental relations between individuals. The network is at loss to say who is supposed to carry out the managerial duties, what his or her commitments include, and what kind of competence is necessary in strategic networks based on widely differing systems of value production.²⁰

3. The Gap-Analysis Approach to Identifying Challenges to Industrial Design Consultancy Services

The companies vary greatly in their ability to make use of design.²¹ The challenges of using industrial design consultant services mainly concern the domain of network-oriented procedures and management.²² However, these challenges often are not identified, because the documentation of R&D projects does not cover the industrial design aspects, and the parties, both internal and external, often change between projects. The accumulation of knowledge thus often remains insufficient. The existing design studies do not provide full accounts of successful industrial design consultancy services, or possible challenges to cooperation. This is an impediment to the development of the services, and to the integration of the design service into the client organization.

The theoretical frame of reference for this article is gap analysis, applied to the ethnographic material accumulated in our research project. We shall try to identify the challenges to cooperation and the reasons behind them. Gap analysis, developed by Zeithaml, Berry, and Parasuraman, is fundamentally designed for analyzing the sources of quality problems in consultancy, and for outlining proposals for remedial action in quality assurance. A gap emerges when the parties do not share their perception of an event, a situation they are unaware of in practice. This disrupts their interaction, which possibly will have an adverse effect on the quality of the end product.

According to gap analysis theory, the client’s expectations of the consultancy services, and the consultant’s perception of the client’s expectations are conditioned by both parties’ previous

19 Ibid.

20 Krister Möller and Senja Svahn, “Managing Strategic Nets: A Capability Perspective,” *Marketing Theory* 3:2 (2003):204-34. They identify three kinds of value production system: (1) Core value production via stable and well established networks; (2) Value-added value production via incremental innovation; and (3) Change and future value production via radical innovation and emerging networks. According to them, strategic networks have different goals and require different capabilities based on different value systems, including managerial ones.

21 Mervi Hasu, Turkka Keinonen ja Ulla Mutanen, “Johdanto teknologiateollisuuden muuttuviin muotoilukäytäntöihin” (English translation: “Introduction to the Changing ID Practices in the Engineering Industry”) in Mervi Hasu, Turkka Keinonen, Ulla Mutanen, Aleks Aaltonen, Annaleena Hakatie, and Esko Kurvinen, *Muotoilun muutos* (English translation: *Transformation of Industrial Design*) (Helsinki: Teknologiateollisuus ry, 2004).

22 Annaleena Hakatie, “Muotoilu alihankinnan kehittäminen” (English translation: “Developing Outsourcing of Industrial Design”) in *Teollinen muotoilu teknologiateollisuudessa: esimerkkejä sovellusalueista, yhteissuunnittelun käytännöistä ja vakiintumisesta* (English translation: *Industrial Design in the Engineering Industry: Illustrating Application Areas, Practices of Participatory Design, and Entrenchment*), Ulla Mutanen, Jaakko Virkkunen, Annaleena Hakatie, and Aleks Aaltonen, “Loppuraportti: Proaktiivinen muotoilu – hanke” (English translation: “Final Report of Proactive Design Research Project”), 2005.

experiences, needs, and the interaction between them. The actual services experienced emerge from what both parties think, decide, and deliver. Zeitham, et al.²³ establish that the consultant's perception of the expectations among the clientele fashion the decisions on the quality specifications to be followed during the delivery process. In studying industrial design consultancy services, specifications can be defined as operations determined in the project plan for maximum achievement.

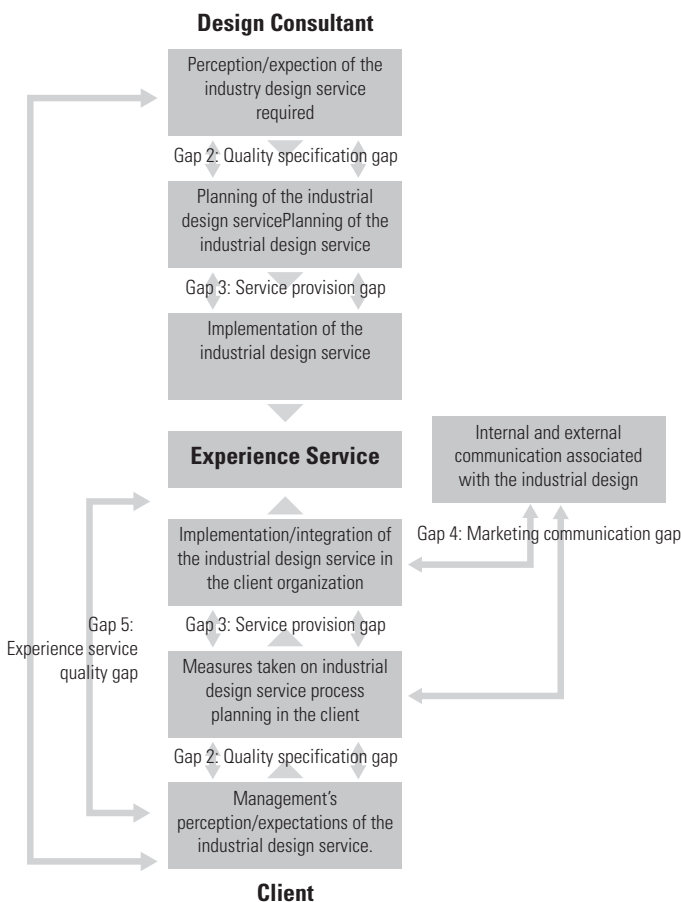
The basic structure consisting of the consultant's and the client's views, decisions, and measures taken produce situations to be considered in analyzing or planning the acquisition or delivery of services. Figure 1 presents five quality gaps between the parts of the basic structure. These gaps appear between the client and the consultant as a result of inconsistencies or tensions in the interaction. The wider gaps impair the quality of the consultancy process, since the means of design are either not effective or not satisfactory to the parties.

23 Valarie A. Zeithaml, Leonard L. Berry, and A. Parasuraman, "Communication and Control Processes in the Delivery of Service Quality," *Journal of Marketing*, American Marketing Association (April 1988): 35-48.

24 This is revised from Valarie A. Zeithaml, Leonard L. Berry, and A. Parasuraman, "Communication and Control Processes in the Delivery of Service Quality," *Journal of Marketing*.

Figure 1

The quality gaps in the design consultancy process both from the perspective of the consultant and the organizations of the client company.²⁴



The first gap in Figure 1, the “management gap,” appears when the managements of the parties or those in charge of the project find a discrepancy between their initial quality expectations. Either the mission does not create an agreement, or the parties develop differing views in the process for one reason or another. The field of industrial design studies has identified the key to a successful consultant-client relationship as mutual understanding and defining the design problem.²⁵ Consequently, the reason for the management gap is the misinterpretation of the knowledge of expectations between the parties, the management’s inadequate knowledge or commitment, and the organization’s lack of skill in communicating required information to the management. The situation of poor communication may result from the organizational hierarchy, and its numerous levels, barring or changing information vital for the process.

The second gap in the process, the “quality specifications gap,” appears when mistakes are made in planning the process once the directions have been given. This gap appears if the specifications to be followed in the organizations during the delivery process do not meet the management’s expectations. The implementation plan does not support the accomplishment of the mission either in one or both organizations. Another reason for this specifications gap, besides planning errors, is inadequate resources. On the other hand, poor planning management, lack of clear objectives, and imperfect recognition of the plans by the management add to the risk of this gap appearing.²⁶ The management’s blessing and commitment almost always results in more purposeful work at the lower levels of the organization, compared with a situation where motivation, reward, and support are lacking.

The third risk to the design process is called the “service provision gap.” This emerges if the terms and conditions laid down for the project plan are not met, or fail in the production and delivery processes. We can discern two classes of factors contributing to this problem: the operative project management does not support and encourage the qualitative goals that the services process sets out to achieve; or the developers at the operational level have different views of their tasks, the rules and regulations of the organization, or the significance or objectives of the industrial design consultancy service. The disagreements between the parties may come from attitudes, education, skills, ambiguous demands by the management or the foremen, excessive workload, or the wrong people in charge of the wrong activities. The technical systems also may be inadequate, the tools not appropriate for the job, or workers have not been trained to use them.²⁷

25 Thomas Walton, “Art, Reason, and the Management of the Consultant-Client Relationship,” *Design Management Journal* (Spring 2000): 6; and Victor Seidel, “Moving from Design to Strategy: The Four Roles of Design-Led Strategy Consulting,” *Design Management Journal* (Spring 2000): 36.

26 Valarie A. Zeithaml, Leonard L. Berry, and A. Parasuraman, “Communication and Control Processes in the Delivery of Service Quality,” *Journal of Marketing*, American Marketing Association (April 1988): 35–48.

27 Ibid.

The inconsistencies between the promises given in the marketing and inter-organizational communication, and the services provided, is called the “marketing communication gap.” Fundamentally, this fourth gap can emerge in several places. The communication can be slowed down, distorted, or stopped within the consultancy or the client organization. The communication between the organizations also can show problems, and the marketing communication addressed to the client’s customers eventually will suffer as well. The use of industrial design has not been considered as a part of marketing communications.

A fifth gap, that between expected and experienced service, appears when the services received are not consistent with the services expected. The results of using the consultancy service do not correspond to the client’s expectations, and resources have been wasted on unproductive operations. However, these failures only rarely derive from an intention to spoil the process or from individual incompetence. It is rather a question of cooperation when several gaps have emerged. These gaps and their significance have not been identified and analyzed during the process. This means that no attempts were made to reduce the gap effects in client and consultant cooperation.

4. Gap Analysis of a Design Process Development— The Case of Econ

The ethnographic material studied in this paper through gap analysis was collected from a developmental project lasting about seven months between an industrial design consultant and its client company. The material consists of interviews, e-mail messages, video and audio recordings of the meetings between the consultant and the client, as well as the field notes of the observing researcher.

Departure

ECON is one of the world’s leading producers of transportation systems.²⁸ The significance of industrial design for their products so far has not been regarded as the most vital competitive factor in the technology-oriented ECON. Industrial design has mainly been perceived as color- and material-oriented interior design in the company’s products. Since the late-1990s, however, there has been a more targeted use of industrial design for details such as the differentiation of the product platform, and for planning for contingencies in usability. The responsibility for matters of design was switched to the R&D unit through organizational reforms in the first years of the twenty-first century, and the new middle management received messages from various quarters in the organization about the unclear design practices. The matter was resolved by a project that worked out a process tool for directing design which could be included in the existing R&D regulations.

28 Net sales were EUR 2.9 billion in 2003. The name is a pseudonym. Valarie A. Zeithaml, Leonard L. Berry, and A. Parasuraman, “Communication and Control Processes in the Delivery of Service Quality”: 35–48.

Kickoff

There was a tender for the process tool, with three industrial design consultants bidding, and each bid containing a detailed project plan for the services process after a briefing session. The project's executive group included three managerial representatives from R&D, Global Marketing, and Brand Communication. The industrial design consultant was briefed only by the R&D manager, the project manager, and the coordinator commissioned for this project from the R&D unit. The industrial design consultant chosen describes the mission as follows:

"The agenda was left blank: I didn't get it in writing. On the other hand, ECON made a good suggestion for an audit system in support of design (The design consultant describing the commission. Interview on October 11, 2002.)

The bids were considered, and Dvector,²⁹ a well-established, reputable consultancy in user interface design, was selected to carry out the project. The R&D manager, and both the project manager and the coordinator, said that the primary criterion for selecting this particular consultant was the set fee and the schedule. The project was led by the consultancy side managing director of Dvector, the founder of the agency and an experienced senior designer. The design consultant only met the whole project executive group after his bid had been accepted. That was the first time he presented the project plan to them.

"Well, it was the kind of presentation where I demonstrated the basic idea of what we were about to do. It was sort of a scrutiny of specifications, but they were such bigwigs that they didn't have the energy to start reading such large documents; so that it had to be a question of showing a couple of slides." (The design consultant describing the presentation of the project plan to the project executive group. Interview on October 11, 2002.)

"The direction team has not made [many] detailed comments." (A member of the project executive group in charge of R & D. Interview on October 9, 2002.)

Gap analysis lets us conclude that the gap in the management's view was open right from the start, because it is likely in light of these remarks that the executive group was poorly committed on the whole, and that they were only negotiating settlement of the objectives of the services process. The contradiction between the consultant's comment on the agenda being left blank on the one hand, and a concrete suggestion on the other, support the view that the parties did not have a consistent view of the objectives of their project.

29 The name is a pseudonym.

Preparations

The industrial design consultant worked out a project plan after the first briefing,³⁰ specifying the measures to be taken to meet the objective. The assignment was changed slightly after the bid had been accepted, but there was no significant change in the consultant's plans. The consultant was relatively poorly informed when determining the quality specifications, having to base the design of the project plan on an interpretation of the briefing session. The consultant had no previous experience with the customer. The following quotations from the consultant describe some observations made in the process that are critical to the project plan.

"ECON's processes are extremely intricate." (Design consultant. Interview on October 11, 2002.)

"I conducted well over ten interviews with ECON's key persons, which yielded general impressions; but no proper, practical experience with industrial design." (Design consultant. Interview on October 11, 2002.)

The consultant discovered in his interviews that most of the industrial design commitments had been entrusted to suppliers. Their knowledge was regarded as necessary to a successful project and, later in the delivery process, another industrial design consultant was added: the Italian-based DesignTroop,³¹ which had provided ECON with a design for an earlier R&D product development project.

"There are any number of things I expect from DT for outlining the practical work on design, because the thing is that I don't know what it's like to cooperate with ECON on R&D in practice." (Design consultant. Interview on October 11, 2002.)

The quality specifications for the service, strictly tied to cost and schedule, did not allow changes at the delivery stage.

"The schedule is getting too tight. Some time has been spent on involving DT in this. The structure has been tossed back and forth, and even if good things were included, we made it all too broad, and now we'll have to re-jig the whole thing." (Design consultant. Interview on October 11, 2002.)

The quality specifications gap seemed primarily to result from mistakes in the process planning, inadequate resources, and inadequate management of the planning on the client's part. The client invested very little in the project planning, but the design consultant did it at personal expense while the client put the project plans out and invited bids. The consultant based the project planning on knowledge obtained from the client in a briefing session.

30 The briefing session took one hour.

31 The name is a pseudonym, henceforth DT.

Delivery

The design consultant providing the services worked on the project largely on his own. The consultant says of this part:

"I'm in charge of the implementation and the planning."
(Design consultant. Interview on October 11, 2002.)

After the involvement of a second consultant in the project, it was obvious that the client organization had not defined the division of labor and the field of commitment between the consultants. Furthermore, it was beyond Dvector's powers to do this.

"There is a heap of text produced by DT, surely with many good hints, but all I can do is to slam it into a heavy heap. It is more like a stream of consciousness by the designer" (Design consultant. Project Meeting on October 27, 2002.)

In considering how the key members of the project team describe their roles, the client organization seemed to have no members committed to the project. The R&D representative in the project executive group claimed to have been "... present at a couple of work meetings." The project manager in charge characterized the duties: "I've attended the project meetings, assuming the role of moral support for the coordinator." The client's internal coordinator did not regard his role as vital for the quality of the service: "... [I am] a contact for the consultant: I participate in the meetings." These remarks corroborate the reading of the situation that the support of the client organization for the consultant in charge was only nominal, and that the overall coordination of the design project had serious shortcomings.

The occurrence of the service provision gap is associated with inadequate support and commitment on the project management's part to the achievement of the quality objectives of the service process.³² This service provision gap was opened up by the client, because those in charge deserted the project "en masse." One of the main reasons for the in-house parties avoiding commitment probably was previous negative experiences in industrial design projects.

"A couple of years ago, we had hype around industrial design, but one project had expensive and not very practicable solutions suggested by the industrial designers. The whole project failed completely. We haven't really believed in industrial design in our organization since." (ECON R&D manager. Researcher's field report, April 03, 2003.)

The company's attitude regarding industrial design seems to be unfavorable on the whole. The parties fear failure of the industrial design project, and commitment to industrial design matters is rather regarded as a risk to advancement than an opportunity.

32 Valarie A. Zeithaml, Leonard L. Berry and A. Parasuraman, "Communication and Control Processes in the Delivery of Service Quality": 35-48.

Presentation

The management view gap can be distinctly observed in the work meeting on October 16, 2002, towards the end of the project. The coordinator, the only representative of the client, conveyed a message from the project executive group that the process tool being developed should concentrate on corporate brand identity rather than the earlier process-oriented objective. In other words, the repeated view and the almost contrary view from the management was that the tool for directing the design activities should basically have been something more market-oriented, rather than a model of design efforts at various stages of the R&D matrix.

According to the agreement and schedule, the delivery of the process tool was due in a month's time, and the project was about to end. The design consultant made a comment to the coordinator that making such a large structural and target-oriented change was no longer possible and still remain on schedule. The management's view of the objectives no longer corresponded to the supplier's view. The consultant got the information far too late, and the consultant's comment did not reach the management, as indicated in later meetings and interviews.

The process tool was to be presented at a global R&D meeting in December 2002. The design consultant in charge commented on the significance of this meeting:

"The idea is surely that the whole thing has been thought out in broad outline, then it's presented there, and then everybody approves of it, that's OK then, and it's introduced. Some pilot projects are selected that already have been mapped already." (Design consultant. Interview on October 11, 2002.)

It turned out at the global R&D meeting that the project executive group was not interested in the originally assigned process tool for industrial design. This is demonstrated by a comment from a member of the project executive group after the results were presented:

"... this tool might be useful, but I'm actually only interested in market segmentation" (A member of the project executive group in charge of global marketing. Global R&D meeting on December 9, 2002.)

The meeting placed new demands on further development. These new expectations were relatively remote from the original R&D process-oriented idea, in which the design efforts were defined at different stages and processes of the technology-oriented R&D. The expectation was not a process tool, but a hybrid: a mixture of database and set of guidelines, a kind of a design management tool designed to direct the consistency between the global product portfo-

lio identity and the brand identity. It was further supposed to contain strong, market-oriented global trend and style studies, as well as rival analyses both from the point of view of industrial design and usability. It was advantageous to include customer and user segmentations to support decision-making on matters of industrial design. The consultant announced that the current services process, with its quality specifications, could not live up to these new expectations, and an entirely new project should be started. Furthermore, the consultant suggested that design of a process tool was to come first. A decision was made to carry on with this development by testing it in some R&D project. There were still no concrete and convincing measures or schedule proposed to support the decision, which suggests an experienced service quality gap. These demands from the project executive group, diametrically opposed to the original commission, also confirm that the management gap was either there all through the project, or emerged at some stage.

Cooling Off

Testing the tool was assigned to a member of in-house staff, the project coordinator, a decision motivated by cost-efficiency. The industrial design consultant who had designed and produced the tool was involved in the pilot project as a designer in charge of designing visual interface of the system under development. The solutions for a transportation system, and the workability and logistics of its user interface, already had been designed, and the industrial design consultancy company DT³³ had worked out alternative solutions for the appearance of the product. The pilot project had been going on for months before the process tool was introduced for testing.

The consultant who had designed the process tool used it as well, but the other members of the product development team had no clear notion of how it was to be tested, and how the observations were to be documented. The indefinite nature of the testing only added to the work load of the pilot project product development team, which resulted in no systematic testing being carried out. Furthermore, the project coordinator had previously communicated internally that the industrial design process tool in preparation was the answer to all industrial design needs, such as the problem engaging the project managers of the R&D teams about how they should decide which of the solutions produced by the industrial designers would be the ideal. Tension grew between the optimistic promises and the actual situation. These factors contributed both to a marketing communication gap and a service provision gap.

No actual material could be collected on this pilot project to support the development of the process tool. Discussion soon started about another pilot project having to be found to test the tool, so that experience could be gained right from the start of the project. The research project from which this ethnographic data was gathered

33 This company also participated in the content production of the tool.

went on for another two years after these events, but no new pilot project was found to test the process tool during that time.³⁴ The consultant in charge states in an interview towards the end of the research project:

“...I fear that all this has affected the client relationship between ECON and us badly.” (Design consultant. Interview on May 5, 2004.)

The consultant never was actually informed about the measures taken to further the project. The comment from the consultant, and the measures taken to develop the process tool, indicate a conflict between the expected and the experienced quality in the client organization. The most common reason for switching design consultants is dissatisfaction with either pricing or design quality.³⁵ Design studies recognized that the consultants and their clients do not necessarily share their views of the reasons for the waning cooperation. It is not customary to arrange debriefings after a finished project, considering the success of the project in terms such as development of cooperation.³⁶ From the client’s point of view, the reason for inadequacies in the services is the incompetence of the consultant, and the situation will be improved by changing consultants. This notion may bring about the descent of the company into the vicious circle of constant trial and error in its attempts to make use of industrial design. The turnover of industrial design consultants can lead to a situation in which one agency after another reshapes the products, each in their own way, and the direction of industrial design is never settled.³⁷

Summary of the Case

The starting point of this collaboration project is a classic case. All the ingredients of a good project were apparent right from the start. The project was supported by the highest management of a global company, coordinated by experts, and the industrial design consultant was a recognized industrial design agency. The problem was clearly defined, and both the client organization and the consultant were adequately resourced for successful performance. In spite of the promising start, the design project failed; wasting resources for minimal profit, and resulting in negative experiences and soured client relations.

In terms of gap analysis, this case showed all of the gaps that impair the quality of the services process were apparent at some stage of it. The project execution group was only theoretically committed to the project. The members of this group had not worked out a shared view of the objectives of the project. This possibly resulted from inadequate knowledge of the urge for information in product development teams. They lack the information about how to include industrial design in R&D processes. As the project progressed, the management started forming an idea of the need

34 A single attempt was made to test the tool. The coordinator sent a CD containing the process tool to their R&D industrial design partners in China, hoping that the Chinese product developers could test it. There was no feedback from China during the study period.

35 Mario Vafeas and Toni Hilton, “Client Defection in the Design Industry: A Study of the Causes, Process, and Context of Switching Agencies,” *The Design Journal* 5:1 (2002): 14–25.

36 Annaleena Hakatie, “Is It the Organization Model of Design that Also Makes the Difference? How to Develop the Subcontracting of Design,” *Journal of the Asian Design International Conference* 1 (2003): 74; and Annaleena Hakatie, “The Ties that Bind: Modeling the Components of Contracted ID Work Collaboration in Finnish Engineering Industry.” (Paper presented at the Design Research Society International Conference “FUTUREGROUND,” Melbourne, Australia, November 17–21, 2004).

37 Annaleena Hakatie, “Kohti kumpuuta eli kuinka kehittää muotoilun alihankintasuhdetta—esimerkinä Koneen ja Metson muotoilun alihankinnan toimintatavat” (English translation: “Towards Partnership: How to Develop the ID Subcontracting Relationship—The Cases of Practices at Kone and Metso”) in Mervi Hasu, Turka Keinonen, Ulla Mutanen, Aleksi Aaltonen, Annaleena Hakatie, and Esko Kurvinen, *Muotoilun muutos* (English translation: *Transformation of Industrial Design*) (Helsinki: Teknologiateollisuus ry, 2004).

for the use of design, but this was communicated to the consultant in charge too late and unclearly. In order to prevent a management gap, the consultant should have established more active contact with the project executive group, trying to commit the participants to the objectives of the project by such means as joint workshops. It would then have been possible to work on the original objectives actively and in mutual interaction. It would have made sense either to organize a workshop after the briefing, or to hear from all the key persons about the project. Those considered the most important could have been included in the project team.³⁸

The project planning was flawed as a result of planning on too little knowledge and inadequate resources. The client's management did not support quality planning of the services, because they demanded bids from the design consultants after an hour's briefing. This kind of practice is based on the use of simple design tasks rather than complicated consultations demanding broad knowledge. The industrial design consultant worked out the details of the project alone. Only after the start did the client's processes reveal themselves as complicated. Any number of planning hours and project resources were spent on figuring out the basic processes. Furthermore, the practical industrial design competence was outside the client organization. This frustrated attempts to involve another consultant, because the schedules were tight and the financial resources limited, and the commitments were not clearly determined. These factors contributed to a quality specifications gap.

There was no strong management to be found in the client's organization, which meant that the services operations were not really managed or supported by anyone. The project coordinator was an in-house industrial designer. It is a common mistake to entrust the management and coordination of the consultants to an expert in the matter in question, while the executive group is left in the position of a supervisor. According to Huttunen,³⁹ this kind of expert may lack credibility or interest in a solution. The service provision gap also is linked with the consultant, who did not demand better control from the client. The consultant actually preferred to work alone without any real interaction with the client. The project managers, from whose needs the project sprang, did not participate in its development.

The internal marketing communication of the client organization was relatively inadequate, making broad promises about the results. The internal communication had not been committed to the design consultant. This also could be taken into account when planning the quality specifications, making internal marketing into one area requiring remedial action to achieve the objectives. The channels of information and interaction should be agreed on in advance as well. The client organization was not happy with the services eventually delivered. The performance of the design project did not live up to expectations. The inconsistencies during the project were

38 For instance, the design consultant met the designer for the general R&D regulations for the first time on October 16, 2002.

39 Pekka Huttunen, *Onnistuneen konsulttihankeeseen toteuttaminen* (English translation: *Implementing a Successful Consulting Project*) (Saarijärvi: Gummerus, 2003).

not identified, or were not met with gap-reducing remedial action. The cooperative relationship between the consultant and the client quietly withered away, without either of the parties actually presenting their personal view of the reasons for the failure of the project.

5. Conclusion: Pitfalls of Industrial Design Consultancy Services

This article produces several conclusions on what kind of disturbance can be observed in the interaction between design consultants and their clients. Inadequacies in the client-consultant relationship certainly have been identified before. Open communication and teamwork are critical, and relationships are built on key attributes such as trust, openness, reliability, and performance.⁴⁰ Gap analysis and the ethnographic material, however, enable us to look more closely at the factors either supporting or impairing the quality of the services.

The management of the industrial design consultancy seldom has direct contact with the management of the client. It seems to be customary in industry in Finland for the industrial design consultant to form an idea of the expectations of the client's management through a project manager or some other coordinator.⁴¹ The management gap, resulting from poor information, is a common risk to the service provision process, especially when the industrial design competence has not spread vertically in the client organization, or when there is practically none available. To bridge the management gap, management needs to have a better understanding of the competitive advantage created by the industrial design consultancy procedures and the services provided. Several aspects demand attention, such as organizing the information channels, training, and procedures for disseminating information within and between the organizations. A major risk is that nobody in particular is in charge of the project, and both design management and human resource management are neglected.

The industrial design consultancy services are seldom a contribution separate from the R&D processes of the client company. Nevertheless, the industrial design consultant often is independent in designing the quality specifications for the services provided. This practice derives primarily from the fact that industrial design service usually is linked to a project-oriented purchasing culture in which the client puts the services process out for competitive bids before making any decision; inviting bids based on a fixed price. Producing a "flawless" bid demands an extremely high degree of knowledge and understanding of the client's processes and challenges. The consultant only rarely has such knowledge, especially with new customers. The process design is an essential part of the services as a factor of quality improvement, and organizations should show a higher level of commitment to it.

40 Margaret Bruce and Catherine Docherty, "It's All in a Relationship: A Comparative Study of Client-design Consultant Relationships," *Design Studies* 14:4 (October 1993): 402–422; Margaret Bruce and Birgit H. Jevnaker, *Management of Design Alliances: Sustaining Competitive Advantage* (Chichester, UK: Wiley & Sons, 1998); Christine Ennew and Martin Binks, "Impact of Participative Service Relationships on Quality, Satisfaction, and Retention: An Explanatory Study," *Journal of Business Research* 46 (1999): 121–132; and William J. O'Connor, "Good Chemistry: Client and Consultant Relationships to Uncover the Big Idea": 27.

41 Annaleena Hakatie and Virva Haltsonen, "Managing Industrial Design Capability in Strategic Nets." (Paper presented at the 2005IDC, International Design Congress—IACDR 2005 in Younlin, Taiwan, November 1–4, 2005).

In the R&D process, including industrial design, the demands on the product or the service are only rarely possible to define from the outset. Excessive demand specifications and predefined design processes may impair quality in operations of this nature. This should be taken into account when using industrial design consultant services in domains such as innovation-intensive, front-end product conception; where the demands on the product or service are only being mapped out. The process of service provision planning must be open to change as the objectives change. Long-term client relations obviously reduce the risk of a quality specifications gap. As the work goes on, the consultant accumulates information about the procedures in the client organization, which reduces the chances for error. The quality specifications gap also can be reduced through flexible agreement practices that do not tie the design services down to potential process design errors, and which allow change if required.

Design studies have identified factors contributing to a service provision gap that prevent workers from carrying out or accepting plans. Various things about the parties, such as the project manager or in-house coordinator, internal R&D teams, and the design consultant's theoretical and practical competence, resources, and motivation all affect the quality of the services process.⁴² The use of design consultant services may demand the introduction of new procedures or entirely new commitments, both from the client and the industrial design consultant. The differences in company culture can become critical for the service provision gap, because changes in procedures and existing processes, as well as management of change, are associated with time-consuming adaptation, almost without exception. The responsibilities, duties, and authorities have to be defined clearly.

Major reasons for the occurrence of the marketing communication gap are to be found both in the communication cultures and the project communication design. Control of this gap is difficult, because internal communication is mainly an in-house matter. Since the design consultant only rarely has the power to interfere in the client organization, the responsibility for the internal marketing of a design services project may be unclear. The industrial design consultant assumes that this area belongs to the client's internal parties and coordinators who, for their part, do not regard the external consultant services and information about it as part of their internal marketing. In fact, the information and marketing concerning consultant services and industrial design projects are assigned to the person in charge of the project and the coordinating staff in the client organization. If not, the client organization has no representative for industrial design activities. The planning of internal marketing communication should be included in the planning of the external services process.

42 Ibid.

Based on this paper, we suggest that the design consultants and their clients seldom assess the services process as a chain of events in which the events and parties affect the quality of the service, and the correspondence between the experienced service and what is expected. The consultant and the client are not used to assessing the collaboration together, nor are they in the habit of making suggestions for improvement. This is symptomatic of a lack of perception of the industrial design services process as an accumulating long-term investment. Instead, people think that the quality of the industrial design service will be improved by switching agencies.

Gap analysis can be used as a method to identify and reduce possible gaps between the industrial design consultant and the client. It also is suggested that, in shifting the focus of consulting from dealing with projects to developing mutual understanding, establishing good communications, and generating creative tensions, new innovations can be achieved.⁴³ More and more business-related issues such as market opportunities, a project plan to commercialize a preferred option, an approved business plan for the investment required, and other marketing-related issues also are important.⁴⁴ This is an interesting point which also is verified by the methodological help gap analysis provides. After all, the increasing demand for speed and competitive advantage should ensure a sound future for industrial design consultants. The client company and the industrial design consultant who are aware of the possible gaps introduced in this paper, and who can insert a proven industrial design process into a client's best practice, probably will succeed in the face of ever-increasing competition.

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- 43 Cameron Watt, Ken Russell, and M. Haslum, "Stronger Relationships Make Stronger Design Solutions," *Design Management Journal* (Spring 2000): 46–52.
- 44 Cameron Foote, "Thinking More Like a Client," *Design Management Journal* (Summer 2003): 43–47; Mike Tennity, "What Clients Want in Consultants," *Design Management Journal* (Summer 2003): 11–12; and Eric M. Olson, Stanley F. Slater, and Rachel Cooper, "Managing Design for Competitive Advantage: A Process Approach," *Design Management Journal* (Fall 2000): 10–17.

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The Coloring of Jazz: Race and Record Cover Design in American Jazz, 1950 to 1970

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The thread of race runs throughout the business, culture, and aesthetics of jazz. Just as jazz has been called a typically American music, it shares the typically American problem of racial tensions that accompany its more positive aspects of freedom and diversity. This isn't to say that all interactions between black and white jazz figures were negative; if anything, jazz helped foster relationships between groups that might not have collaborated otherwise. However, the fact remains that the time period in question—from 1950 to 1970—was a difficult and critical juncture for race relations in the United States.¹

Although jazz-inspired artwork has been explored by several authors, the more commercial aspect of jazz visual art—album cover design—is a largely unexplored topic. This medium became an essential aspect of jazz culture with the invention of the LP in the early 1950s. For the next twenty-plus years—until the proliferation of cassette tapes and other alternative media—album covers provided a visual identity for both the music and the musician.

For the most part, race was not a subject for album cover illustration; abstract designs and neutral photography lent an air of racial ambiguity for much of the 1950s and '60s. In the late 1960s and '70s, however, the Civil Rights and Black Power movements stimulated changes in both the sound and image of jazz. Some record labels upheld the status quo; the message of the music didn't always correspond to the covers, particularly when the tone of the music was one of black rebellion. But a few labels began to draw on black culture for their album cover designs, emphasizing African motifs, African-American hairstyles, and other symbols of black pride.

I will argue that this more visible "blackness" of jazz and jazz musicians probably had more to do with the increasing commodification of black culture than an increase in African-American participation in the field. Very few black graphic designers were involved with album cover design—even in musical genres that have been traditionally linked to black culture and roots. The motivation and means of expression for African-American artists and musicians developed parallel to each other, but came together infrequently in album cover design. Although black artists and musicians shared a common tension between the expression of their racial identity

1 For a more comprehensive study of the relationship between jazz and American social life, see Burton Peretti, *Jazz in American Culture* (Chicago: Ivan R. Dee, 1997) and Geoffrey Ward, *Jazz: A History of America's Music* (New York: Alfred E. Knopf, 2000). These volumes, particularly the former, address issues of race and social change in the context of the development of jazz as a musical genre.

Figure 1
Back o' Town album cover, 1946. Designer unknown; *The Barbershop* by Jacob Lawrence, Riverside/Fantasy Records (RLP 12-130). Cover courtesy of Concord Music, Inc. © copyright 1946.



and the desire to be appreciated as a skilled individual, they rarely collaborated in the commercial art world. An album cover like the one for Jelly Roll Morton's *Back o' Town Blues* (Figure 1), which uses a painting by African-American artist Jacob Lawrence, is the exception rather than the rule. This disparity can be accounted for in the power structure of the jazz industry as well as the relationship between black artists and the world of commercial art.

- 2 Rober G. O'Meally, "Jazz Albums as Art: Some Reflections," *International Review of African-American Art* 14: 3 (1997): 39.
- 3 Coleman Andrews, "Pioneers," in *Graphics Record Covers: The Evolution of Graphics Reflected in Record Packaging*, W. Herdeg, ed. (New York: Hastings House, 1974).
- 4 O'Meally, "Jazz Albums as Art: Some Reflections," 40. Another important factor in the boom in record production was the end of the wartime rationing of shellac and vinyl—both materials necessary for the manufacture of records. Additional changes in recording technology, including the introduction of "long play" discs in 1949 that allowed studios to record eighteen to twenty-five minutes of music per side, further stimulated the growth of the jazz recording industry.

Jazz Album Covers As Art

Album covers, in the format we know them today, were an innovation in both the music and art worlds—they were a new form of packaging for a new form of media.² Prior to the introduction of the 78 rpm record, records were packaged alone in plain gray or tan paper sleeves or as "albums" of sleeves bound together in a rectangular package.³ While some of the earlier records did incorporate visual elements into their packaging, as can be seen in examples of "tombstone" labels from the 1920s, it was not until the introduction of self-service record retailing that the attractiveness and appearance of the outer sleeves had any real impact. Around 1945, music stores shifted from having their products located behind the counter with their thin spines outward to an arrangement where customers were allowed to browse through racks of colorful record jackets.⁴

Album design was important for the marketing of jazz music because it typically lacked lyrics; one had to "read" the cover in order to gain some insight about the mood, tone, and style of the

music inside. Record covers as commercial art, though, had few distinct precedents. They may be likened to product packaging design in their need for catching the consumer's eye and conveying a sense of their contents, but record covers were conceived as more durable and useful than a throw-away cereal box. Book covers had a similar form, but were displayed spines out, mandating different graphic priorities.⁵ Album covers' unique function and status as a new medium made this time period a significant era in the development of album covers as an art form.

But images of jazz were not altogether unfamiliar to the jazz-consuming public. By the time the familiar 12-inch-square album packaging made its debut in the 1950s, a jazz aesthetic had already begun its development in the hearts and minds of Americans. Posters and concert bills were the first form of jazz graphics. In Europe, the "exotic" aspects of jazz were played up in racially insensitive images like these found in Paul Colin's posters for Josephine Baker in Paris during the 1920s.⁶ Musicians' so-called "black" features were played up in an attempt to lure white patrons into the nightclubs offering this somewhat subversive art form. In the United States, jazz imagery began in the same vein but changed over time; in fact, by the 1950s, the musicians' race was often downplayed in order to appeal to a wider audience.⁷

The overall trend in jazz record cover aesthetics paralleled stylistic development in the fields of fine art and graphic design. Modern, abstract styles were especially well-suited to illustrate the spontaneity, call-and-response rhythms, and dynamic energy of jazz—avant garde sounds were paired with avant garde imagery.⁸ Many covers during this period explicitly reference movements like cubism, surrealism, abstract expressionism, and pop art. The work of Jackson Pollock and Roy Lichtenstein, among others, was frequently recalled in jazz album covers of the 1950s and '60s. With the rising popularity of rock and roll music, more jazz album covers began copying the psychedelic art and re-invention of art nouveau graphics found in rock posters during the 1960s. These album covers, like the one for *Lightnin' Joe Hopkins* from 1973–74, designed by Pushpin Studio founder Milton Glaser, might easily have blended in with covers from the Who or The Family Band.

While a few key personalities emerged in the field—including Alex Steinweiss, David Stone Martin, and Reid Miles—the majority of record cover designers were doomed to obscurity.⁹ Many album covers are not attributed; fewer still are recognized as works of art in their own right. By one researcher's estimate, over half of the album covers produced between 1948 and 1960 will never be attributed.¹⁰ The industry was not prepared for the new design opportunity presented to them by the introduction of LP jackets; the artists were often making it up as they went along, drawing from experiences in other commercial art pursuits, and rarely specializing in the field.¹¹

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- 5 Andrews, "Pioneers," 24.
 6 Ward, *Jazz: A History of America's Music*, 156.
 7 Roger Dean and David Howells, *The Ultimate Album Cover Album* (New York: Prentice Hall, 1987) 15.
 8 *Ibid.*, 16.
 9 Eric Kohler, *In the Groove: Vintage Record Graphics, 1940–1960* (San Francisco: Chronicle Books, 1999) and Jennifer McKnight-Trontz and Alex Steinweiss, *For the Record: The Life and Work of Alex Steinweiss* (New York: Princeton Architectural Press, 2000) provide quite good condensed histories of some of the pioneers in album cover design. Several other books, including Dean and Howells' *Ultimate Album Cover Design*, volumes 1 and 2; Manek Daver's *Jazz Album Covers: The Rare and the Beautiful* (Tokyo: Graphic-Sha, 1994) and *Jazz Graphics* (Tokyo: Graphic-Sha, 1991); Graham Marsh and Glyn Callingham's *California Cool: West Coast Jazz of the 50s and 60s* (San Francisco: Chronicle Books, 1992), *New York Hot: East Coast Jazz of the 50s and 60s* (San Francisco: Chronicle Books, 1993), *Blue Note: The Album Cover Art* (San Francisco: Chronicle Books, 1991), and *Blue Note 2* (San Francisco: Chronicle Books, 1997); and Strom Thorgeson and Roger Deari's *Album Cover Album* (Surrey, UK: Dragon's World, 1977), provide varied and comprehensive collections of album cover art from this period, but add little in the way of scholarship (art historical, musical, or otherwise). These collections do, however, give the researcher the opportunity to view the work of several designers in a wider context.
 10 Daver, *Jazz Album Covers* 12.
 11 Richard Cook, *Biography of Blue Note Records* (London: Secker & Warburg, 2001), 49.

It is unclear how much interaction took place between the musicians and the artists who designed their album covers. Even the “masters” of jazz album design did not consistently consult with the musicians whose work they were visually representing.¹² Although there are a few key instances of jazz musicians commissioning their own covers (Thelonius Monk, for example), and creating their own covers (like Gil Mellé), for the most part there existed a gulf between the two most creative endeavors of jazz record production.¹³ The management of the record label and the art director (if one existed) determined how musicians were presented to the public on the cover of their albums.

Race and Record Cover Design

The impact of African-American instrumental artistry in jazz is rarely questioned, but the influence of black visual artists—graphic designers, art directors, and photographers—is a murky and largely undocumented topic. During the postwar period, African-American artists and musicians were confronting the same issues in their respective fields: how to retain their identity as black Americans while being recognized as skilled artists regardless of race; how to convey their own personal experiences; how to overcome discrimination; how to succeed in their field, and how to express pride in their African heritage—all without the aid of words.¹⁴ These two groups also mingled in the same clubs, read the same books, and listened to the same music.¹⁵ The actual connection between the two worlds, however, seems tenuous, at best:

Given the long and close association between jazz musicians and African American artists, the paucity of the visual artists’ work on the album covers of jazz LP records is remarkable.¹⁶

Although jazz has been heralded as a distinctly African-American musical form, the art used on jazz album covers does not necessarily take on a distinctly African-American aesthetic. But what is an “African-American aesthetic”? This terminology is reductive, to say the least. Art historian Richard Powell suggests that while there is perhaps no boundary that defines African-American art, there may be what he calls a “Blues Aesthetic.” To put it quite simply, he says, “Some Afro-Americans are interested in Afro-American culture, and some Afro-Americans are not.”¹⁷ In fact, practitioners of the Blues Aesthetic need not be black—they need only have an abiding interest in African-American culture and a feel for the blues (or in this case, jazz). Working within a Blues Aesthetic allows artists to communicate the realities of being a minority in American culture and to resist cultural commodification—as well as characterization as either “black” or “white.”

12 Dean and Howells, *The Ultimate Album Cover Album*.

13 O’Meally, “Jazz Albums as Art: Some Reflections.”

14 Sharon F. Patton, *African-American Art* (New York: Oxford University Press, 1998), 183–185.

15 Jon Panish, *The Color of Jazz: Race and Representation in Postwar American Culture* (Jackson, MI: University Press of Mississippi, 1997).

16 O’Meally, “Jazz Albums as Art: Some Reflections,” 40.

17 Richard J. Powell, “The Blues Aesthetic: Black Culture and Modernism,” in *The Blues Aesthetic: Black Culture and Modernism*, R. J. Powell, ed. (Washington, DC: Washington Projects for the Arts, 1989) 21.

Figure 2
Coltrane album cover, 1957–58. Esmond Edwards, designer, Prestige (7105). Cover courtesy of Concord Music, Inc. © copyright 1958.



It is interesting to note, then, how few jazz album covers use original artwork that conveys any sense of the jazz community, even when the artist is black. Considering many African-American artists' interest in social realism and folk art forms in the 1940s and beyond, the lack of cover art presented in these genres is rather surprising. One explanation comes from Jon Panish, who postulates that African Americans and whites view jazz in different ways.¹⁸ According to Panish, whites tend to decontextualize the musician and place him in an heroic position as an innovator and an individual, one man against the odds. Blacks, he argues, pay more attention to contexts and connections among community members, audience members, and family members.¹⁹ Therefore, art inspired by jazz might not prominently feature a musician on a stage, but rather the feel of the music or the artist's recollection of a neighborhood street—a perfect example of the Blues Aesthetic.

Because the predominantly white art directors and record executives made the final decisions in album cover design, cover art depicted their own conception of jazz and jazz musicians. While a Blues Aesthetic does not necessarily preclude the participation of whites, most likely the individuals in the upper management of the major record labels tended toward Panish's "white" perspective of jazz musicians as creative individuals rather than members of a vibrant community. These disparate views of jazz may help explain the predominance of "brooding-musician" photographs on jazz album covers (Figure 2). Photographic covers in muted, neutral tones showing musicians looking away from the camera in serious

18 Panish, *The Color of Jazz: Race and Representation in Postwar American Culture*, xix.

19 *Ibid.*, 80–81.

contemplation were quite common for the Blue Note label—particularly in the work of photographer Francis Wolff.²⁰ The same images, even something as “objective” as a photograph, may tell different stories to black and white viewers.

Another factor that contributed to the absence of African-American album cover designers is the lack of a tradition in corporate design among the black artist community. According to Floyd Coleman, African-American art students were usually more focused on expressing themselves in the fine arts media.²¹ The black absence in the academy and museums was felt strongly; many artists were concerned with filling this void with images of African-American life and representations of alternative artistic traditions. As a result, many of the creations of African-American artists—whether commercially oriented or not—were consumed within the black community or labeled as “outsider art.” A combination of minimal outside opportunities, outright discrimination, and a tendency toward self-isolation meant that few African-American artists were recognized as excellent artists in their own right.²²

According to Richard Powell, African-American artists found a kind of relief and freedom in the world of abstract art.²³ In the abstract expressionist mode especially, painters were able to express their moods, frustrations, and individuality—beyond racial boundaries. The connection between abstract expressionism and jazz was made among bohemian artists and writers who frequented the same Harlem cafés and went to the same Greenwich Village parties. In fact, Jackson Pollock was said to have listened to Charlie Parker and “Dizzy” Gillespie as he created his action paintings.²⁴ Record companies also linked the movements and often used abstract art to illustrate album covers, drawing from diverse modernist traditions to illustrate the new forms of bebop and progressive jazz. At least one musician agreed with this assessment. Ornette Coleman, a jazz saxophonist, was also a painter whose work sometimes appeared on his own album covers (Figure 3). His work is characterized by splashes of bright color and broad brush strokes that mirror his exuberant playing style.

Some artists, however, believed that abstraction was one form of “selling out” and becoming part of the mainstream art world without acknowledging their heritage as African Americans. As a result, several of these artists turned to figural painting or various forms of protest art, calling more attention to issues of race and ethnicity than their abstract counterparts. Because of their position outside the economic and political power structure of the highly segregated recording industry, work from such artists was rarely developed as commercial art.

As noted earlier, jazz album cover designers were rarely acknowledged for their work, and many outstanding designs in the field are still attributed to “unknown” artists. It is not surprising,

20 The photography of Francis Wolff, as used on jazz album covers, is covered excellently in Marsh and Callingham's *Blue Note and Blue Note 2*. A brief description of his career can also be found in Richard Cook, *The Biography of Blue Note Records*.

21 Floyd Coleman, “Black Colleges and the Development of an African-American Visual Arts Tradition,” *International Review of African-American Art*, 11: 3 (1996): 31–38.

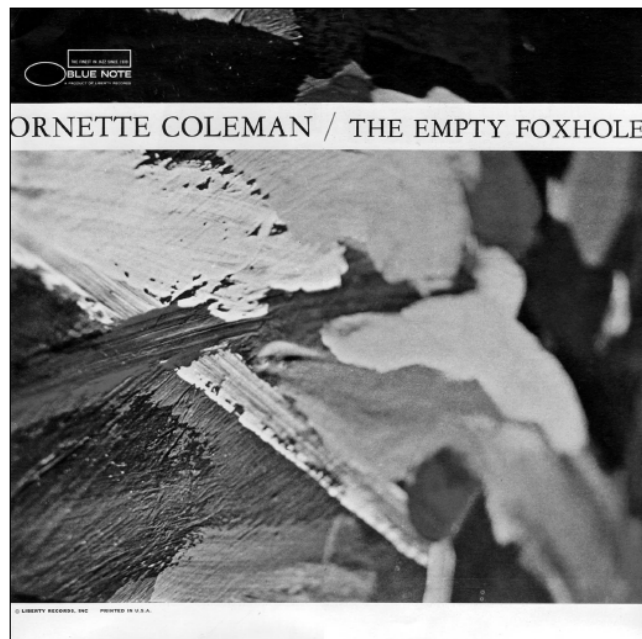
22 Sylvia Harris, “What is It? Searching for a Black Aesthetic in American Graphic Design,” *International Review of African-American Art* 11: 3 (1996): 38–42.

23 Patton, *African-American Art*; Richard J. Powell, *Black Art: A Cultural History* (London: Thames & Hudson, second edition, 2002).

24 O'Meally, “Jazz Albums as Art: Some Reflections,” 41.

Figure 3

The Empty Foxhole album cover, 1966. Bob Fuentes, designer; Ornette Coleman, painter, Blue Note Records (BLP-4246). Cover courtesy of Blue Note Records © copyright 1966.



then, to find few African-American designers recognized for their work in the field. If African-American designers were involved in album cover design, chances are it would be difficult to distinguish their work from that of white designers. Georg Olden, a graphic designer for CBS during the 1950s, tried to downplay his identity as a black man in order to succeed in a cutthroat corporate environment.²⁵ In the racially charged atmosphere of the 1960s especially, the difficulties of overcoming prejudice in the business world outweighed artists' concerns of being recognized as pioneers in their communities. According to Sylvia Harris, "Most of these intrepid souls were so concerned with surviving within a hostile profession that their work expresses little that is uniquely African-American."²⁶

A few African-American artists did create names for themselves in the field of album cover design, including the painter/illustrator known as Richard "Prophet" Jennings. Two of his covers, dating from 1960, reference the art of Salvador Dali: Eric Dolphy's *Out There* (Figure 4) and *Outward Bound* (Figure 5). The dreamlike qualities, visual distortions, and strange juxtapositions of Jennings' landscapes reflect Dolphy's particular brand of free jazz. Surrealism may also have appealed to Jennings for other reasons; Richard Powell notes that several African-American artists, including Gertrude Abercrombie and Hughie Lee-Smith, were drawn into a quasi-surrealist style because it allowed them to express their alienation from society.²⁷

25 Julie Lasky, "The Search for Georg Olden," *Print* March/April (1994): 21–28, 126–29.

26 Harris, "What is It? Searching for a Black Aesthetic in American Graphic Design," 40.

27 Powell, "Blues Aesthetic," Powell, *Black Art*.

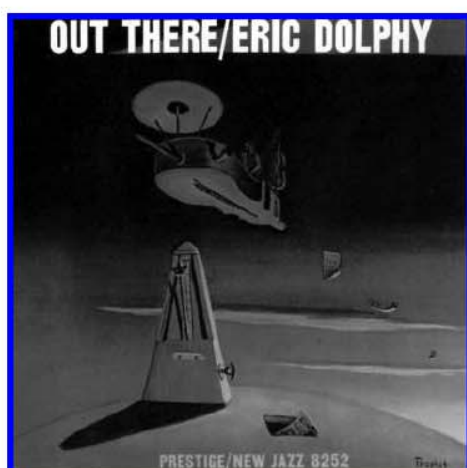


Figure 4
Out There album cover, 1960. Richard "Prophet" Jennings, designer, Prestige/New Jazz (NJLP-8252). Cover courtesy of Concord Music, Inc. © copyright 1960.



Figure 5
Outward Bound album cover, 1960. Richard "Prophet" Jennings, painter, Prestige/New Jazz (NJLP-8236). Cover courtesy of Concord Music, Inc. © copyright 1960.

Charles Stewart is a West Coast success story; his photographs appear on dozens of jazz album covers, several of which have earned him critical acclaim.²⁸ Stewart's cover for Lee Morgan's *Expoobident* is compelling in its use of African-American slang ("expoobident" meaning "extraordinary or phenomenal") as well as the fact that the musician, photographer, and record company were all African-American (Figure 6). Many of his photographs also include elements of irreverence and humor. For example, the cover for *Jimmy & Wes: The Dynamic Duo* from 1966 features two men linking arms and "chowing down" on messy sandwiches.

Beginning in the late 1950s, some jazz musicians embraced the Civil Rights movement wholeheartedly and adapted their music to reflect their goals of racial equality and freedom. The "hard bop" style developed by musicians like Charles Mingus and Max Roach had a connection to the rise of militant African-American identity and an increasing call for separation from the white norm—both socially and musically.²⁹ Occasionally we can see this attitude reflected in the album cover illustrations. For example, the cover of Max Roach's *Freedom Now Suite* pushes the then-controversial issue of integration to the forefront with a photo of a lunch-counter sit-in. The bold constructivist style of typography reasserts the rebellion and urgency of the album's title, *We Insist!* and makes the cover appear almost as a newspaper front page, screaming the message of equality.³⁰

Thelonious Monk's *Underground* cover tends toward the chaotic, politically charged iconography found in the rock album covers like the Beatles' *Sgt. Pepper's Lonely Hearts Club Band* (Figure 7). This image is also significant in its positioning of Monk, an African-American man, as a revolutionary freedom-fighter. Although ostensibly the enemies depicted in the photo are the Nazis in Vichy

- 28 O'Meally, "Jazz Albums as Art: Some Reflections," 44.
- 29 Charley Gerard, *Jazz in Black and White: Race, Culture, and Identity in the Jazz Community* (Westport, CT: Praeger, 1998), 130–135.
- 30 While it is difficult and perhaps irrelevant to examine any racial correspondences to type, a brief study of jazz album covers from the period in question does reveal a few differences by region and specific style of jazz. The use of typography on jazz album covers would be an interesting topic for another essay, particularly examining the way type is used as a design element to reinforce the content and composition of the graphics and images.

Figure 6
Expoobident album cover, 1961. Charles Stewart, photographer; Vee Jay Records (VJS-3015). Cover courtesy Vee Jay Records © copyright 1961.



France, one might imagine that the scenario could also represent the ongoing African-American resistance movement and fight for civil rights.

The musician's political beliefs, however, did not always make it onto their album covers. One 1959 album by Charles Mingus, *Mingus Ah Um*, contains the song "Fables of Faubus" that refers to and criticizes the segregationist governor of Arkansas (Figure 8).³¹ The purely abstract cover, while perhaps conveying a sense of Mingus's powerful and somewhat chaotic style of playing, does not reflect his musical message of rebellion against the racist policies of the South. It is unclear whether disregarding the strong political statement of the musician was a conscious decision by the record label; however, this example demonstrates again the gap between the music and the marketing of jazz.

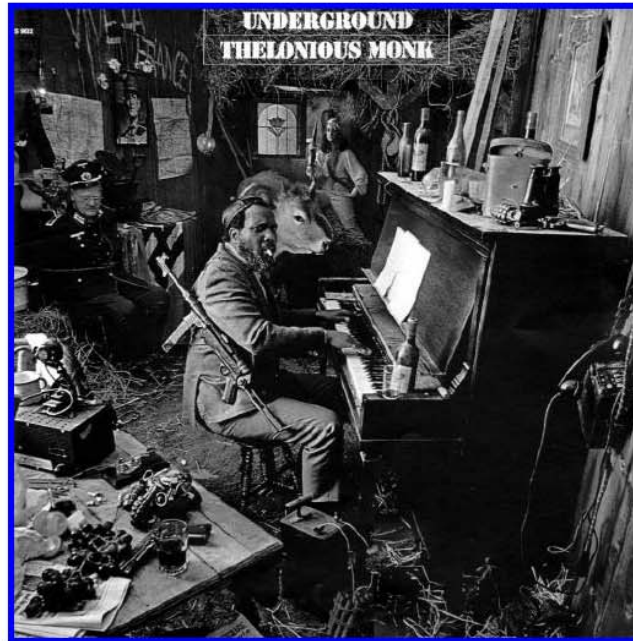
A renewed interest in African themes was also visible in jazz record album covers during this period. For example, a 1963 cover by Woody Woodward for Curtis May's *Katanga!* bears a photograph of an African mask that corresponds to the album title's reference to a province in the Republic of Congo (Figure 9). Other more abstract images invoke the modernist proclivity for "primitive" and African figures, as seen here in the 1962 for *Herbie Mann at the Village Gate*.

In 1970, paintings by Abdul Mati Klarwein provided Miles Davis with two highly symbolic and somewhat controversial album covers that used African imagery in fantastic settings. These albums mark the beginning of Davis's foray into jazz fusion and his willingness to both compete with and emulate the strategies of commercial rock albums.³² The complex symbolism of these covers, like the cover for Santana's *Abraxis* (also illustrated by Klarwein), is more typical of rock-and-roll album covers. Their use of African motifs, however, make them worth noting as a new way of presenting jazz graphics.

31 Gerard, *Jazz in Black and White: Race, Culture, and Identity in the Jazz Community*.

32 Ward, *Jazz: A History of America's Music*, 445–446.

Figure 7
Underground album cover, 1968.
John Berg/Dick Mantel, designers; Horn/
Griner, photographers, Columbia Records
(CS-9632).
Cover courtesy SONY BMG Music
Entertainment © copyright 1968.



Interestingly enough, Klarwein is white—born in Germany and raised in Palestine. He was, however, exposed to a variety of world cultures throughout his life, and later converted to Islam, where he may have found an affinity with some of the ideas of the Black Power movement.³³

Both covers use black and white figures that are inverted, opposed, and/or balanced on the back cover of the album. On the *Live/Evil* cover, a pregnant African-American woman wearing an African headdress is kissed by the swooping waters of the sea, while on the reverse what appears to be a gluttonous white frog wearing an ammunition belt and sporting a blond bouffant squats menacingly over a gaping orifice (Figure 10). The former likely represents the “live” portion of the title, with its reference to the life-giving powers of women and the renewing cycles of the sun and moon. The latter might symbolize the “evil” of European society, the warlike and greedy nature of those who carefully guard the material world. *Bitches’ Brew* is similarly rife with potential interpretations of the oppositions presented on the back and front of the album. Black and white faces stare out from the spine of the album, and flow into a pair of intertwined hands. Inverting the colors, the sweat on the black face becomes what looks like splattered blood on the white face. The figures on both sides are depicted in tribal African costume.

Elements as basic as a hairstyle can also signify black pride. Covers like Forlenza Venosa Associates’ *Total Eclipse* are important

33 “Zeitdokumente, Seite 2,”
www.matiklarwein.com, downloaded
June 12, 2003.

Figure 8

Mingus Ah Um album cover, 1959. Don Schlitten, designer, Columbia Records (CS-8171). Cover courtesy SONY BMG Music Entertainment © copyright 1959.

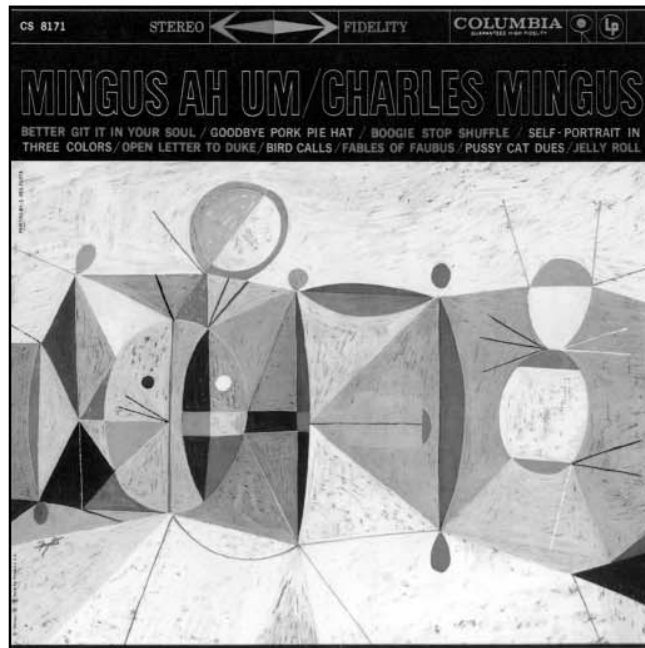
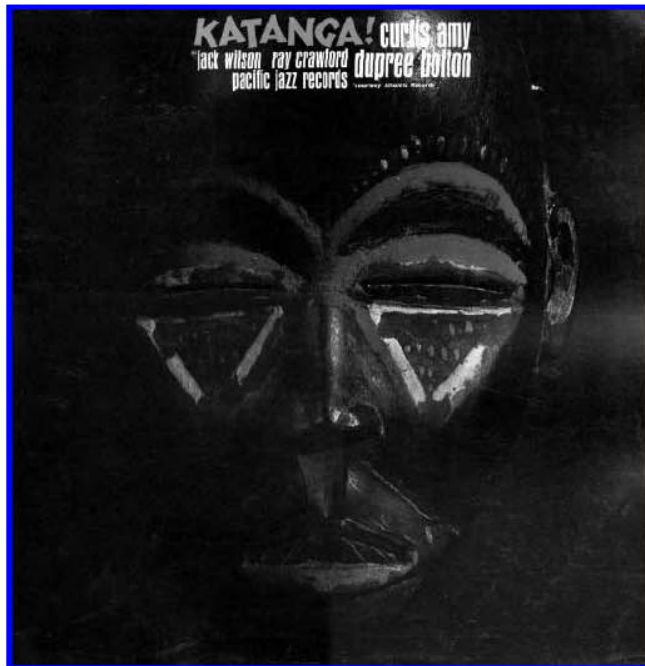


Figure 9

Katanga! album cover, 1963. Woody Woodward, designer, Pacific Jazz (ST-70). Cover courtesy of Blue Note Records © copyright 1963.



visual reminders of the cultural differences between blacks and whites (Figure 11). The incorporation of the “Afro” in album cover design more than likely started with the Vince Cullers agency in the 1960s. This black-run advertising agency, working for Kent cigarettes, developed a campaign to appeal to black consumers with images of hip, young African-Americans—many of them sporting Afros. While this commodification of black culture was not new to jazz—having been long predated by the “Race Records” phenomenon of the 1920s—it does mark a shift in approach whereby cultural differences become an asset rather than a weakness.³⁴

Toward the end of the 1960s, more album covers featured images of African-American females—on male recording artists’ products. These images were sometimes overtly sexual, other times more innocuous. During this time the image of the strong black woman—a “soul sister”—was also prevalent among representation of African-Americans on jazz album covers (Figure 12). In this cover from 1968, the central figure is a woman with an Afro, wearing ethnically inspired jewelry. Although this woman is meant as an object of desire, her posture indicates pride and independence. This trend might be seen in a negative or a positive light; on one hand, the presence of African-American figures reduces the previous tendency toward invisibility, but on the other hand, images like these strengthen the propensity toward objectification of the female body. Another round of research would be needed to further illuminate the role of gender and representation as it relates to the hypermasculine jazz culture.

34 Cultural commodification in relationship to jazz worked in the reverse as well; early white jazz bands were often purposefully represented with racially ambiguous images to appear to the consumers—both white and black—many of whom felt that only black musicians had a feel for the rhythms of jazz music.



Figure 10
Live/Evil album cover, 1970, John Berg, designer; Abdul Mati Klarwein, illustrator, Columbia Records (PG-30954). Cover courtesy SONY BMG Music Entertainment © copyright 1970.



Figure 11
Total Eclipse album cover, 1967. Forlenza Venosa Associates, designer; Fred Seligo, photographer. Blue Note Records (BST-84291). Cover courtesy of Blue Note Records © copyright 1967.



Figure 12
Love Call album cover, 1968. Havona, designer; Francis Wolff, photographer. Blue Note Records (CDP-7843562). Cover courtesy of Blue Note Records © copyright 1968.

Conclusion

Race and jazz are inextricably linked in American history and potentially visible in the images displayed on jazz records. Because jazz album cover design was and still is an obscure profession, it remains unclear to what extent African-American designers were involved in the field. The evidence from analyses of jazz culture, the recording industry, and graphic design in general, however, indicates that any substantial participation is unlikely.

Today, jazz recordings make up less than ten percent of industry sales, but other genres, including rap, hip-hop, and reggae, have become highly successful venues for the proliferation of minority and urban culture. Changes in recording technology have also led to an increase in small, independent record labels specializing in little-known musicians and styles. This shift in focus, from the large corporate label to “indie” production, has the potential to allow individual musicians a greater opportunity to express themselves. However, the commodification of African-American culture is still rampant as advertisers and corporations appropriate imagery and exploit it to sell products. The use of “gangsta” clothing, music, and slang in advertisements and music videos, for example, appeals to a certain segment of whites (and blacks) who want to experience something of the glamour and danger of a far-removed lifestyle.

The nature of album sales has also changed in the last two decades. Customers no longer browse racks of albums but frequently buy their music online, basing their decisions not on the covers of the CDs, but the song clips they download onto their computers. While

some authors have heralded the CD as an “irremediable set back” in the realm of music graphic design, the change in format may not be a completely negative phenomenon.³⁵ These new media, while not offering as large or as visible a format as the old LPs, do offer opportunities for interactive design and computer animation as a part of the listening experience. Technology has changed such that anyone with a computer and a printer can produce their own CD; the democratization of the digital age might indeed be a blessing to groups of people who haven’t traditionally had access. Whether in jazz, punk, or rockabilly, the real emphasis should be on grassroots participation and the importance of control over the means of representation of one’s self, one’s culture, and one’s identity.

35 *Daver, Jazz Album Covers.*

The Concept of Formgiving as a Critique of Mass Production

Fedja Vukić

Introduction

An article by Vjenceslav Richter entitled “The Basic Problems of Industrial Formgiving (*industrijsko oblikovanje*) in Our Country” was published in the 1966 book *Twenty Years of Technology and Economy in Yugoslavia*. Richter was an architect, designer, theoretician, and one of the founders of the art group EXAT 51, which began in 1951 in Croatia—one of the republics of the former Yugoslavia.¹ Ten years later, another article, “On Applied Arts Issues and the Significance of the Initial Exhibition of the First Zagreb Triennale” by Bernardo Bernardi, an architect, theoretician, and another founder of EXAT 51² appeared. The titles of both articles stress the significance of the issues (i.e., the “problem”), while the texts discuss the phenomenon known in today’s Croatian language and culture as, “*dizajn*” (design). Since Bernardi establishes the concept of the “artist in industry” and Richter discusses how industrial design is still a new and vague notion to many, and even unknown to some, a comparison of these texts is worthwhile, especially because both authors belonged to the same cultural scene in Zagreb and Croatia during the 1950s and later.³ But while Bernardi set the foundations of the new perspective of the applied arts in 1955, ten years later Richter claimed that industrial design had not yet acquired the full social meaning in the domestic environment. It also should be noted that, while the term “industrial formgiving” (*industrijsko oblikovanje*) is used in the title of Richter’s article, the term “industrial design” (*industrijski dizajn*) is used with the same meaning throughout the rest of the article.

1 Vjenceslav Richter, “Osnovni problemi industrijskog oblikovanja kod nas” (“Basic Problems of Industrial Formgiving in Our Country”) in the book *Dvadeset godina tehnike i privrede Jugoslavije* (*Twenty Years of Technology and Economy in Yugoslavia*) and in a special issue of the magazine *Tehnika* (*Technics*) published by Savez inenjera i tehničara Jugoslavije (Association of Engineers and Technicians of Yugoslavia), Beograd, 1966, 123–128.

2 Bernardo Bernardi, “O problematici primijenjene umjetnosti i o znacanju inicijativne izložbe Prvi zagrebacki trijenale” (“On Applied Arts Issues and the Meaning of Initial Exhibition First Zagreb Triennale 1955”) in J. Denegri and Z. Koscevic, *EXAT 51* (Zagreb: CKD SSO Zagreb, 1979), 325–326.

3 Jerko Denegri, *Umjetnost konstruktivnog pristupa* (*The Art of a Constructive Approach*) (Zagreb: Horetzky, 2000).

Since the culture of Croatia in the context of the socialist Yugoslavia of the 1950s has, apart from a few exceptions, still not been fully studied,⁴ it seems useful to examine these two texts, which discuss an important segment of that cultural planning for mass production. The creation of mass, machine-made products intended for Croatia's growing population gained importance as a part of the general trend of ideological modernization. The term most often used to describe activities connected with planning for mass production is "formgiving" (*oblikovanje*). In this article, I would like to deal with some indications significant for further study of the semiotic range of this term in the Croatian culture of the 1950s.

The Concept of Formgiving by Bernardo Bernardi and Zvonimir Radić

First of all, let me comment on the article by Bernard Bernardi. The text originated as a commentary to the First Zagreb Triennale that was held in Zagreb in 1955.⁵ The Croatian Association of Visual Artists of Applied Arts, a professional association founded in 1950 in Zagreb,⁶ organized the exhibition with the aim that this "initial exhibition," as it says on the cover of the catalog, should contribute to the integration of artistic creation and industrial production. Very illustrative of this is the introductory text in the catalog:⁷

But in order to achieve the full, more versatile success in this direction it is necessary to put our productive process into the right frame, i.e., it is necessary to establish a name for the artist-creator in this process and put him in the right position. He must enter (into) the industrial production as an integrator.

4 The most systematic contributions to the knowledge of visual arts culture in the fifties are the following articles from *Jugoslovensko slikarstvo seste decenije* (*Yugoslav Painting of the Sixth Decade*) (Beograd: Muzej savremene umetnosti [Museum of Contemporary Art], 1980): Boris Kelemen, "Bozo Bek, Slikarstvo seste decenije u Hrvatskoj - opsti pregled" ("Painting of the Sixth Decade in Croatia: General Overview"), 70–75; Boris Kelemen, "Figurativno slikarstvo sestog desetljeća u Hrvatskoj" ("Figurative Painting of the Sixth Decade in Croatia"), 75–82; Boris Kelemen, "Fantastično slikarstvo sestog desetljeća u Hrvatskoj" ("Fantastic Painting of the Sixth Decade in Croatia"), 82–86; Jesa Denegri, "Geometrijske tendencije u Hrvatskoj umetnosti seste decenije" ("Geometric Tendencies in Croatian Art

of the Sixth Decade"), 86–92; Zelimir Koscevic, "Likovna kritika u Hrvatskoj 1950–1960" ("Visual Arts Critique in Croatia 1950–1960"), 92–98; as well as Arijana Kralj's text in the catalog for the exhibition "Grafčki i industrijski dizajn 1950–1960" ("Graphic and Industrial Design 1950–1960"), Galerija Ulrich, May 10–31, 1983, Likum, Zagreb (without pagination).

5 The exhibition was held at Umjetnički paviljon (Arts Pavilion) in Zagreb. One photograph, the origin of which is unknown, was published in the catalog *Skica za portret hrvatskog industrijskog dizajna* (*An Outline for the Portrait of Croatian Industrial Design*), catalog of 27th Zagreb Salon (27. Zagrebački salon), Zagreb, 1992, 13. According to the catalog, 123 authors, members of which also published the modest catalog

designed by Ivan Picelj. The "Industrial Art" section of the exhibition is described on the unpaginated page over the initials "V.R."; probably Vjenceslav Richter. It states: "Industry—the only domain in which this problem of ours, the giving of form to our medium, can be solved... so that the industrial artist is provided a work place in industry, and formgiving becomes a recognized stage in the process of industrial production." These thoughts unambiguously express the same conviction as Bernardi and Radić (i.e., this new type of applied art, called "formgiving" or "industrial formgiving," is a synthesis of artistic creation and serial industrial production).

The exhibition was devised as a reflection of the then very influential international exhibition, Triennale di Milano, at which artistic production—connected through the common theme of the improvement of dwelling conditions—was presented in a similar way. In postwar Europe, this also was one of the more important social and cultural themes. The following domains were presented at the First Zagreb Triennale: architecture, scenography, painting and graphics, photography, textiles, contemporary fashion, ceramics, wood, metal, toys and dolls, as well as industrial art. The Triennale, held in the Arts Pavilion (Umjetnički paviljon) in Zagreb from November 5–25, 1955, was designed by Vjenceslav Richter.

The concept of the exhibition, organizing committee, exhibitors, and the design of the catalog undoubtedly confirm the exhibition's intention, which was to display the practical realizations and the possible social significance of the ideas first presented in Croatia at a public reading of the manifesto of the artists group EXAT 51 in October 1951. The manifesto stated, among other things, "that the group does not see any difference between the so-called pure and the so-called applied art."⁸ This conviction would be expressed on many later occasions, whereas the article by Bernardi previously quoted very clearly emphasizes the new concept of "applied arts" advocated by the group EXAT 51 and himself, who, as a kind of a spokesman, in fact publicly read the manifesto in October 1951.

Bernardi criticized the traditional meaning of "applied arts" which, at the time of the Industrial Revolution, expended its creativity ornamenting objects of mass production. Instead, he stressed the significance of the work of visual artists in the field of the so-called applied arts or, to be more precise, whose creative activity was directed at the formgiving of our plastic environment—and who, ever since the twenties, have been taking a new approach to solving these visual arts tasks.⁹ Bernardi did not say who those visual artists were, but one can confidently suppose that he meant the concept—the idea—as well as the individual authors related to the Bauhaus, and other avant-garde artistic and architectural trends that existed between the two world wars.¹⁰ He says that they have proved the necessity of their creative work to meet the needs of contemporary society and the possibilities offered by materials, new technology, and new production techniques.¹¹ Based on this, Bernardi established a vision of the new concept of a "visual worker" who "finds his creative impulse and realizes his idea of form within the conditions of function, material, and technology." It needs to be stressed that, under function, he meant more than functioning in its narrow sense. He considered function to be a complex unity of social, economic, scientific, technical, biological, psychological, and aesthetic conditions. Quite understandably, the boundaries outlined by these conditions are very wide, and the final result of the process of formgiving, by which we communicate through the form, depends on the artist's creative potential.¹²

6 Udruženje likovnih umjetnika primijenjenih umjetnosti Hrvatske (ULUPUH/ Croatian Association of Visual Artists of Applied Arts) was founded in 1950. At the plenary session of ULUPUH in December 1951, Bernardo Bernardi read the manifest of the group EXAT 51.

7 In the same catalog, without pagination.
8 Denegri, Koscević, 1979, 35.

9 Bernardo Bernardi, "O problematici primijenjene umjetnosti i o značenju inicijativne izložbe Prvi zagrebacki trijenale," 325.

10 Namely, in the text published in 1959 in *Arhitektura (Architecture)* under the title "Definicija i značaj industrijskog oblikovanja" ("Definition and Significance of Industrial Formgiving"), see note 16. Bernardi in a more detailed way determines the significance of the Bauhaus school in the formation of the concept of "industrial formgiving" (Page 9). How ideas behind the Bauhaus influenced the leading theorists on the concept of formgiving is obvious in certain parts of the text by Zvonimir Radić. (See note 16 on page 61, and also at the end where three sources are quoted; two of which belong to *Bauhaus: László Moholy Nagy*, "Vision in Motion," and Walter Gropius, "Bauhaus 1919–1928.")

11 Bernardo Bernardi, "O problematici primijenjene umjetnosti i o značenju inicijativne izložbe Prvi zagrebacki trijenale," 325.

12 *Ibid.*, 326.

This longer quote seems very important because it clearly describes the meaning of the exhibition it introduces. So, not artists, but “visual arts workers” put their work on display at the exhibition. Their job is “formgiving” (*oblikovanje*), and the result is “form” (*oblik*). Bernardi further explains the meaning of the exhibition when he writes, “We want to prove that the artists from our association are able to solve all artistic tasks arising from our present social, economic, scientific, and cultural reality. With the help of a part of the exhibits we would like to explain that formgiving is a necessary and inseparable part of the entire process of industrial production. The artist in industry is a completely new type of an artist.”¹³ Despite the evident confusion in terminology, the intention is clear—establish a new type of cooperation between creative artists and mass production through the process called formgiving. In today’s terminology, we would say that Bernardi wrote a thesis for the introduction of design into production and social processes, but he did not use that term. His article, as well as the exhibition Zagreb Triennale, clearly emphasize the social need to obtain a higher quality product by investing in artistic imagination.

Further on, Bernardi explains the methodology of formgiving by claiming that the creative activity of the “artist in industry” begins with developing a product in cooperation with the engineer and other specialists who—each in his or her field of expertise—analyze different parts of the same, complex problem. It is necessary to analyze the purpose and the function of a product, research its social need, evaluate its commercial value, choose the most suitable materials, and then initiate the production process. In short, a number of analytical operations must be performed in order to collect the data necessary to start production. The task of the artist in industry is to bring together all of this data in a “form,” thus creating a harmonious unity—an industrial product.¹⁴ So Bernardi consequently established a theoretical basis for an ambitious coordination of different professional profiles in the industrial production that was, in a way, already envisioned by the theory and practice of education at the Bauhaus. Therefore, one could say that his term “formgiving” is equivalent to today’s term “design.” However, this semiotic equivalent should be observed and analyzed in the context of the social, economic, and even political environment of the ‘50s, since even Bernardi uses the term “formgiving” (i.e., the activity of the “visual arts worker”) in the context of the different social issues affecting the industrial product. Yet his text is the first clear elaboration of the term “formgiving” in the Croatian culture of the 1950s in the sense of the semiotic values attributed to the term “design” today. In the professional periodicals of the first half of the fifties, the term “formgiving” had been used only as an incidental or technical term that was not theoretically or critically elaborated.¹⁵

13 Ibid., 325.

14 Ibid., 326.

15 A bibliography of theoretical and critical articles from that period is included in the general bibliography of the catalog *An Outline for the Portrait of Croatian Industrial Design (Skica za portret hrvatskog industrijskog dizajna)* on page 27. Zagrebački salon (27th Zagreb Salon), Zagreb, 1992, 58–59. In almost all texts on design issues published during the fifties, the concept of “formgiving” is used as a stand alone concept or additionally described by the adjective “industrial.” Exceptions to this practice represent only the texts mentioned in this article.

In order to better explain formgiving in the Croatian culture of the fifties, one should examine yet another article by Bernardi, as well as an extensive article by Zvonimir Radi, another architect and member of EXAT 51. Both were published in the same issue of the professional magazine *Arhitektura (Architecture)*, which was completely dedicated to formgiving, or what today in the Croatian language is called "*dizajn*" (design).¹⁶

Bernardi's 1959 article is an extended version of what he wrote for the Zagreb Triennale in 1955. At the very beginning, it clarifies the confusion arising from equating the term "industrial design" to "industrial formgiving." Also, the significance of the modern art and aesthetics is elaborated on in more detail, with special attention given to the impact that the Bauhaus had on the development of industrial formgiving. Towards the end of the text, there is a more or less identical definition of the term from 1955; the only difference being that now the adjective "industrial" is constantly used in describing formgiving as well as the term "artist" (i.e., "industrial artist").

Zvonimir Radić's article, "The Art of Formgiving," is a more detailed elaboration of Bernardi's mostly theoretical themes. He says: "Industrial art is that form of the artistic practice which instigates and performs an overall action of the visual art in that part of life's environment emerging under the influence of industry" and "Here we are not talking about some kind of copying or stylizing anymore, but about the deep and fundamental mastering of production and industrial methods to such an extent that they can serve as a constant creative instigator of the union of the plastic expression and the formation of concrete reality. Here we are not talking about cosmetics, but about the continual setting in motion of plastic principles that make up the backbone of a work of art, and are unique for each wholesome creation."¹⁷

It is especially important to note that Bernardi (much more obvious than in the first version of his 1955 text) and Radi unambiguously stress the social meaning of formgiving. They claim that "... industrial formgiving in the socialist economy acquires a completely different meaning from the one in the capitalist world"¹⁸ and "... due to the process of liberation and development of our industrial production and our society, the problem of industrial products necessarily stands out. This necessity is obvious and imperative due to the following circumstances: (1) the cultivated industrial form gains in significance as a more and more important factor in international trade, and (2) as a result of its freedom in quantity and space, the industrial form has an enormously intense and decisive influence on the consciousness of our man, thus presenting the most powerful social factor in the formgiving of his habits, life motivation, and philosophy."¹⁹

16 Bernardo Bernardi, "Definicija i značaj industrijskog oblikovanja" ("Definition and Significance of Industrial Formgiving"), *Arhitektura (Architecture)* 1:6 (Zagreb 1959): 6–21; and Zvonimir Radić, "Umjetnost oblikovanja" ("The Art of Formgiving"), *Arhitektura* 1:6 (Zagreb 1959): 41–70.

17 Radić, "Umjetnost oblikovanja," 62.

18 Bernardi, "Definicija i značaj industrijskog oblikovanja," 17.

19 Radić, "Umjetnost oblikovanja," 63.

20 Ibid.

21 Neven Segvić writes: "In our country, today, after the Revolution, when the means of production have been taken away from the speculators of human consciousness, when workers' councils took factories, workshops, and all work places in their hands the hands of those who produce it is the time to direct our efforts, synchronize with our general, advanced ideological attitude. Our objects of use have to become a part of the man, a part of his rational and emotional consciousness. They have to be functional, aesthetic, and economical." See note 7 (without pagination).

22 On page 46 of issue 1:6 (1956) of *Arhitektura (Architecture)* there is an article by architects Antonini, Babić, Bregovac, Frgić, and Richter of SIO – Studio za industrijsko oblikovanje (Studio for Industrial Formgiving) of the Croatian Association of Visual Artists of Applied Arts. The text states: "Presenting itself to the public at the exhibition 'Apartment' for our circumstances for the first time, SIO endeavors to create a transition from individual activity in the field of applied arts to the radical activity of giving form to industrial objects."

23 Catalog of the 1957 "Housing for Our Conditions" exhibition and symposium, held at Gospodarsko razstavice, Ljubljana May 26–June 3 1956. (The Permanent Conference of the Cities of Yugoslavia, Ljubljana 1957), 30–56. See also note 24.

24 Except for The Permanent Conference of the Cities of Yugoslavia, the exhibition "Apartment for Our Circumstances" was organized by the following institutions: Savezna industrijska komora (Federal Chamber of Industry), Savezna gradjeviniska komora (Federal Chamber of Civil Engineering), Savez zanatskih komora FNRJ (Association of Trade Chambers of Federal People's Republic of Yugoslavia – FPRY), Savez drustava arhitekata Jugoslavije (Alliance of Yugoslav Associations of Architects), Savez urbanista Jugoslavije (Association of Yugoslav Town Planners), Savez gradjevinskih inženjera i tehnicara FNRJ (Association of Civil Engineers and Technicians of FPRY), Savez zenskih drustava FNRJ (Association of Women's Societies of FPRY). See also previous note, page 9.

Formgiving defined in such a way by Bernardi and Radić as a wider and generally understood "practice of the creation of plastic environment" and as "industrial formgiving," has a distinct significance in the real circumstances of the socialist concept of production, consumption, and education of the individual. Moreover, Radić obviously thinks that industrial formgiving can be used as a powerful factor for the education of the socialist individual because: "It happens that we are surrounded by the shapes that are school examples of all possible phases in the development of a product except by the one for which the socialist society is a precondition, and that despite the fact that our workers make use of and experience the most modern production methods."²⁰ So formgiving, according to two of the most significant Croatian critics of the 1950s, also has a distinct social mission within its semiotic range. This social, and to some extent even political, component of the term formgiving was clearly stressed in Bernardi's introduction to the Zagreb Triennale in 1955, and thus served as the basis for his 1959 article.²¹ It also should be mentioned that this exhibition was not the only initiative to try to win recognition for the theoretical premise of formgiving in the real world.

Public Initiatives for Affirmation of the Concept of Formgiving

In 1956, the group *Studio for Industrial Formgiving* was founded in Zagreb as a part of the section for industrial formgiving of the Croatian Association of Visual Artists of Applied Arts.²² The *Studio for Industrial Formgiving* had its public presentation at the exhibition *Housing for Our Conditions* that was held in Ljubljana (Slovenia) in 1956, and in the professional magazine *Arhitektura (Architecture)* which published a review of the exhibition.²³ The exhibition in Ljubljana brought a representative range of ideas to housing construction, decoration, and interior design of apartments from throughout Yugoslavia; mainly in the "industrial formgiving" of furniture from Slovenian and Croatian. *Housing for Our Conditions* was sponsored by very important political bodies, as well as professional organizations, which gave the exhibition a very clear programmatic value and even a political significance.²⁴ The *Studio for Industrial Formgiving* organized the Yugoslavian exhibit for the 11th Triennale di Milano in 1957, in cooperation with several Croatian and Slovenian companies that were mostly engaged in furniture production. At the Triennale, a living ambiance with the accompanying original furniture designs of different authors was presented. Yugoslavia was awarded the silver medal for its presentation as a whole.²⁵ The Second Zagreb Triennale was held in 1959. It was a continuation of the idea of the first exhibition in 1955, with an even more strongly expressed consciousness of the need for social affirmation of the visual art within the boundaries of industrial production. Vjenceslav Richter expressed this consciousness in his foreword to the exhibition catalog: "Though still at the beginning, we believe

the solution to the question of the dignity of visual art within the totality of our production to be the main news of the day, since it is through the very solution to this question that the visual art becomes a social factor of such a democratic strength on the cultural level that matches the one of the workers' self-management on social and political level." And further, "We are confronted with a task unprecedented in the history of art: to provide art to the working man so that he too takes part in its creation through the process of production and consumption, and enjoys its benefits."²⁶

The Second Zagreb Triennale also gave rise to a thematic issue of *Arhitektura (Architecture)* which included articles by Bernardi and Radić. Along with the foreword to the catalog, these texts constituted an important collection of ideas for understanding the concept of formgiving at that time. Each, in its own way, clearly defined the underlying elements of the concept of formgiving, as well as that part of its semiotic range applying to the social, economic, and even political aspects of its affirmation.

The above-mentioned social initiatives, and the formation of groups and exhibitions, helped create the distinct meaning of the concept of formgiving as an avant-garde artistic practice that, based on the fundamental ideas of artistic movements between the two world wars, negates the formalistic individuality of the concept of artistic creation as a self-sufficient one. In opposition to such a concept, Bernardi and Radić pleaded for establishing the concept of formgiving as a multidisciplinary activity for which artistic creation was the origin, and industrial production the realization. In his foreword to the catalog of the Second Zagreb Triennale, Richter clearly defined the social significance and political implications of formgiving.

Romantic Activism and Industrial Art

Despite all similarities and congruity, it should be noted that Radić's texts are more general and theoretical dealing with the problem as a whole, and not referring directly to any field of application. On the other hand, Bernardi was more concerned with the problems related to giving form to dwelling spaces and their contents. It was, indeed, a subject that became extremely popular in the post-war years. However, Bernardi also was active as a practitioner in this field, while Radić concentrated on creating very strong theoretical foundations for formgiving. Thus, there is a certain distinction evident in interpreting the concept of formgiving in the works of Bernardi and Radić. This opens up the field of further research of its meaning in the cultural context of the fifties.

As a result of Bernardi's interest in dwelling-related issues concerning space for individuals within the collective space, the concept of formgiving in his texts includes elements of romantic activism in the sense of a willingness to improve the existing order of things. While this definitely does not mean going back to former

25 Mostra internazionale dell'abitazione ("International Home Exhibition, Yugoslavia."), catalog of the exhibition XI Triennale di Milano, 1957.

26 Catalog of the exhibition "2. Zagreb triennale" ("2. Zagrebacki triennale"), April 22–May 20, 1959 (without pagination). The exhibition was held in three locations. The Didactic Exhibition of Industrial Formgiving was held in the Graphic Cabinet (Graficki kabinet). The Dwelling Culture Exhibition was held at the Society of Architects (Drustvo arhitekata); and individual creations were shown at the Arts Pavilion (Umjetnicki paviljon). 16. See note 8.

values, he expresses opinions that sound more like a rational defense of certain social values from the second stage of Croatian modernization within socialist Yugoslavia, as defined by sociologist Ivan Rogić.²⁷ These social values can be identified as an affirmation of the individual in the sphere of the collective (i.e., as in fighting for an articulated space for the individual in the general shrinking of the space intended for an individual). It is a concept of giving form to a dwelling place that is minimal, but furnished with quality materials in order to secure a decent space of self-realization for each and every individual, and in a political environment that puts the common identity before the individual one. It is at this level of rational social activity that the concept of formgiving found its realization in Bernardi's design of products for dwellings. Most of the writing from the fifties in keeping with the postwar period of reconstruction and building, and the trend toward urbanization, discusses problems related to the quality of a dwelling space. To that end, Bernardi, through his theoretical work and practical activities, continued to make contributions even in later years. In 1960, he developed the "Apartment of the Near Future" as an exhibit for the didactic exhibition *Family and Household*. It was a living environment adapted to the conditions of a socialist society that, at that time, was still waiting for the "near future," even after several years of endeavors by theorists, critics, and activists.²⁸ This private, intimate space was a minimal version of the much larger, modern, middle-class, pre-World War II apartment. It can be concluded that, in its affirmation of the dwelling space, Bernardi's concept of formgiving had certain characteristics of romantic activism reflected in the affirmation of a private apartment versus the factory, which represented the collective in both a real and a symbolic sense. The concept of formgiving, therefore, also can be interpreted as an affirmation of the middle-class sense of individuality within the growing trend toward collectivization.

In Radić's texts, however, the acceptance of a machine as a production factor is very clearly stated. Unlike mass production, the machine is seen in a positive light, a view which Radić found in the theory of the Bauhaus.²⁹ Such concepts historically emerged as an attempt to assign value to mass production through the intensified presence of designers trained in aesthetics and highly aware of the production process. This vision of the industrial production raised awareness of man as "homo faber," but using production machines instead of hand tools. The concept of the machine as a means of humanization, as Radić saw it, brought the new aesthetics as a communication model, as well as the distinct social engagement as its program of activities. Such an orientation is clearly expressed in Radić's texts through an acceptance of the machine as unavoidable, so there is an even stronger intention to interpret the actual social modernization of the day on the basis of the ideas developed by the avant-garde artistic movements of the twenties and thirties. Based on this approach, Radić makes a distinction between "formgiving" and

27 Ivan Rogić, *Tehnika i samostalnost* (*Technics and Independence*) (Zagreb: Hrvatska sveučilišna naklada [Croatian University Press], 2000).

28 Stane Bernik, Bernardo Bernardi, Graficki zavod Hrvatske i Nacionalna i sveučilišna biblioteka, Zagreb, 1992: 98–99.

29 Radić, "Umjetnost oblikovanja," 61–62.

the applied arts of the nineteenth century, since the symbolic function (appearance, decoration) of objects is only one of its integral parts, such as its material function. These properties of machine production are observed and explained in the context of the contemporary environment, along with the thesis that formgiving is not only the successor to the idea of the connection between the designer and the machine, but a kind of daily life regulator. Such a regulator emphasizes the need of establishing a “formgiving-like” approach which aims to improve the objective reality, and thus improve the quality of life of all those who use these objects.

This implies that modernization is only possible when it is done in the interest of end users (i.e., through a well-thought out and practically realized process of formgiving). This methodic concept bears reference to the avant-garde modernistic idea about the total control of the machine (i.e., about the machine as a subject of the new industrial value). The machine, however, is not just a subject of the creation of a new value in the material sense, but also, as Radi emphasizes, in the social and psychological sense. That is because “The industrial form has an enormously intensive and crucial effect on the consciousness of our man, and it is the most important factor in shaping his habits, motives, and psychology.”³⁰ The industrial art producing this form (i.e., that *should be* producing it, since Radic still speaks theoretically, *pro futuro*,) is a discipline consisting of the synthesis of art, science, and technology; that is to say a powerful means of modernization. Radic, however, unambiguously exposes to criticism the situation in local conditions, because local Croatian producers in the 1950s were still very far from such a complex understanding of formgiving, and were more engaged in the decoration of symbolic functionality of the object. In a way, the criticism of the actual conditions of the day puts Radic’s methodical concepts among the romantic visionary attempts to improve the actual conditions of mass production. His ideas corresponded to the actual order of things within the industry of the day, but the concept of formgiving as a method in the context of mass machine production was, at that time, still not integrated in the system of self-managing socialism. Not until the beginning of the sixties can the renewed theses for acceptance of the concept of “*dizajn*” (design) as a new synonym for the concept of formgiving³¹ be found in the professional critical and theoretical literature. And that was in connection with the introduction of free market elements within the social concept of planned economy during the social and political reform of the mid-sixties.

Formgiving as Design

During the 1950s, however, other critics and theorists also used the concept of formgiving in their texts when referring to specific issues³², and it is important to mention that the concept of design occurs occasionally in the professional literature of the day, as the Croatian derivative “*dizajn*” or an Anglo-Saxon original design. We

30 Ibid., 66.

31 Matko Mestrovic, I.C.S.I.D., Venice 1961, “Covjek i prostor” (“Man and Space”); 108–109, (Zagreb 1962).

32 Fedja Vukic, “Od oblikovanja do dizajna” (“From Formgiving to Design”), Meandar (Zagreb 2003).

already have stated that Bernardi himself at the very beginning of terminological explanations in his text from 1959 equates the concept of design and industrial formgiving which, from today's perspective, allows it to be designated as the design practice behind theoretical elaborations of the Croatian culture of the 1950s. Apart from the two texts, thus far I have not identified the presence of the concept of design in the theoretical and critical texts of the 1950s. The first one, written by Milan Lentic, is "Art and Industry," in which the terms *dizajn*, design, and designer are used, and in which the concept of design is identified with the concept of industrial formgiving.³³ The other one, written by Vera Sinobad-Pintaric, is entitled "XI triennale," and published as a review of the 1957 Triennale di Milano. Here, the concept of "industrial design" is defined as "industrial drawing."³⁴

In order to additionally clarify the meaning and historical development of the concept of formgiving in the Croatian culture of the 1950s, it is useful to quote several sentences from the previously mentioned manifesto of the group EXAT 51, especially since Bernardi, Radić and Vjenceslav Richter were founders of the group and co-signed the manifesto. It is thus claimed that "In relation to the understanding of our reality as a desire for progress in all aspects of human activity, the group sees the necessity of fighting against attitudes and production manners that have outlived their usefulness in the field of visual arts: the group finally maintains the synthesis of all kinds of visual arts to be its main task."³⁵ This quote represents a clear platform of the ideas elaborated by Bernardi and Radić in the formerly-quoted texts, and the concept of formgiving appears in this sense as that desired synthesis of art—the synthesis that also is mentioned several times in the quoted texts, and sometimes is terminologically defined as integration.³⁶ An instructive text for understanding the concept of synthesis in the context of the culture of the fifties, and also for further elaboration of the concept of formgiving, was written by Vjenceslav Richter: "The Prognosis of Life and Art Synthesis as an Expression of Our Epoch."³⁷

The fact that the concept of design is used neither in the most distinguished texts of the fifties by Bernardi and Radić, nor in the texts by other writers, possibly indicates an attempt to create an original theory of visual arts synthesis for the purpose of serial industrial production. Furthermore, this is especially emphasized in the quoted texts by Bernardi and Radić, and in the quoted foreword to the catalog of the Second Zagreb Triennale by Vjenceslav Richter, which was an attempt to find that originality in becoming involved with the reality of the socialist production, economy, and self-management of the day. Whereas the texts by Bernardi and Radić are theory-based and politically neutral, except in the sense of a general humanistic point of view, the texts by Richter and Segvic are more ideological in their search for the meaning and justification of the positioning of formgiving within the industrial sphere. By the way, all four of them are architects, and it seems that it is not accidental

33 Milan Lentic, "Umjetnost i industrija" ("Art and industry"), "Covjek i prostor" ("Man and Space"); 61 (Zagreb 1957); 1–4.

34 Vera Sinobad Pintaric, XI triennale, "Covjek i prostor" ("Man and Space"); 66 (Zagreb 1957); 4–5.

35 Denegri, Koscevic, 1979, 69.

36 Radić 1959, 1957, and later.

37 Denegri, Koscevic, 1979, 319–324.

that exactly Bernardi, Radić, and Richter were the main theorists of the group EXAT 51 and the whole concept of formgiving, since there has been a tradition of social involvement by architects in the Croatian culture ever since the 1930s. This ideological involvement continued after 1945, and expresses itself mostly in housing-related issues, within which the idea of formgiving as a new applied art emerged, operating together with industry in creation of original objects for apartment furnishings.

However, let us go back to the beginning once again (i.e., to the quoted text of Vjenceslav Richter from 1966). As we have shown, during the fifties, the concept of formgiving emerged rather strongly in the critical and theoretical literature, and in the foundation of groups and the organization of exhibitions. However, summing up the economic and technical results of the state in the past twenty years, one of the main protagonists of the cultural and artistic scene of the fifties uses the concept of formgiving only in the title, but “design” in the rest of the text. That points out the significance of industrial formgiving in the total economic picture of the state. Apart from that, the whole text is very critical, since the author notes that industrial design has not been completely integrated into the social structures as it should be, considering numerous initiatives and the political need from the fifties mentioned in the text.³⁸ Basically Richter’s text continues to advocate the concept of merging the artist with industry, but it now also introduces the profession of a “*dizajner*” (designer) (i.e., “*industrijski dizajn*” [industrial design]), which replaced the concepts of visual arts worker and industrial formgiving from theoretical and critical texts by Bernardi and Radić.

Conclusion

In mass production based on the socialist self-management of the sixties, the need for affirmation of formgiving in the production process did not arise in spite of initiatives and an elaborated concept. The issues outlined here await further research. First of all, the professional periodicals as well as critical articles from the first half of the sixties should be researched (i.e., texts published before Richter’s article), in order to find out how much and with what semiotic range the concept of formgiving and design were used. This is especially important since, in 1964, the Center for Industrial Formgiving (*CIO-Centar za industrijsko oblikovanje*) was founded in Zagreb, with Richter as one of the founders. The idea behind this institution was to function as an agency connecting artistic creation with industrial production within the newly reformed social environment.³⁹ This further research could produce additional elements for understanding of the total range of meaning of the concept of formgiving in the socialist culture of the fifties, and maybe even some elements for the evaluation of the consequences of such a concept of art in industry in a production process defined by self-management.

38 Vjenceslav Richter, 1966.

39 Fedor Kritovac, “Deset godina Centra za industrijsko oblikovanje” (“Ten Years of the Center for Industrial Formgiving”), *Arhitektura (Architecture)*, 150 (Zagreb 1974); 39–42.

Why Horst W. J. Rittel Matters

Chanpory Rith and Hugh Dubberly

Acknowledgments

Many people contributed to this project. We are grateful for their help.

The project grew out of research for a book written by Peter Esmonde and published by Paul Pangaro for Sun Microsystems, *Notes on the Role of Leadership and Language in Regenerating Organizations*. While writing *Notes*, Peter was also working with Hugh Dubberly to research the origins of the Design Methods Movement. Peter first located a number of works by Rittel and introduced some of Rittel's ideas into *Notes*.

Later, Paul and Hugh included *Notes* as well as some of Rittel's articles in a Stanford design course. After participating in the course, Chanpory Rith suggested reprinting Rittel's complete works. We began by compiling a bibliography.

Many people participated. Juan Quiles searched the stacks at Berkeley and made copies. Justus Brown and Martin Thormann helped translate the German titles into English. Philip Foeckler helped obtain works from Germany.

We have been especially fortunate to have help from two of Rittel's colleagues in the College of Environmental Design at UC Berkeley. Elizabeth Byrne, head of the college's library, provided many excellent references and much practical advice. Professor of Architecture Jean-Pierre Protzen provided much background information as well as his own database of Rittel's work and Rittel's final CV. Their spouses, Chuck Byrne and Elsbeth Protzen, have been very patient with our frequent intrusions.

Horst Willhelm Jakob Rittel taught design and architecture for over 30 years, yet he never designed a building or otherwise practiced as an architect. (We might now recognize him as a design planner.) Even so, Rittel changed the field of design—linking design and politics—and started a line of inquiry which continues today in the field of computer programming and information science—design rationale.

What Rittel Did

Rittel served as a sort of funnel transferring knowledge (developed during and just after World War II) from the sciences and engineering to the design professions. At the Hochschule für Gestaltung (HfG) Ulm, Rittel taught courses in operations research (OR) and cybernetics. At the University of California Berkeley, he also introduced ideas from cybernetics into his teaching. For example, his course notes show explicit references to feedback models and to Ashby's models of requisite variety. In his writing, Rittel also explicitly linked cybernetics, feedback, and the design process. If anything, the systems models of OR and cybernetics are more relevant to the practice of design today than they were when Rittel first introduced them.

Rittel was recruited to Berkeley in 1963 by William Wurster, Dean of the College of Environmental Design. The same year, Wurster also recruited Christopher Alexander. Together with Christopher Alexander, Bruce Archer, and John Chris Jones, Horst Rittel helped found the Design Methods Movement. He taught design methods courses at both Ulm and Berkeley, helped found the Design Methods Group (DMG) at Berkeley, and the DMG Journal.

The movement flourished from approximately 1962 to 1972. Its members advocated a systems view of design projects and introduced a range of methods emphasizing a rigorous, rational or scientific approach to designing. (Most models of the design process—for example: define, prototype, evaluate—trace their roots back to the Design Methods Movement.) Within just a few years, the movement found its assumptions under attack—particularly its claims of rationality and objectivity—and two founders, Alexander and Jones, both publicly repudiated the movement. Rittel also offered serious criticism of “first generation” design methods and proposed a set of principles for “second generation” design methods.

What Rittel Teaches Us

Rittel introduced several fundamental ideas:

- Simple problems (problems which are already defined) are easy to solve, because defining a problem inherently defines a solution.
- The definition of a problem is subjective; it comes from a point of view. Thus, when defining problems, all stakeholders, experts, and designers are equally knowledgeable (or unknowledgeable).
- Some problems cannot be solved, because stakeholders cannot agree on the definition. These problems are called wicked, but sometimes they can be tamed.
- Solving simple problems may lead to improvement—but not innovation. For innovation, we need to re-frame wicked problems.
- Because one person cannot possibly remember or keep track of all the variables (of both existing and desired states) in a wicked problem, taming wicked problems requires many people.
- These people have to talk to each other; they have to deliberate; they have to argue.
- To tame a wicked problem, they have to agree on goals and actions for reaching them. This requires knowledge about actions, not just facts.
- Science is concerned with factual knowledge (what-is); design is concerned with instrumental knowledge (how what-is relates to what-ought-to-be), how actions can meet goals.
- The process of argumentation is the key and perhaps the only method of taming wicked problems.
- This process is political.
- Design is political.

Having become convinced design is argument, Rittel set out to develop ways to support and enhance the development and tracking of arguments during the design process. (He hoped these systems might also make both the design process and the political process more transparent.) He introduced Issues Based Information Systems (IBIS) first in analog (paper) form and later in digital (computer) form. His efforts, while cumbersome, form the basis of an on-going line of inquiry within computer science known as design rationale. To date, over 1000 papers have been written on this subject. Many reference Rittel, and he is widely regarded as a seminal figure in the field.

In sum, Rittel remains significant to designers for two reasons. First, he articulated the relationship between science and design, specifically the limitations of design processes based on the nineteenth century rational view of science. (Never-the-less, the rationalist “problem-solving” view of design remains a widely held popular belief.) Second, he proposed principles for dealing with these limitations. (Unfortunately, these principles are not widely taught.)

One goal of this bibliography is to help preserve Rittel’s ideas and to introduce (or re-introduce) Rittel, second-generation design methods, and design rationale to a wide audience of design practitioners, researchers, and educators. We hope others will see value in Rittel’s ideas and carry them forward.

As Rittel might have said: It is optimistic, perhaps futile, but worth trying.

Horst W. J. Rittel's Writings on Design: Select Annotations

Chanpory Rith and Hugh Dubberly

Rittel's bibliography contains over one-hundred unique entries on many subjects. The following annotations are for works which we feel are most relevant to designers. This is a very subjective and arbitrary list. In choosing works to annotate, we considered how often a work was cited, its date of publication, and its uniqueness in relation to other works. These works are presented in chronological order.

***The Universe of Design: Faculty Seminar,
College of Environmental Design, Spring
1964.***

Berkeley: Institute of Urban and Regional
Development, University of California, 1964.

***The Universe of Design: Faculty Seminar, College of
Environmental Design, Spring 1964.***

Surveys existing methodologies for creating "innovation" and related notions such as "image," "model," and "problem/solution" in relationship to institutionalized science. Finds these methodologies—and the nineteenth century view of science in which they are rooted—insufficient for innovation and design which are inherently political and subjective, rather than neutral and objective. Rather than a single definition, proposes some properties of design. Concludes that "any theory of innovation including a theory of design must be based on a theory of action, not a theory of knowledge (epistemology) alone." Lays the ground for later concepts such as "wicked problems," "design rationale," and "instrumental knowledge."

"Instrumentelles Wissen in der Politik."

*Beiträge zum Verhältnis von Wissenschaften
und Politik.* Helmut Krauch, ed. Heidelberg:
Studiengruppe Für Systemforschung, 1966.
183–209.

"Instrumental Knowledge in Politics."

Presents the ineffectiveness of political decision-making systems as a symptom of a limited model of knowledge. Suggests that improving these systems requires an expanded model which, in addition to factual knowledge, includes "instrumental knowledge" or knowledge about actions that meet goals. Also emphasizes that improvements entail political involvement in contrast to the cherished neutrality of traditional science. Thus, implies a new type of science which is rigorous but sheds objectivity in its goal to generate useful instrumental knowledge. Concludes by countering attitudes of defeatism to this idea, advocating a search for better political decision systems despite formidable obstacles, seeming futility, and potential abuse.

“Some Principles for the Design of an Educational System for Design.”

Education for Architectural Technology. J. Passonneau, ed. St. Louis: Washington University and the AIA Educational Research Projects, 1966. 103–151.

“Some Principles for the Design of an Educational System for Design.”

Criticizes existing design curricula as poor preparation for tackling planning problems and proposes a goal-oriented approach to design education that focuses on the difficulties of designing. Also argues that the master-apprentice tradition is inflexible and that the common debate of “breadth” versus “depth” is simplistic. Advocates teaching general theoretical principles to reduce, but not eliminate, the reliance on more specific, shorter-lasting “rules of thumb.” Also urges designers to be aware that design is political and to continue learning how to design better despite “difficulties, paradoxes, and dilemmas.”

“Dilemmas in a General Theory of Planning.”

Panel on Policy Sciences, American Association for the Advancement of Science. 4 (1969): 155–169.

“Dilemmas in a General Theory of Planning.”

Introduces the notion of “wicked problems,” emphasizing its social and political context. In addition, criticizes the inadequacy of existing Newtonian-based scientific and professional processes, because wicked problems cannot be solved by traditional and formulaic processes. Suggests that the ideal planning model is a cybernetic—goal-oriented and involving feedback—process.

Issues as Elements of Information Systems.

Working Paper No. 131. Berkeley: Institute of Urban and Regional Development, University of California, 1970.

Issues as Elements of Information Systems.

Outlines Issue-Based Information Systems (IBIS), providing an early model of design rationale systems that aim to explicitly capture, structure, and represent the deliberations and reasonings that occur during planning processes. Specifies that these systems center around issues, questions of fact, positions, arguments, and model problems. Considers these systems beneficial because they make the design process transparent, provide a history of previous and existing states of discourse, and are adaptable to rapidly changing language.

“Information Science: On the Structure of its Problems.”

Information Storage and Retrieval. 8.2 (1972): 95–98.

“Information Science: On the Structure of its Problems.”

Compares first and second generation design methods in relation to the evolving discipline of information science. Specifically finds the discipline’s heritage in traditional science and factual knowledge as an obstacle for growth. Identifies organizing the discourse during the planning process as its central issue.

“On the Planning Crisis: Systems Analysis of the ‘First and Second Generations.’”

Bedrifts Økonomen. 8 (1972): 390–396.

“On the Planning Crisis: Systems Analysis of the ‘First and Second Generations.’”

Summarizes characteristics of the first and second generation of system approaches to design, underscoring the limits of a sequential, scientific, and rational approach (first generation) to tackling “wicked” problems. Notes the “symmetry of ignorance” in defining wicked problems. Posits expertise and ignorance as “distributed over all participants.” And thus presents the second generation approach as an argumentative process that is inherently collaborative and political.

“Son of Rittelthink: The State of the Art in Design Methods.”

The DMG 5th Anniversary Report. DMG Occasional Paper No. 1. 7.2 (1972): 143–147.

“Son of Rittelthink: The State of the Art in Design Methods.”

In interview form, summarizes the origins of first generation design methods and presents second generation methods as better suited for addressing the shortcomings of the first generation. Identifies the theoretical and practical applications of the argumentative model of the design process as areas for further development.

“How to Know What is Known: Designing Crutches for Communication.”

Representation and exchange of knowledge as a basis of information processes. Proceedings of the Fifth International Research Forum in Information Science (IRFIPS), Heidelberg Sept. 1983. Ed. Dietschmann, Hans J. Amsterdam: Elsevier Science Publishers B.V. (North-Holland), 1984.

“How to Know What is Known: Designing Crutches for Communication.”

Presents a theory of information science that views information as a knowledge changing event rather than as stored data. Criticizes attempts by artificial intelligence researchers to mimic the brain, and instead proposes research to find tools or “mental crutches” that enhance “natural intelligence.” Finds, however, that most existing tools and information systems are limited because they merely confirm knowledge. Provides guidelines for more “natural intelligence-reinforcement” systems that cast doubt, point out ignorance, and thus are more useful because they open up new possibilities.

The Reasoning of Designers.

Arbeitspapier A-88-4. Stuttgart: Institut für Grundlagen der Planung, Universität Stuttgart, 1988.

The Reasoning of Designers.

Encapsulates Rittel’s own design philosophy. Argues that design is a planning activity that involves models, that the reasoning of designers is a process of argumentation unlike problem solving, and that design is political and associated with power. Also asserts that design is subjective and that designers are responsible for their judgments. Maintains that advancement of the design field requires a new science of design, and proposes three tasks: to develop “theories of design,” to inquire empirically into “how plans come about,” and to look for “tools to support designers.”

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1995

Notes by Eric Dluhosche, Donald P. Grant and Diana Lee-Smith

"Impressions of Architecture 130: Notes and Observations on Professor Horst W. J. Rittel's Classic Design Methods Course at Berkeley as taught circa-1969–71 [The Spring 1969 Course]."

Design Methods: Theories, Research, Education and Practice. 29.1–30.4 (1995): 2111–2437.

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Design Methods: Theories, Research, Education and Practice. 32.1–4 (1998): 2599–2724.

In Memoriam: Horst W. J. Rittel

C. West Churchman, Jean-Pierre Protzen,
and Melvin M Webber

Timeline of Rittel's Life

We compiled this timeline from information in Rittel's Curriculum Vitae as printed in December 1988. The CV was provided by Jean-Pierre Protzen.

1930

Born in Berlin, July 14

1936–1940

4. Volksschule, Berlin (elementary school)

1940–1943

Scharnhorstschule, Berlin–Schoeneberg
(gymnasium)

1946–1949

Gymnasium Adolfinum, Bückeburg

1947–1954

Private tutor in English, French, Latin, mathematics, and physics

Worker (aluminum factory, precision scales factory)

Insurance agent

Interviewer for survey institute

1949–1954

University of Göttingen

Studied mathematics and theoretical physics

Auxiliary Assistant in astronomical observatory (*analysis of stellar spectra*)

Auxiliary Assistant in geophysical observatory (analysis of geomagnetic fields)

Manager of student dormitory

1953–1958

Maschinenfabrik Deutschland, Dortmund

Cost predictions, development of design aids, operations research*

1958

University of Münster, Dortmund

Studied mathematical logic and sociology

Horst W.J. Rittel, a pioneering theorist of design and planning died of lymphatic cancer on July 8, 1990 in Heidelberg, Germany. He was born in 1930 and grew up in Berlin, where he attended the Gymnasium Adolfinum. Upon graduation he enrolled at the University of Göttingen to study mathematics and theoretical physics. In 1953, fresh out of school, he found employment in the Maschinenfabrik Deutschland in Dortmund as an operations researcher. There Horst first became fascinated with the concepts that later became the focus of his career: the activities of design and planning. Before pursuing these topics, however, he joined the Sozialforschungsstelle of the University of Münster in Dortmund in 1958. His role was that of mathematician and statistician, developing socioeconomic prediction models and evaluating sociological field research. Simultaneously, he pursued the study of sociology and mathematical logic at the university.

Rittel's writings are as varied as his educational background. They are difficult to classify, because they are scattered in the professional journals of disciplines as disparate as chemistry and law, computer science and policy science, or architecture and information science. The writings, however do have a common core. Horst saw the theme of his work to be the reasoning of designers: the nature of their problems, the kinds and structures of the knowledge they use, the formation of judgment, their logics of procedure. He called it the science of design.

As he said, he had the good fortune to participate in the development of the science of design from its beginning. He laid the cornerstones of his work at the Hochschule für Gestaltung at Ulm where he was both teacher and director from 1958 to 1963. At Ulm he argued that dichotomies purporting to distinguish systematic versus intuitive, and rational versus nonrational design are untenable. Rather, he asked, to what degree can and should design processes be made explicit, and to what extent can and should they be made communicable to others. For only communicable processes can be taught, and only explicitly formulated processes can be critically scrutinized and improved upon.

In 1963 Rittel was called to Berkeley. Of this event he said "my special luck was the invitation to join the faculty at Berkeley: I could not have found a livelier, more stimulating and resourceful place in the world." And indeed, Rittel often talked about how he

Sozialforschungsstelle an der Universität
Münster, Dortmund
Mathematician and Statistician:
theory of predicting socio-economic
processes, planning, and evaluating sociologi-
cal research

1958–1963

Hochschule für Gestaltung Ulm
Festdozent (tenured docent) for design meth-
odology, mathematical operations analysis,
communications theory, and epistemology

1959–1963

Elected for 4 terms to the three-member
College of Rectors, HfG Ulm
(the administrative body of the school)

1960?

Married Karin in Ulm[†]

1963

Daughter Caroline born

1963–1967

University of California, Berkeley
Department of Architecture
Lecturer

1965

Son David born

1965–1967

University of California, Berkeley
Space Science Lab and Center for Planning
and Development Research
Associate Research Mathematician:
Project TAUM
(Technology and Urban Management)

1967–1969

University of California, Berkeley
Department of Architecture
Associate Professor

1967

Washington University, School of
Architecture, St. Louis
Visiting Associate Professor of Architecture
and Operations Research

1968–1973

Studiengruppe für Systemforschung,
Heidelberg
Co-director

was challenged by his new colleagues and students here. He always acknowledged how their thinking had influenced his own; he considered them to have been the pioneers of the idea that design and planning are most important subjects of scientific inquiry.

His *Dilemmas in a General Theory of Planning* proved to be a seminal treatise. There he expounds on the inherently intractable nature of design and planning problems which he termed “wicked” to contrast with the tame problems of mathematics, chess, or puzzle solving.

The notion of wicked problems led Rittel to a radically new conception of design and planning processes and of methods appropriate to their resolution. He described the design process as inherently argumentative, in which the designer continually raises questions and argues with himself and others over the advantages and disadvantages of alternative responses. Methods that support argumentation and facilitate the identification of questions, responses, and arguments, he called methods of the second generation to distinguish them from their earlier methods of operations research.

In 1973 Rittel received a call to join the architecture faculty at the University of Stuttgart. There, he founded the Institut für Grundlagen der Planung, which he directed until his last days. Yet, he had not abandoned Berkeley for Stuttgart; he simply became an international commuter splitting his time between the two institutions.

In more recent times Horst was involved with what he termed natural intelligence-enhancement. He had been a stubborn skeptic of the ambitions of artificial intelligence researchers, who seek to create computer programs that simulate intelligent behavior, or better yet, that surpass human intellectual capabilities. To him this was the story of the Golem, or of Faust and his homunculus, all over again. He was specifically critical of today’s widespread attempts at constructing expert systems. He contended that the expert knowledge embodied in such systems would become nothing more than “freeze-dried prejudices.” Instead of pursuing the aims of artificial intelligence, he proposed what he saw to be a less ambitious but more promising strategy. In his words, “as my eyeglasses don’t see on my behalf but help me to see better, one might use the computer not to think on one’s behalf but to reinforce and enhance one’s own ability to think.”

Before his premature death, Rittel was working on a general theory of technology, that is the description, analysis, and theory of instrumental knowledge. He was asking how we might more effectively trace the consequences of applying a technology, and how we might construct a combination of technologies in pursuit of desired results without also generating unforeseen and undesirable side- and after-effects, the nightmares of designers. Horst considered

1970–1990

University of California, Berkeley
 Department of Architecture
 Professor of the Science of Design

1973–1990

Universität Stuttgart Fakultät für Architektur
 und Stadtplanung
 Universitätsprofessor für Grundlagen der
 Planung und Direktor des Institutes für
 Grundlagen der Planung

1977–1979

Universität Stuttgart Fachbereich Bauplanung
 (Department of Building Planning)
 Elected Dean

1977–1981

Universität Stuttgart Fakultät für Architektur
 und Stadtplanung
 Elected Dean for three terms

1974?

Divorced[†]

1977?

Married Anita[†]

1986–1988

Katholieke Universiteit Leuven
 Faculteit Toegepaste Wetenschappen
 Guest Professor in School of Engineering
 Department of Architecture, Planning, and
 Urban Design

1990

Died in Heidelberg, July 8

* While the CV does not list operations
 research, Jean-Pierre Protzen suggests that
 was a part of Rittel's work at Maschinenfabrik
 Deutschland.

† Provided by Jean-Pierre Protzen—
 not in original C.V.

his work in chemistry, for which he received international recognition, to be a special case of this general theory. Over the years he had developed an algebra of chemistry which allowed him to trace the outcomes of chemical reactions over as many steps as desired. Chemical engineers are typically interested in the “yield” of a reaction, that is, the percentage of a desired compound produced by a reaction, not the residues of that reaction. But, typically for Horst, he was interested in what others discarded. He wanted to find what happens when residues get thrown together as in the effluents of sewage plants. These residues or nondescript aggregates he called “mishmashes.” He often apologized for the term but said that even distinguished chemists could not find a less vulgar word for this important concept. He had outlined a theory of mishmashes, but it will fall to others to elaborate it.

Incomplete as it is, the rich and innovative work of Horst Rittel, even if it is not yet fully recognized, has opened new directions and has already stamped many generations of students. Because, as he once said, innovative ideas need lengthy incubation before they become integrated into the course of “normal” research and into professional practice, the full impact of his work will not be appreciated for many years.

He is survived by his wife, Anita; a son, David,
 and a daughter, Caroline.

Originally published in 1992 in University of California: In Memoriam a publication of the Academic Senate, University of California, under heading: “Horst W.J. Rittel, Architecture: Berkeley 1930–1990, Professor of the Science of Design,” edited by David Krogh.

Book Reviews

Richard Buchanan

Understanding Your Users: A Practical Guide to User Requirements: Methods, Tools, and Techniques

by Catherine Courage and Kathy Baxter,
ISBN 1558609350 (San Francisco: Morgan Kaufmann,
2005) 781 pages; \$59.95; paperback.

Understanding Your Users is an exception among the many “how to” books that are common in design literature. It is an important book that helps to clarify the practices of user research in design and product development. In addition, however, it also helps to consolidate the new field of interaction design by focusing on the practical meaning of “user-centered design” for the practicing designer.

User research has become a common theme of many papers in design conferences around the world, and many design schools are now adjusting their programs to include a significant component of user research methodology. However, the subject of user research remains confusing and disorganized. This is true even in the professional design community, where there are estimates that a significant portion of user research is wasted either because the particular method employed is not appropriate to the question that needs to be answered or because the results of user research are not adequately integrated into design thinking. There are few books or articles that provide a useful framework for understanding the wide range of user research methods that are available to the designer or the product development team, the practical details of specific methods, the situations when one or another method is appropriate, and concrete examples of best practices. *Understanding Your Users* comes as close to meeting the need as any other book one may find.

The book is organized in five parts. The first part is a discussion of many preliminary issues in user research. The issues range from key concepts of user-centered design and user requirements to personas and scenarios to ethical issues to appropriate facilities. The second part discusses the practical issues of preparing for a user research session. The third part presents seven key methods of user research: interviews, surveys, wants and needs analysis, card sorting, group task analysis, focus groups, and field studies (ethnographic methods). The fourth part discusses how to report the results of user research to different stakeholders. And the fifth part offers appendices on many topics relevant to user research. Each part is well considered, clearly written, and entirely helpful, with case studies and many practical suggestions.

There are, of course, some specialized methods that are not addressed in the book. These are, generally, methods from cognitive science that are important in certain aspects of usability research for software and computer products. If one knows enough to be aware of these methods, then one probably also knows where to find practical discussions of their practice. However, *Understanding Your Users* addresses the key methods that most designers or product development teams need to be familiar with in their work.

While the authors come from high tech companies—Oracle and eBay—their understanding of user research and interaction design clearly extends beyond software and human-computer interaction (HCI). This is not a book about software development or computer and internet applications. The methods presented in the book are relevant to all areas of interaction design, including such areas as service design and the design of complex information systems in any medium. Graphic designers and industrial designers will also find this a valuable book.

As the authors point out, human-centered design focuses on the end users of products. “The philosophy is that the product should suit the user, rather than making the user suit the product.” (p. 3) In turn, they argue, this philosophy rests on three principles: an early focus on users and tasks, empirical measurement of product usage, and iterative design. The first principle is the focus of *Understanding Your Users*, and the various methods discussed in the book are the ways that one can come to understand users. Teachers, students, and professional designers will find it valuable.

Impossible Histories: Historical Avant-Gardes, Neo-Avant-Gardes, and Post-Avant-Gardes in Yugoslavia, 1918-1991 edited by Dubravka Djurić and Miško Šuvaković, ISBN: 0262042169 (Cambridge, MA: MIT Press, 2003), 605 pages, illustrated, index, \$44.95 (hardcover).

Impossible Histories is the first detailed English language study of the avant-garde arts in Yugoslavia. The term “Yugoslavia,” it represents a very ambiguous and volatile geographical, cultural, political and economical concept. While it refers to a country that does not exist anymore, “Yugoslavia” also marks a geographical and cultural space in Southeastern Europe, a space with a shared vocabulary of artistic and design practices.

The book focuses on cultural production—mainly in Serbia, Croatia, and Slovenia—spanning a time period of more than seventy years; a time period that began with the formation of Yugoslavia in 1918, and ended with its violent dissolution in 1991. Although this time frame bears a specific regional significance, it also reflects major global events: the dissolution of the Austro-Hungarian, Ottoman, and Russian Empires in 1918 and the aftermath of the fall of the Berlin Wall in 1991. Dubravka Djurić and Miško Šuvaković, the editors of the volume, take these historical parallels as no coincidence—their commentaries clearly resonate with the idea that art practices are inseparable from their historical contexts. They frame this argument through definitions of geo-political and geo-aesthetic identities of artistic practices. Furthermore, the book is built on a historical paradox: the country that disappeared through violent civil wars, ethnic conflicts, and NATO interventions, was the space for free exchange of ideas about modern art and design. This is just one of many “impossibilities” that are outlined in *Impossible Histories*.

The anthology combines scholarly essays with primary documents, many of which are published for the first time in the English language. *Impossible Histories* begins with two introductions, framing the historical and political context of Yugoslav art. It continues with sixteen scholarly essays and twenty-five primary documents on Yugoslav avant-gardes. With more than six hundred pages of text and unique black and white and color reproductions, the book is an encyclopedic source for this subject matter.

Impossible Histories is divided into four parts. Part I focuses on literary practices which radically shaped artistic production. Part II brings together seven essays on visual art and architecture. Part III deals with “Art in Motion”—theater, film, video art and music—including pop and rock music and phenomena like the group *Laibach* and Goran Bregović (composer for many of

Emir Kusturica’s movies). With its twenty-five primary documents on the Yugoslav avant-garde, Part IV (Manifestoes) is an extremely valuable part of the book. It includes texts such as *Rhythm 10, 5, 2, 4, 0*, an early work (1974) by Marina Abramović, now an internationally recognized Serbian artist.

In her essay “Radical Poetic Practices,” Dubravka Djurić discusses the origin of radical avant-garde literary movements in Yugoslavia. These movements started with two brothers—Branko Ve Poljanski and Ljubomir Micić—whose identities speak about the Balkan ethnic complexities: they are both Serbs born in Croatia, who practiced in both Serbia and Croatia, and, in the case of Ve Poljanski, in Slovenia. Like other avant-garde movements of the time, such as the Berlin Dada group, the *Zenitism* movement of Micić was born from the traumas of the First World War. He published the avant-garde journal *Zenit*, which many authors in *Impossible Histories* refer to as one of the key avant-garde publications in Yugoslavia (Miško Šuvaković, Aleš Erjavec, Dubravka Djurić, Sonja Briski Uzelać and others). The journal had a very broad international perspective. Tatlin’s *Monument to the Third International* was first published in *Zenit* outside Russia, and El Lissitzky and Ilya Ehrenburg agreed on the publication of a Russian edition of *Zenit* in 1922.

But according to Djurić, *Zenit* was also a specific reaction to the conservatism of language. This reaction radically defined *Zenitism* and other avant-garde movements that followed. In Southeastern Europe, the language is considered a sacred and crucial part of national identities of small Balkan nations. Serbs, Croats and Slovenes often relied on great world powers—politically, economically, institutionally and culturally—leaving the domain of language as one of the very few independent elements of a national identity. Djurić asserts that it is precisely this autonomy of language and its association with the nineteenth century nation building that became the main target of the modernist avant-gardes in Yugoslavia.

Djurić’s essay continues with analysis of post World War II radical movements in poetry and in particular their visual vocabulary. Her essay also provides an important critical perspective. Many scholars of Serbian and Yugoslav modern art movements idolized the purity of form and radicalism of the early avant-gardes. Without being too polemical on the modernism vs. post-modernism issue, Djurić argues that most of the literary movements were male-only, even macho in character. By extending the post-modern critique of the modern genius here, Djurić positions her essay and the volume itself into a much broader discussion about gender and identity.

The contribution of *Impossible Histories* is manifold. At the very least, this book provides a healthy scrutiny of sometimes parochial cultural spaces of the Balkan nation-states (read: counter-Balkanization). It also

provides a broader (European and global) theoretical perspective for the origin and reception of the avant-garde movements in Yugoslavia, or what we know today as Serbia, Croatia, Slovenia, Bosnia-Herzegovina, Montenegro, Former Yugoslav Republic of Macedonia, Republic of Srpska, Vojvodina, Kosovo and Metohija, Šumadija, etc. While this volume brings together divergent geographical spaces, it also successfully morphs other boundaries, namely those between visual arts, design, performance, and literature. At its most, the book provides a unique resource for readers outside ex-Yugoslavia. Through its powerful historical narratives, *Impossible Histories* maps out an emergent language of social criticism. It demonstrates a painful link between art and politics—both their alliance and artistic defiance to political hegemony. Furthermore, the book maps out an historical and social struggle of the avant-garde in both capitalist and communist Yugoslavia. This complicated set of relationship transcends the regional character of the book, providing an interesting perspective on the cultural politics of the avant-gardes.

Impossible Histories is a very detailed anthology, one that provides—in addition to its critical and scholarly aspect—numerous historical data. While this comprehensiveness is one the book's great assets, it occasionally represents a predicament to the reader. It is not easy to navigate through an ocean of names of Yugoslav artists, journals, and places—most of which are unfamiliar to the Western ear and mind. Having (even) more illustrations would definitely help one navigate the text much easier. However, even as is, this book represents a very important contribution to the field. With its witty essays and important primary documents, *Impossible Histories* is an invaluable archive of Yugoslav art. In a country disintegrated and destroyed by many wars and violent changes, the appearance of such scholarly archives is of utmost importance. This archive is well organized and presented, which is the result of volume editors' intensive labor. Furthermore, we should also be grateful to Roger Conover, editor of the books on visual culture at the MIT Press, who not only commissioned the work, but went to Serbia during its greatest hardships to help with the production of this outstanding volume.

This book continues MIT Press' excellent series on Eastern European art and architecture, in particular *Primary Documents: A Sourcebook for Eastern and Central European Art since the 1950s*, Laura Hoptman and Tomas Pospiszyl, eds., (Cambridge, MA: MIT Press 2002), and *Between Worlds: A Sourcebook of Central European Avant-Gardes, 1910–1930*, Timothy O. Benson and Éva Forgács, eds., (Cambridge, MA: MIT Press 2002). Contextually, it

builds upon the work of Ljiljana Blagojević in *Modernism in Serbia: The Elusive Margins of Belgrade Architecture, 1919–1941* (Cambridge, MA: MIT Press and the Harvard Design School, 2003). All of these books resonate with painful historical reminders that Eastern Europe is a unique, borderland space, a place in-between East and West; a place where war traumas and ethnic conflicts were intertwined with artistic production and its social criticism. *Impossible Histories* serves as an important reminder that our histories both enable us and trap us at the same time.

Problem Solved: A Primer In Design And Communication by Michael Johnson, ISBN: 071484435 (Phaidon: London, 2004) 288 pages, illustrated, \$29.95, paperback.

The most surprising thing about *Problem Solved* by Michael Johnson is that it isn't really a book about graphic design. Rather, it is about clients and what they want from designers. While most graphic design writing focuses on an individual designer, historical period, or type of media, *Problem Solved* is a sort of psychoanalysis of the field. In much the same way that a therapist looks at behavior as a manifestation of a deeper condition, Johnson discusses individual pieces of graphic design as evidence of their deeper motivation—the client brief. In a Jungian twist, he uses this analysis to articulate archetypal problems, grouping diverse projects (regardless of media, form, success or failure) according to the underlying challenge they pose for the designer.

Each chapter of *Problem Solved* begins with an archetypal problem on black paper. The bulk of the chapter is composed of examples of projects that address that problem on white paper and ends with a related case study of an individual designer on grey paper. The best parts of the book are where Johnson focuses on how engaging with the client is an essential component of the design process. In describing what he calls “the charity begins at work problem,” Johnson writes, “Blue-chip clients with generous budgets may buy the respect of their creative consultants, but they can't buy their love...Enter the charity clients—seemingly grateful for your time and expertise, initially respectful of your understanding and infinite patience. But make the most of it—it may not last for ever.” It is refreshing to hear this kind of transference and projection between client and designer discussed so bluntly. The charity client initially projects onto his designer the same noble qualities that he prides himself on; unfortunately, this establishes a structure through which his insecurity and self-doubt can also be transferred. A successful designer, like a successful analyst, acknowledges and consciously manages this exchange of emotions.

Johnson also relates the kind of war stories that interns love to hear their bosses reveal at the office party. For example, in the chapter devoted to “the paradigm shift problem,” Johnson describes how Robert Brownjohn stripped to the waist and projected slides on his “rather ample belly” in order to convince producers of the James Bond films to let him use projected type for a title sequence. These anecdotes about the nexus between client and designer are fascinating and well told. Johnson touches on the range of ways that designers persuade, cajole, acquiesce to, and resent their clients, and because he is essentially more interested in the problems than the solutions, he is free to talk about failures as well as

successes. This immediately sets the book apart from the laudatory hero-worship (or worse yet, self-congratulation) that characterizes so much design writing.

Unfortunately, the book's structure prevents it from making a broader argument about what these individual examples add up to. The black page, white page, grey page system makes the book easy to navigate but it forces Johnson to return to square one at the beginning of each chapter and consequently the book doesn't have much of an arc. He never moves past the idea that the material result of the design process (the ad campaign or the whiskey packaging) is the ultimate goal that designers are working toward, despite the fact that his own examples imply a more novel idea: a model of the designer-as-analyst. Johnson tells stories about how designers engage with their clients' problems on a personal level, but he never breaks out of his system long enough to discuss what this says about design in general.

In his introduction Johnson says he wrote *Problem Solved* for a beginner audience, which might explain why he stuck to such a rigid format. But in a more loosely structured book he might have been able to situate the designer/client relationship within the wider context of a designer's work. For example, when a young man with an asymmetrical haircut sits down at his G4 to crank out a yoga flyer, he has more on his plate than the client's problem. He has to engage with materials, technology and format. He has to negotiate the problematic history of yoga flyer design. And to make a truly great yoga flyer he may have to draw upon his own ideas and work towards satisfying himself. Without examining the interplay between these competing concerns, Johnson reduces the problem/solution model to a tool for the post-rationalization of design. Clearly, problems and solutions are narrative devices that help designers make sense of their work after the fact (just as archetypes help recast chaotic experiences into the ordered structure of myth) but Johnson leaves the question of how this model fits into the process of making graphic design largely unanswered.

The designer-as-problem-solver is an old metaphor. Early modernists used it to convey a purely rational process, invoking its mathematical origins. Michael Johnson uses the same metaphor to explore the interpersonal nature of the design process. Is it the times that have changed or design practice itself? Do designers actually solve problems or are they in the business of convincing people (including themselves) that they do? Is there a designer-as-analyst model for graphic design? In spite of its title, *Problem Solved* raises more questions than it answers.