

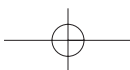
## Introduction

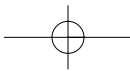
A primary gratification of editing a journal that embraces as broad a field of research as *Design Issues* does, is discovering common themes that are rooted in different research strategies, whether stemming from history, theory, criticism, or empirical investigation. Since the journal began in 1984, the editors have been committed to bringing different kinds of research and arguments into relation with precisely the expectation that related concerns and issues would surface.

This issue of the journal provides an excellent example of that process. Among the themes that have emerged in this issue's articles are the changing role of the designer, the growing complexity of design, the need to incorporate the contributions of users in the design process, and the question of how the representation of a design situation conditions the designer's response to it even when the representation is at odds with how things actually are.

Massimo Negrotti establishes a framework for the issue with his careful discussion of our need to understand the meaning of "artificiality" when we make objects. This is particularly important in fields like bioengineering and artificial intelligence where methodological confusion may arise when the designer seeks to produce the counterpart of something natural such as a bodily organ or the human brain. Negrotti provides a clear vocabulary to clarify the relation between the natural and the artificial. The natural object is an *exemplar* which the designer apprehends according to different *observation levels* that range from the electrochemical to the physiological, aesthetic, or even spiritual. What is important is that the designer understand the *essential performance* of the natural object which will be produced in its artificial counterpart. By establishing a clear distinction between natural and artificial objects, Negrotti shows us that the designer's choice of observation levels is essential in creating an artificial object that can perform like a natural one. This puts a strong emphasis on the designer's ability to "construct" the design situation as opposed to perceiving the problem of replicating nature as given.

Malcom Miles, in his critique of urban design strategies that do not sufficiently incorporate a city dweller's lived experience, shows how easy it is for planners to ignore this experience, simply by the way they construct their design problems. He writes about the power and control inherent in developing design policies on the basis of maps and abstract representations of urban space and argues for the importance of dialogue with people who live in the places where planning occurs. To support his position, he selects and discusses four articles on planning theory that embody both exclusive and inclusive strategies of planning.





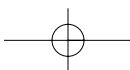
Miles's emphasis on the relation between planning methodology and the ability to "see" a situation echoes Negrotti's discussion of observation levels in relation to producing artificial objects. What is essential in both instances is the way that the designer views the design situation. For Miles, the issue is modernist reason, which obscures the messiness and complexity of lived experience, while for Negrotti it is that the designer's observation of nature will determine the way artificial objects are conceived in relation to it.

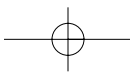
Where Negrotti sees the designer's relation of the artificial to the natural as a problem of individual perception, Wolfgang Jonas addresses the problem of how designing can be theorized within a social system. He draws heavily on philosopher Niklas Luhmann's concept of *autopoiesis*, which claims that human beings are autonomous organisms who apprehend the world through observation. This governs their cybernetic exchange with the system. Jonas's espousal of social constructivism has some correspondence to Negrotti's theory of observation levels as well as Miles's argument that planning techniques are also constructed, although this construction is not always foregrounded by those involved.

Each of the three history articles in this issue focuses on an individual designer. Brought into relation with the articles on theory, they are very much enriched. Michael Large's article on Canadian designer Paul Arthur relates closely to Miles's critique of urban planning theory. Arthur spent much of his career working on problems of wayfinding. He moved from an initial fascination with the principles of Swiss typography to a much broader concern with making public signage comprehensible. This brought him to the understanding that it was essential to incorporate a great deal of information about the user into the planning process. Through case studies, Large shows us how he did this.

Gerd Fleischmann's article on a poster by Max Bill is a study of a single object. Fleischmann, a graphic designer and design educator, was involved with organizing the Bill archive and found hundreds of sketches for the poster he writes about, which publicized *Concrete Art*, a 1944 exhibition at the Basle Kunsthalle. Bill believed strongly in creating visual metaphors of order to counteract the chaos of the world. While this can work for an artist who is responsible first to himself or herself, it leads to the type of planning theory that Miles finds unworkable. Bill's faith in geometric metaphors can also be contrasted with Paul Arthur's desire to move beyond Swiss graphics in order to incorporate user perceptions. Fleischmann's article carefully details Bill's creative process and helps us to understand how the artist translated his desire for clarity into a formal object.

Lastly, Fujita Haruhiko article on Notomi Kaijiro fills in a missing piece of design history by describing the career of this little known design educator. Kaijiro was an official in Japan's exhibit bureau at the 1873 World Exhibition in Vienna, where he was





exposed to Western technology. Upon his return, he had the idea to adopt modern technology to reinforce, rather than replace, traditional crafts in Japan. In 1887 he established his first school of crafts and design and had an extensive career as an educator. This account of Notomi Kaijiro shows us how much more we need to learn about design in Japan and its relation to the country's industrialization process. While it is more difficult to find themes in Kaijiro's life that connect to the theory articles in this issue, his struggle with the relation between craft and the machine is a forerunner of the kinds of issues that we face today as we strive to better understand our engagement with the artificial. Even such an indirect connection makes the relation between history and theory worthwhile. It supports the value of history for the understanding of theory and enriches the meaning of history when it is informed by an awareness of contemporary concerns.

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