Adaptive Landscapes

In the 1960s, Archigram—a British group of architects and artists—proposes a city with the built-in prospect of change.[1] In the 'plug-in city', all architecture is hypothetically interchangeable, and can be replaced as preferences and needs change. The plug-in city requires framework and infrastructure (hardware), which can accomodate the modular and interchangeable component parts (software). Prefabrication and standardization are both essential for this type of modularity—an anticipation of change based on component parts which can be assembled and reassembled in any order.

While Archigram's plug-in city remains in the realm of science fiction, some of its characteristics are paralleled in the work of the Japanese Metabolists, most prominently in Kisho Kurokawa's Nakajin capsule apartment building in Tokyo, a modular high-rise built in 1971. It can, in theory, accomodate additional units, which plug into the frame of the building. Tokyo at the time was insufficiently urbanized to accomodate Kurokawa's ideas, as most inhabitants preferred the suburbs to city living, and the building's potential was never utilized.[2] Yet it still exists, incorporating change literally, built-in from the onset.

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1
Cook, Peter, edited by.
Archigram. Princeton
Architectural Press,
New York, 1999.
Archigram was a group
of architects and artists
in the late 1960s. They
addressed urbanism
from a counter-utopian
standpoint, presenting
future scenarios of
what they advocated as
the new architecture.
Their concepts included
walking cities, the plug-
in city, nomad cities,
instant cities and live-in
pods.

2
Suzuki, Akira. Do An-
droid Crows Fly Over the
Skies of an Electronic
Tokyo? The Interactive
Urban Landscape of
Japan. Architectural
Association, 2001.
This collection of essays
discusses the impact of
social and technological
change on Japanese
cities. Tokyo is described
as a city with a highly
mobilized population,
which is "extremely fluid
and capricious. It has no
tradition of architectural
culture, its infrastructure
is quite haphazard, and
its local communities—
recently even the family
unit—have begun to
disintegrate." Effects of
these living conditions
can be seen in the
proliferation of capsule
hotels and one-room
apartments.

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Design can be adaptive, demonstrating a potential for change, as the conditions and context within which it operates change. Change may be seen literally or metaphorically. Change in the literal sense is inherent in reactive and dynamic media. It relies on the separation of form from content, the former a product of the latter. Change in a metaphoric sense is implied or intrinsic. It may be causally contained within static form, or evoke the expectation of variance. Adaptive landscapes remain constantly in fluctuation, changing according to our changing values as a society.

I have always searched for order, in an attempt to classify, structure and make sense of an increasingly complex world. Logic and rationale are the driving forces in my work, from the abstraction of natural forms to invoking systems and networks. While my method is primarily conceptual, trial and error remains an important part of the process, satisfying my need to create in order to understand. As a designer, the dichotomy I face is a drive to create, to layer, and yet at the same time to organize, simplify and understand. I have been exploring computation as one technique by which to satisfy both.

Intricacy

Computation leads to intricacy. I am intrigued by the idea of creating complexity through reduction. As I have found through an approach based on subtraction, attempting to reduce an already simple form, whether or not by computational means, results in complexity—while the outcome is increasingly determined with every design choice, the combinatorial possibilities become progressively more complex. Thus, a programmatic design process, separating the conceptual from the execution state, involuntarily leads to a loss of control after the conception. A loss of control, however, does not equal a lack of intent. Instead, it refers to the absence of the human hand in matters of production, a factor which has long become a reality. Rather than allowing our actions to be mediated by the proprietary tools common to our industry, we may create our own.

Instant Design

An integral characteristic of adaptive design involving computation is a verifiable process. Being preconceived, the process is also transparent and replicable, lacking the ambiguity of more traditional methods of design. Of course, the choices of visualization are no less subjective, and in no way compromise the vision of the designer. As a method for information visualization, computation allows the recognition of patterns from the characteristics of a dataset. As a method for form-making, it has the potential to produce results which are both unexpected and beautiful in their intricacy.

Adaptive design stems from a decentralized process, in which the creative challenge to the designer is not in creating finished products but rather open systems that can sustain themselves. This is apparent in the fields of software and web design, in which the designer anticipates future content and design changes, often from someone other than himself.

Implicit Change

Metaphorically, adaptability means anticipating the possibility of change. Scalability and flexibility are central, allowing for translation into any form of design. Flexibility is the notion that any particular design can act as a container for similar information; scalability is the notion that a design can expand or contract, adapting to larger or smaller volumes while maintaining its integrity. In actuality, my approach aims at a kind of open-endedness, toward the impression that no piece is ever finished, but forever in a state of becoming.

Modernist Dystopias

For the last century, Modernism has unquestionably been the predominant worldview. In design, the Modernist movement advocated a return to a universal geometry and the utilization of the industrial modes of mass production, such as the assembly line. Through automation, companies were able to supply regions, entire nations, and eventually export to other countries, preparing the world for globalization. As a result of this pursuit of efficiency and economies of scale, many would say, cultures are becoming increasingly homogeneous. By promoting a one-fits-all solution, Modernism actually promotes an idealism of types, the only legitimate types being those that conform to global standards.

If this is our current situation, it is still far removed from the aims Le Corbusier puts forth in his 'Modulor': "To standardize, which is to run the risk of arbitrary choice, and the reverse of that risk: a wonderful freeing of the methods of economic production. More: to avoid the deadly error of making short cuts to standardization, of standardizing by mutual concessions. The promise, guaranteed by experience, always to offer harmony, variety, elegance, instead of banality, monotony and lack of grace." While the premise behind the Modulor is acceptable—artistic progression within set limitations—it was nevertheless founded on a single individual's point of view, though it attempted to appear universal. Furthermore, progress within design and the arts is itself a dubious concept. Instead of the "mutual concession" Corbusier mentions, however, design can be based on contextual data. It is through context that we may begin to address the problems of our age.

3
Le Corbusier, The Modulor, Harvard University Press, 1954. The Modular is a development of the Fibonacci series, applied to the human figure—it allows harmonious composition in accordance to human proportions. Of interest is Le Corbusier's writing on systems of measurement, of interval, as well as standardization and prefabrication. His belief is that restrictions of interval, such as the tonal scale in music, advance human creativity and achievement. This has interesting parallels to the more recent debate surrounding analog and digital systems.

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Frederick Taylor's vision of maximized human productivity has been realized in a dystopia. How far productivity can continue to increase is questionable. Yet, in order to stay competitive in a global market, our economy-driven society is compelled to continue inventing. Instead of cheap and fast production, a re-orientation towards creating value through customization seems inevitable.

Designing Design
Collaboration and contextual data may stand at the center of an adaptive design practice. At the most fundamental level, the objects we design could carry an intrinsic anticipation of change, captured either in the process of conception, or the subsequent personalization and adaptation throughout the course of their lifecycles. Furthermore, as most designers, I am searching for added value in the things we create and consume—something more than the object stripped to its fundamentals, an assertion of humanity and purpose.

Ours is an information-oriented society—we believe in facts and the quantitative, the objective; the results of science, mathematics and computation; we are skeptical of the subjective, the qualitative, the intuitive and the supernatural; those things unfamiliar and those which go unexplained. Yet, innately, there is a tension between the physical entity of information, in whichever form it presents itself, and what we believe—or, what we are led to believe—it represents. It is this controversy which I intend to explore, subverting expectations and questioning the object or objective. It is through misreading, faltering and the anxiety caused by confusion or incomprehension that we may perhaps look behind the scenes at what is actually taking place.

Ours is a stratified society. The promise of modernity was the ideal, the utopia. It is now again the situation which inspires us, the reality of the human condition, and the promise that technology, having first been demonized, then idealized, can now finally become simply a tool for understanding and constructing our roles in the world.

Adaptability

My thesis begins with several opposing concepts: the ideal and the empirical; order and disorder; top-down and bottom-up; heirarchical and flat; static and dynamic. Extremes within a multidimensional coordinate system, these ideas represent the poles between which any form may be situated. Instead of categorizing, they direct. This approach has helped me arrive at a personal method, of which adaptivity forms the core.

Postmodernism & The Death of the Author

The beginnings of Postmodernism are found in literary theory.[4] Barthes, Foucault and Derrida, as the movement's key figures, introduced the idea that no piece of authored writing was, in fact, original. Rather, it was situated along a vector of writing in all its entirety. The authored text was based on systems, codes and traditions, "woven from threads of the 'already written,' the 'already read'" (Allen, Graham). Out of response to a growing disillusionment with the idealistic goals of modernism and a reality consisting of unbridled commercialism, transforming America's urban landscapes into strip malls, billboards and generic building façades, Robert Venturi began developing a language of appropriation in the 1960s, using the American vernacular type as a kit of parts to recombine and re-purpose. While Postmodernism advocated the appropriation of a culture which grew independently out of societal and commercial predispositions, as opposed to supposed elitist ideals of order and pure geometry, Modernism, which originated from Futurism and its contempt for history and knowledge, attempted to start from a clean slate, turning instead to technology and the industrial machine. The key to understanding their disparity, therefore, is empiricism.

The Empirical Model

Since economic theory became an academic discipline, there has been an ongoing dispute between followers of the empirical model, represented by Neo-Ricardian theory, and the equilibrium model, represented by Neo-Classical theory. The former, derived from the writings of David Ricardo, advocated the formulation of market theories based solely on the existence of prior statistical evidence. Neo-Classicism, on the other hand, postulated the existence of a universal equilibrium state, based upon which markets could be explained. It assumes perfect knowledge on behalf of all the market participants, which, in practice, makes it difficult to employ without making adjustments to the far-from-perfect conditions of the real-world. The empirical model, on the other hand, which has all but disappeared in contemporary economics, is resurfacing in other disciplines.

4

Barthes, Roland. Mythologies. Hill and Wang, New York, 1972. Roland Barthes writes about the nature of myth in the everyday. Barthes equates the idea with the bourgeoisie, the so-called middle-class striving for respectability. Speaking broadly of the role of the idea and the event in his contemporaneous culture, as in the section comparing the faces of Gretta Garbo and Audrey Hepburn. this book strongly influenced my orientation towards a theory of adaptability.

5

Rock, Michael. The Designer As Author. Originally published in Eye, no. 20 (Spring 1996). Rock analyzes the contemporary notion of authorship in graphic design, a somewhat ambiguious term which he helps clarify by pointing out the common pitfalls of misinterpretation. Most interesting is perhaps the distinction of a form of authorship resulting from a common voice throughout the work of a graphic artist, and one at that which is not purely stylistic, yet rooted in a transcendental personal understanding of the world.

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