Inspiration

Contemporary Design Methods in Architecture

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Inspiration: Contemporary Design Methods in Architecture is a comprehensive compilation of work samples and ideas on design and gestalt, illustrations and graphic configurations, textures and structures, as well as form and spatial development. This book features more than 800 examples of abstract compositions that relate to architectural design methods and principles. These methodologies find their ground in the work of contemporary architectural design practice, while still being highly applicable to other related creative fields.

Inspiration showcases hundreds of examples, models, sketches, and renderings of abstract architectural design applications. In addition to this substantial body of visual work, the book also documents and details the generative process and production of these design creations.
The knowledge of contextual relationships and their requisite translation into a process of design or form requires a certain abstract comprehension of different cultural phenomena.
Introduction

The book *Inspiration: Contemporary Design Methods in Architecture* focuses on the contemporary use of emblematic design strategies, laws, and procedures in the field of architecture. The book features process-oriented design approaches through the illustration of abstract exercises, intended to develop genuine solutions that place themselves within architectural design and theoretical discourse. The content and methodologies in this book are universal: although the focus of the book is on architectural design, generally accepted design parameters such as perceptual theory and proportion studies will also apply to other related creative fields. We believe that designers, landscape architects, artists, illustrators and students will find this book a source of inspiration.

The conformation of our environment is a reality whose basic prerequisite lies in the reflection of our cultural or natural context by constitutive and creative individuals. Besides fundamental design principles, this particular process has historically been driven by societal phenomena, theory and science (ref. 0.1). A strong affiliation with up-to-date knowledge of cultural and scientific facts respective of their context has therefore proved to be crucial in the development of our own consciousness and existence.

Our society has reached such a high degree of understanding that even simple design tasks often require a highly complex system of intellectual realizations and resulting design procedures in order to gauge solutions that effectively reflect our cultural development. The knowledge of contextual relationships and their requisite translation into a process of design or form therefore requires a certain abstract comprehension of these different phenomena. The mastery of these methods and the intellectual ability to transfer a multifaceted issue into a design statement is an obligation for future generations of architects and designers.

To work within these challenging parameters, process-oriented research in conjunction with a thorough knowledge base are necessary to consistently cultivate fluctuating and ever-evolving design approaches. Only innovative and conceptually sophisticated
solutions can achieve a comprehensive and long-ranging design value. To strive for this kind of architectural quality is therefore the only way to render a design capable of generating cultural relevance and societal value.

**Design Methodology + Cultural Significance**

Design methods in architecture never lose their relevance. The now-globalized profession is increasingly searching for architectural individuality, giving the principles of architectural design an even greater significance in city marketing and corporate identity. For better or worse, many highly celebrated “signature buildings” have been executed since the completion of the influential and undoubtedly brilliant Guggenheim Museum by Frank Gehry in 1997, unleashing a stream of ever progressing fashion styles in architecture. Having taken these trends in consideration, the design methods in this book will not follow a style or fashion or postulate form for the sake of form. Instead, the book will strive to demonstrate how abstract design elements can playfully interact with building constituents to achieve a harmonious whole that is comprehensible and artistically significant. At their best, these relationships will lead to what we would like to introduce the aspect of “cultural relevance.”

The search for architectural individuality or uniqueness can be considered one of the central themes in contemporary architectural design. But uniqueness and inimitability on their own will not create architectural quality. To achieve architectural quality, designers must consider the cultural relevance of their work by placing it within a cultural context.

This term can be used to gauge how well an idea or production of an idea speaks to society as a whole: a building or an architectural solution of any kind has cultural relevance if it has the capacity to demonstrate the following principles: deep roots in a greater cultural idea, concept or heritage; inherent qualities and design concepts of non-economic value; innovative and progressive ideologies; communication with its cultural and environmental context; and finally, capability to enrich cultural human life.
The current trend towards architectural individuality and uniqueness seems to be highly tailored to the individual designer. A process like this is in danger of becoming arbitrary if one is not carefully considering all aspects of all design parameters at hand within any architectural assignment. One can argue that contemporary building activities of an ever globalizing society tend to negate the classic design elements of local origin and material-specific composition, which can for instance be found in vernacular architecture. (ref. 0.2)

The design quality and relevance that is inherent in a local building and craftsmanship culture results from a long evolution of traditions, available material, and lore of crafting abilities. Nowadays, these qualities often converted to luxury items, relegated to a niche existence, and only able to survive in confined geographical areas. As these examples are already deeply rooted within their cultural context, it is safe to say that by nature these are already cultural relevant designs. If this classical form of cultural relevance is replaced through a combination of random products from the building industry that are executed through standardized detailing by the lowest possible bidder, a cultural relevance is obviously lost. On a larger scale this means that the cultural and also natural harmony of any given geographical region is potentially disturbed, if not destroyed. This “cultural neutrality” can be found in almost every region of the earth. However, this book does not aim to continue the ideological discourse between modernism and traditionalism, nor does it propagate critical regionalism. Instead, this book seeks to establish and explore certain constant design parameters which are always inherent qualities in architecture, regardless of context, site, or scale of time. Finally, Inspiration strives to link these parameters to contemporary architectural practice.

Globalization – specific vs. generic

Historically, the propagation of certain architectural styles has always exceeded boundaries and continents (ref. 0.3). Current architectural development is characterized and trenchantly described by Hans Ibelings as “supermodernism” (ref. 0.4). Ibelings categorizes two types of supermodernist architectures:

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0.2 Bernard Rudofsky: Architecture Without Architects: A Short Introduction to Non-Pedigreed Architecture
0.3 for example gothic architecture or art deco
0.4 Hans Ibelings: Supermodernism, Architecture in the Age of Globalization
buildings of high architectural value that have the power to give meaning to their context, and buildings that are absolutely generic and could be found just about anywhere. If we consider every manmade structure, the majority of the built environment, which is falling into Ibelings second group, was never meant to last. We would therefore like to concentrate on the first group and establish the qualities and aspects that are necessary to gain such a power of presence. The thorough reflection of the cultural context through an individual designer or design team, and the linkage from the subject of the architectural design to the current endemic culture, prevents the neutrality of the latter group, and creates a potential for the genesis of cultural relevance within a globalized architecture.

Design Methodology + Architecture

A valuable example of cultural relevance in contemporary architecture can be found in the designs of Kazuyo Sejima and Ryue Nishizawa (SANAA). Although their work is rooted in the cultural understanding of space in Japan, it can also be interpreted as a reflection of the cultural context of the digital revolution and the resulting virtualization of our current society. Similarly, Sou Fujimoto’s radical spatial concepts under the slogan “primitive future” (ref. 0.5) introduce ideas about the nature of architecture and architectural space in a global society. More than any other architect of his generation, Fujimoto takes a stance towards a nonspecific and flexible use of space, ultimately connecting basic human needs to the reality of our globalized society. So in its best way, this very sensitive form of “global architecture” begins to reflect the current societal context while still being highly influenced by its local culture or history.

It should be noted that while the design methodology of these architects follows a very personal approach, their work also relies on universally valid aesthetic principles. Due to the unique nature of their work, it is not advisable for young designers to merely follow these styles, but rather understand the underlying universal principles behind the architect’s design decisions. It is therefore essential for designers to develop their own stance and handling of the relevant architectural composition elements. For this reason, it is more important to look beyond the emblematic...
quality of a given piece of architecture in order to find
and understand the inherent design harmony that
operates beyond the personal and sometimes subjec-
tive criteria of the author. If we stay with the example
of SANAA or Fujimoto, we can easily look beyond the
fascinating personal predilection of dematerialisation
or spatial indetermination and always find general
qualities such as additive design elements, emergent
effects and self-similarities. It is precisely these at-
tributes that this book will elucidate. There are many
more works within the current architectural discourse
which highlight this point. The examples featured are
not intended to present a style or endorse a certain
kind of architecture, but rather reveal principles that
constitute good design. It should be noted that most
examples are also chosen for their contextual and
cultural relevance. Without this type of integration
none of the featured works in this book would be
possible.

**Design Methodology + Digital Culture**

The references of the examples shown in this book
complement the design methods featured in each
chapter. These methods are also examined by various
creative analysis methods, including digital investiga-
tions. Computational technologies have given rise to
many new design methods and to experimentation,
making it possible for designers to seek solutions us-
ing emergent digital tools and techniques. This book
features examples of digital explorations in conjunc-
tion with their design principles, in an effort to estab-
lish a foundation of contemporary and fundamental
design methods in architecture.

The research and application of digital design and
fabrication methods continuously impacts archi-
tectural practice. Innovative material and product
applications will not only lead to new design pos-
sibilities in architecture and product design, but also
allow a direct communication between designer and
production facility. The resulting design and produc-
tion possibilities for specific custom-tailored building
parts allow for the realization of complex and highly
specialized building components. Computational
techniques have the potential to be valuable design
tools.
In architectural design, it is imperative to assemble elements, building components, and materials. In addition to the tectonic, constructive, and structural makeup of a given element, architects must also consider the potential of its inherent aesthetic and design qualities. The design can begin as a simple combination of a number of single entities and component parts starting with the point, the line and the surface. The compositional alignment of these elements is a vital attribute of a cohesive design.

Without this design consistence, there is a loss of gestalt quality. For example in extremely heterogenic or generic places such as landfills, many industrial areas, most suburban housing developments or other such spatially inconsistent places, one will find little compositional conformation or compositional harmonic qualities. These conditions illustrate a loss of constitutive organization. Conversely, by the limitation of one or only a few elements (in this chapter circles and pixels) or a comprehensible rule structure in their arrangement, an initial design quality can be established.

One way to assemble a design consisting of single elements is through additive composition (ref. 1.1). The effects of additive composition can be found almost everywhere: in nature, culture, art, design and architecture. Children...
configure LEGO bricks with joy and fascination into infinite constructions and formations. Terraced rice paddies in Asia reflect the same design principle (fig 1.1). The landscaping of rice fields and colorful combinations of plastic blocks are only two examples of additive compositions: they appeal to us and capture our attention because of their inherent order and fascinating repetition. Similar qualities can of course also be found in many artworks, for example Andreas Gursky’s photographs or the manic drippings of Jackson Pollock’s paintings; both draw their allure from this simple but very effective design method.

Repetitive or similar elements can sometimes begin to constitute a new and a unique whole that ultimately possesses exclusive characteristics in its constituting substructure. This phenomenon is called emergence: the occurrence of new properties on a macroscopic level as a direct result from the interaction of its single parts on a microscopic level – or as simply put by Aristotle, “the whole is greater than the sum of its parts.” (ref. 1.2)

An example of a historic and relatively simple additive composition can be found in Germany’s Aachen Cathedral (fig 1.2), whose structure comprises the arrangement of building sections, each of which reflect the architectural style of the era they were erected. The differentiating building parts reveal the captivating spatial continuum of the interior, while their resultant cluster-like urban qualities create an emergent effect. Another example that shows the material and spatial qualities of additive design can be found in the cantilevered balconies that are horizontally read against the vertical quarry-stone walls at Frank Lloyd Wright’s Fallingwater in Mill Run, Pennsylvania (fig 1.3).
Many examples of modernist architecture display these principles, and their application is even more obvious in recent architectural developments. Contemporary examples of additive compositions and emergent effects in architecture can be found for example in the Guggenheim Museum Bilbao by Frank Gehry (page 9, fig. 0.5), where building parts clearly share similarities in texture and shape, as well as the dotted embossed, and perforated façade of the de Young Museum by Herzog and de Meuron in San Francisco (page 54, fig 3.1). The architectural designs of an even younger generation of architects such as Sou Fujimoto and Bjarke Ingels often utilize these strategies to achieve spectacular spatial and material effects. The examples in the first three chapters of this book delve deep into this design method.

In the first section, additive compositions will begin with designs achieved by the manipulation of points and dots. In our examination, the points will not yet be regarded as a means to derive architectural space, but as a method to achieve a graphic quality and derive a two-dimensional composition.

The works in the following chapter will illustrate the potential of additive configuration of points. The intention is to achieve and develop a design that is not generated by using digital filters or programming, but through a habitual approach. The final products are derived through physical design techniques like hand-sketching, followed by manual manipulation and simple transformation steps in a two-dimensional CAD program.