



PERFORMALISM

FORM AND PERFORMANCE IN DIGITAL ARCHITECTURE



EDITED BY

YASHA J. GROBMAN AND ERAN NEUMAN

ROUTLEDGE


PERFORMALISM:

FORM AND PERFORMANCE
IN DIGITAL ARCHITECTURE

YASHA J. GROBMAN
AND ERAN NEUMAN



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PERFORMALISM:

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TODAY, with the advent of digital media technologies and the ability to conceptualize, express and produce complex forms using digital means, the question of the status of the architectural form is once again under consideration. Indeed, the computer “liberated” architecture from the tyranny of the right angle, and enabled the design and production of non-standard buildings, based on irregular geometry. Yet the questions concerning the method of form expression in contemporary architecture, and its meaning, remain very much open.

Performatism takes up this discussion, defines it and presents changes in form conception in architecture, followed by their repercussions. In the context of the architectural discourse, this book posits that today we can define architectural form and performance as an “ism”. Supported by a wealth of case studies from some of the top firms across the globe and contributed to by some of the top names in this field, this book critically examines the implications and influences of computer-based design on form as performance.

Highly illustrated throughout, and with a unique emphasis on professional practice, this book is essential reading for all architects, aspiring and practicing.

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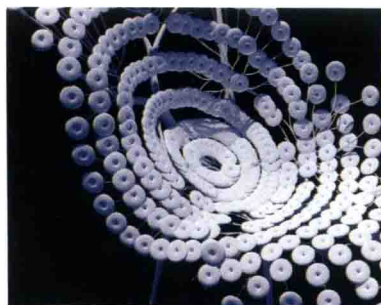
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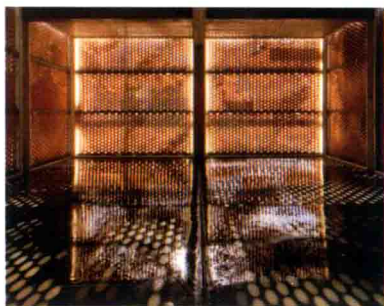
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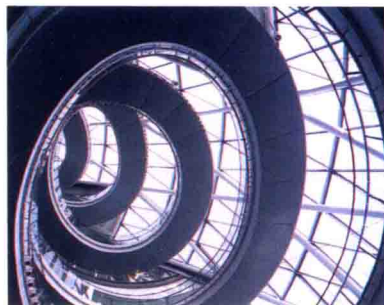
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THEORY AND ESSAYS

Performatism: a manifesto for architectural performance

Eran Neuman

Yasha J. Grobman

TALKING IN "ISMS" might be risky. "Ism" assumes that behind a described phenomenon stands a group, a movement, or a collective, whose members share points of view, ideologies, and modes of production. It entails that members included in an "ism" partake in a cause and a distinctive doctrine and theory. It alludes to a moment in history in which dispersed notions crystallize into a coherent idea and change political, cultural, and social notions brought to a rupture within certain realities, proposing new ways to look at, transform and engage with these realities. At times an "ism" demarcates a perception of life in absolute terms, seeking a singular way to relate to and produce life. The risk of talking in "isms" lies in the reduction of a certain phenomenon into several limited concepts.

The need to characterize phenomena and at the same time reflect the complexities related to these phenomena led, throughout the course of history, to the definition of "isms" according to the modes of operation performed by their members. That is, not only according to the shared modes of production, but also through an analysis of the attribution of discursive mechanisms. Many "isms" professed avant-garde ideas by performing avant-garde actions. Means and ideology were unified; together they provided ways to define those "isms." Sometimes "isms" used manifestos as a vehicle to spread their ideas, call for change and search for a future. The manifesto, as Mary Ann Caws claims, was "crafted to convince and convert." From the Communist Manifesto to the Futurist one, from Surrealism to Situationism, it functioned as a political and critical tool worded in the first person plural ("We should finally like to state . . ." as Umberto Boccioni professed) and outlining modes of operation that would conclude in the new and about the future. An analysis of these manifestos assisted in characterizing those "isms."

Performatism takes the risk. It proposes defining a phenomenon common in architecture today while also providing a sort of manifesto for this phenomenon: a retro-manifesto. Observable and distinct, even though it contains discrepancies, this phenomenon can be categorized according to the points of view of those occupied with similar ideas and forms of production. The present book outlines the ways in which prominent

architects today utilize discursive formations and modes of operation in and about the new. Through those architects' projects, texts and words, the book does not only map out attitudes in architectural production today, but it also proposes a way of looking into architectural realities existing in the interstice between form and function, object and subject, space and flesh, perception and cognition, politics and ideologies, and defining these realities as a modality for performative architectural existence today.

WHAT, THEN, is performance in architecture? What is architecture occupied with in recent years? How does it perform? What, in effect, makes it an "ism?"

With the advent and assimilation of digital technologies, architecture underwent a big transformation. Having broader and more complex means of expression and production, architects who were interested in realizing the potential of computation in design began to explore what were perceived as odd forms, basing them mainly on the outcome of visual properties, on an image, while neglecting to incorporate other aspects of architecture. This tendency was expressed, for example, in projects by such architects as Marcus Novak and Stephan Perrella whose formal approach, even when examining cultural aspects of form, was primarily based on form's visual properties. Frank Gehry's initial occupation with built digital projects, as executed in the "Fish" and the Guggenheim Museum in Bilbao, rejected aspects of modernism, such as "form follows function," and defined a new level of freedom in the relationship between form and its formal appearance, showing the possibility of realizing this odd form.

The initial interest in form in terms of visual and formal properties in many ways brings to mind a parallel historical phenomenon. In the early twentieth century, as a result of the Industrial Revolution, overwhelmed by the new technological possibilities, artists and architects began experimenting with new forms. Despite the different historical and cultural circumstances from which they derived, Russian Formalism, Dadaism, Cubism

and Futurism can be considered to recall the formal exploration of the time. Albeit focusing on the autonomy of form, these formal explorations enfolded social and political agendas by questioning the relation between form and content. Nevertheless, these explorations were later criticized by Marxist ideologists for having emphasized the formalist aspects in art and architecture rather than directly addressing cultural, social, and political aspects of form making. In a similar manner, artists and architects today, overwhelmed by yet another technological revolution – the Digital Revolution – started experimenting with new forms.

Similarly, in the 1990s, some architectural critics and practitioners claimed that these new experiments reflected a reductionist attitude, one that excludes complex aspects of a formal conception in architecture, relying solely on a few image-related parameters. Reacting against this attitude, they called for the incorporation of other parameters into the conception and making of architectural form, such as those derived from environmental and programmatic aspects. Basing form on function ("form follows function") was not an option because functionalist form making was conceived as yet another reductionist attitude. The logic of form as an outcome of function was mechanistic, relying mainly on the utilitarian aspects of form and not necessarily addressing the complexity of form as a cultural, social, and political product.

For architects, performance provides a wider frame for the conception of the architectural form because it incorporates and lingers in-between the functionalist and image-based approaches of form making and conception. It also suggests breaking dichotomies between the performance of form as an object and the performance of the human subject. Form in this case is animated, acting and interacting with the surrounding objects/forms and the human subject, creating possibilities for the emergence of new realities. It is an integral part and the outcome of inclusive processes based on nature as well as culture. As such, a performative perception of form would call for its optimization as a product of technical utilization, while at the same time it would aim to incorporate symbolic,

perceptual, and behavioristic aspects of form as a figure that displays a visual and sensual appeal. Form in this case would be more flexible, adjustable, and free.

IN THE SEARCH for a new logic in the conception of form and a new relationship between the different parties in the triangle Form–Function–Subject, Performalism proposes that computer-based architecture transforms notions in the architectural discourse from function to performance. The work presented in this book addresses the question of form as an outcome of performance. It claims that digitization shifts form-making to a complex, dynamic operation based on performative aspects. As a heuristic device, the book includes works from both ends of performance of form in architecture: on the one hand, an image-based conception of form and on the other, a functionalist attitude toward architectural form. In-between, the book presents a range of works that treat the question of architectural form from neither end, but try to explore various conceptions of form as an inclusive procedure, addressing perceptual and behavioral aspects. To that end, the book presents the multi-faceted perception of form as a result of several performative procedures.

In Peter Eisenman's conception of form, which is an outcome of diagrammatic procedures, performative and conceptual inputs are used both as an initial field-grid and as disturbances that modify the field-grid and generate the subsequent formal expression. Performance in this case relates mainly to the design process itself rather than the specific parameters of the final formal expression.

Greg Lynn FORM's mode of form generation is an investigation of the potentials of computer complex form manipulations and manufacturing. Here performance is conceived as a development of communication mechanisms between designers and machines and between environments, played by internal and external vectors.

Preston Scott Cohen's complex initial form has strong geometric origins. His approach to performance

emphasizes a level of virtuosity that goes beyond function as a result of the need to address multiple constraints, with often contradicting demands that are addressed simultaneously.

Archi-Tectonics' work addresses the architectural figure by developing a formal strategy that goes beyond the parametric design into the aesthetic and integrates both. Form is generated through the deployment of three different typologies of matrix: armature, smart skin, and interface. Each of these organizers operates as a mechanism for "associative parametrics" – the feedbacks that link component assemblies in responsive feedbacks, and link built organizations and their context or environment.

Contemporary Architecture Practice addresses formal affects, effects, and atmosphere rather than concentrating on the environmental performative aspects of form during the initial form-generation process. In the following stages, performative aspects (environmental and perceptual) are being used while developing innovative form-conception and manufacturing methods.

The work of R&Sie(n) exploits the formal possibilities introduced by computation and pushes the performance of form to the limit, to a moment in which form performs as a schizoid process. Here performance is examined in terms of tools that are designed to perform by themselves as facilitators of the final architectural product.

KOL/MAC ARCHITECTURE addresses the relation between form and performance by employing strategies based on models from nature through tools such as fuzzy logic software. Their design process emphasizes emerging possibilities to use this logic to create complexity in architectural and urban systems, while avoiding the reductivism which is frequently linked to computer form generation methods.

In Gehry Partners, LLP / Gehry Technologies' form development process, performance and performative simulation tools, such as Digital Projects, are realms for analyzing and actualizing designs that were initially developed in a rather traditional method, using physical models.

Franken Architekten's formulations of form as registration of force vectors are attempts to optimize the