A DEBATE about RE-SEARCH in ARCHITEC-TURAL DE-SIGN

DE-SIGN-DRIVEN RESEARCH

Architectural research meets the general criteria of originality, significance, and rigour. It produces forms of output and discourse that are proper for disciplinary practice, making it discussable, communicable, and useful to relevant audiences. It is validated through panels of experts who collectively cover the range of disciplinary competencies addressed by the work.

REFLECTING ON RESEARCH IN ARCHITECTURAL DESIGN

THE ENVIRONMENT AS AN ARCHITECTURAL PROJECT: ON THE AGENCY OF DESIGN RESEARCH

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Erika Kanagawa, Joy in Architecture, Toto Gallery, Tokyo, 2021. Installation view, scale models. Photo © Yuji Harada.

Sibyl Moholy-Nagy's research on vernacular architecture in North America cast a novel gaze on the relationship between buildings and natural context. Its findings were initially published in her article "Environment and Anonymous Architecture" on *Perspecta* (1955), which explored, from a historical perspective, the relation of man to his immediate environment by means of the tools, materials, and technologies deployed in creating a dwelling for himself.

The photographs that accompanied the article and, subsequently, the 1957 book "Native Genius in Anonymous Architecture" were shot by the author during "some 15,000 miles of travel [by] every conceivable means of transportation" (Moholy-Nagy 1957, n.p.) in the period between 1948–1952. Moholy-Nagy's perspective resonates with the challenges design must face today. On the one hand, it calls for a rethinking of buildings from the standpoint of landscape, climate, topography, and the natural environment. Her "focus on climatic, formal, and material responses to varying spatial and temporal environments is closer to an architectural habit of mind – a pedagogy – for energy, heat, and human comfort than parallel technocratic agendas for the same subject" (Moe 2014, 198). On the other hand, it highlights the need for architectural research to coin new tools and processes to explore the multifaceted connections between the environment and the built artefact. In so doing, it stressed the importance of non-mediated impressions of the built environment and of wandering, travel, fieldwork, observation, and empirical knowledge. The research by Sibyl Moholy-Nagy in the mid-1950s draws attention to the need to associate socio-ecological concerns with concerns about architectural form, structure, materiality,

and performance, which emerges all the more cogent in connection to design practices today. Arguably, it forms part of visionary late-modern historiographies that "underlay relational approaches to architecture" and are exceptions to its naturalization as a field "focused on the formal to the exclusion of environmental, behavioural, or social" demands (Barber 2020, 14-15). In light of climate change, the relationship of architecture to the environment has become ever more complex and elusive, requiring new approaches to design research after interrogating the role of concepts, words, and metaphors and their impact on design.

The term 'environment' entered architectural discussions more vividly in the latter half of the twentieth century as preoccupations about the relationship between building and the natural context began to increase. Initially, it appeared in Reyner Banham's 1969 book *The Architecture of the Well-Tempered Environment*, which argued that function and form, visual and physical perception, comfort and structure ought to be indivisible and part of the same discourse. The book expressed an understanding of environmental design as a technological issue connected mainly to controlling and modifying the climate. On the other side of this discourse, the term environment was

used to theorize a given building's relation to its physical environment in its manifold manifestations. To emphasize, that is, a design stance that intersects with the specificities of the context, history, and tradition, as in the seminal theory on the "pre-existent environments" articulated by Ernesto N. Rogers, which interpreted "architecture as a living process of perceiving, understanding, using, and modifying the environment" (Sabini 2021, 87). Therefore, the environment of architecture is "much more than a matter of pragmatic prescription and technical realisation, however useful that might be" (Hawkes 2007, xvi). Contemporary theoretical constructs such as the environmental imagination (Ibid.) have aimed to address such a tendency prevalent in contemporary architecture, drawing attention to the complex interplay between technics and poetics. Today, design research is called to reinterpret the intermediary relationship of architecture to the natural world in terms of efficiency, sustainability,

and resilience, shaping new narratives on this relationship. Interpreting the environment as an architectural project means moving away from a merely technical interpretation of environmental performance in order to embrace the manifold connections between building and place, experience and movement, intention and time. It relates to establishing a holistic approach to the functional, perceptual, material, spatial as well as quantifiable dimensions of building performance. It refers to examining the "questions of world, environment and nature" again and anew (Frichot 2018, 36).

More recently, the term environment has been interpreted as a field in which design research needs to take action – a field charged with creative potential. Drawing upon the concept of Umwelt, introduced by biologist Jakob von Uexküll in the first half of the twentieth century to refer to a given animal's perceptual environment, Hélène Frichot put forward the conceptual construct "environment-worlds," intending to highlight that both represent "domains in which creative approaches to practice can be explored" – she argues that "this is where practice takes place, often as a matter of necessity in response to the problems that directly confront the researcher in their immediate milieu" (Frichot 2018, 41).

Such a construct resonates with the fact that the consequences of the Anthropocene reverberate on a broader level. Such consequences cast an impact on the tools that architects adopt to document, interpret, and shape the built environment around them. The design project today is called to operate across a broad range of scales, from the building to the planetary one, and this entails considering both human and non-human stakeholders, the material and immaterial traits of space, built form and energy flows.

Connecting the design project to the planetary scale emerges as a crucial notion of design research, as it entails that architecture needs to "think about the Earth not only as a host to cultural diversity but as a host to life itself," questioning whether we can "continue to think about planetary commoning, if not commonality, within the multiple registers (aesthetic, technical, social) that architecture has at its disposal" (Graham and Blanchfield 2016, 12).

Design research in the Anthropocene needs to embrace a shift in the understanding of architecture as a discursive practice that is primarily connected to the production of meanings and abstract images. It instead needs to revisit the interpretation of architecture as a material practice (Allen 1995), associated with both criticism and

design production, language and the visual: a practice which is "engaged in time and process" and devoted "not to the production of autonomous objects, but rather to the production of directed fields in which program, event, and activity can play themselves out" (Ivi, 52). Exploring possible hybrids between design production and criticism, between theory and design project, emerges as an essential action of research in architecture today.

Design research today is called to give a concrete expression – formal, material, physical, practical, tangible – to concepts and practices connected to the architectural environment, i.e., to reducing energy consumption, articulating natural ventilation, controlling sunlight, sustaining energy flows, contributing energy to broader grids, creating microclimates, providing alternative paradigms to carbon form. Exploring the agency of design research in this context entails interrogating the agency of drawing. To grapple with the current socio-ecological issues, research in architecture needs to address environmental sustainability as equally a representation and a design issue. It entails highlighting what is at stake – urgent, critical, crucial – regarding design research and how this reflects in the tools and means of representation the latter deploys. It entails not working "primarily

with images or meaning, or even with objects, but with performance" and being "less concerned with what things look like and more concerned with what they can do" (Allen 1995, 53).

This shift entails defining new associations between design and discourse, project and theory. Design research today demands a renewed approach to architectural theory. Bruno Latour and Albena Yaneva situate the relevance of architectural theory "for architects, for end users, for promoters, and for builders" in its capacity to produce "earthly accounts of buildings and design processes, tracing pluralities of concrete entities in the specific spaces and times of their co-existence, instead of referring to abstract theoretical frameworks outside architecture" (Latour and Yaneva 2013, 88). They draw attention to the need to delve into "a building's extensive list of controversies and performances over time […] to what it does, to the way it resists attempts at transformation, allows certain visitors' actions and impedes others, bugs observers, challenges city authorities and mobilizes different communities of actors" (Ivi, 86).Therefore, design research in the Anthropocene needs to address the relational dimension of architecture rather than its autonomous character and think of the design project in terms of dialogues, pairs, and a broader network of connections. Interpreting the environment as an architectural project, in the framework of design research, entails focusing on aspects that go further to the instrumental, the performative, or the quantitative quality. It entails coining a renewed understanding of phenomenological experience. It involves addressing the relationship between physical artefacts, users, and their immediate environments as well as between these artefacts and the behaviours they may enable.

Research for design in architecture, therefore, increasingly moves away from the making of new objects or buildings and towards the definition of "new affordances that have the possibility to alter patterns of human activity, and might even change entire sociocultural practices" (Rietveld and Rietveld 2018, n.p.). This design aspect nurtures the conclusion that architectural research oscillates between pragmatic and creative approaches. Addressing the design of the built environment today requires working with uncertainty, a condition that emerges as a crucial design factor. Design research may embrace this challenge not as an obstacle but as an opportunity to speculate on the actions, changes, and performances it may generate and allow for. The design research project, in this regard, "requires movement away from its own techniques toward conditions that are not of its own making, an eccentric procedure dedicated to the unseen potential of the world it seeks to remake" (Leatherbarrow 2012, 12). It requires drafting a systematic method of inquiry that operates between synthesis and analysis, between methodical action and, most importantly, wonder.

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