

Introduction from the Editors

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The 23rd Issue of *Forum A+P* investigates and speculates on the relationship between the city and *techno-science*. The term ‘city’ is understood in two ways: first, in a discursive sense – as an object of study and a set of practices – epistemological, aesthetic, architectural, political, economic, and social among others - that deal with such object; and second, as a *reality* that both delimits and challenges the very notion and possibility of representing and knowing it as an object. In its hyphenated form, *techno-science* is understood - in Bernard Stiegler’s words: “as a *com-position* of science and technology, meaning that science submits to the constraints involved in becoming the technology that formulates the systematic conditions of its evolution.”¹ The hypothesis we anticipated the contributions collected in this volume to reveal was that the discipline of architecture is not and has never been ‘safely’ situated in a discursive niche; that its boundaries are always shifting in relation to the changing relationships of technology and science; and more importantly, that architecture – in various discursive scales and modalities – is discursively implicated in the network among technology, science, and the city.

Of course, such implication has a long history, and it goes back to the origins of enlightenment, when Claude Perrault, for instance, used scientific epistemes of classification to classify, represent, and order the classical architectural orders. The work of naturalists like Georges Cuvier and Étienne Geoffroy Saint-Hilaire, and later, Charles Darwin also had a deep impact on the work of nineteenth century architects like Gottfried Semper. The international expositions, on the other hand, displayed the advancements of science and technology in their unprecedented steel and airy structures. The advancements in engineering technologies and the science of mathematics and geometry also had a deep impact on the curriculum of the schools of architecture, triggering divergent pedagogical approaches – such as those oriented toward a polytechnic model and those in line with a Beaux-Arts tradition. Theories and projects of urbanization that emerged in the nineteenth cen-

tury were profoundly affected by the scientific epistemes of the time. They aimed to deal both with the expansion of capital and those of diseases... Nietzsche already saw the earth as a body without organs infected by man. What *form* should the modern city and its architecture take? Not a particular one, because for modernity “*form is nothing*,” to quote Ildefons Cerdà, the great theorist of urbanization. The form should be rather general, that of the organism. Such was the question Cerdà, Camillo Sitte, Hilberseimer, and Le Corbusier asked. Yet those epistemologies of extension and self-generation that made possible such questioning in the first place were already laid out by enlightenment, scientific theories, and critical philosophy in the eighteenth century. It was the main characteristic of the 19th century to find to *bridge* the schism between science and art through the rich rhetorical tradition of organicism. From an epistemological standpoint the 19th century did not couple technology with science into techno-science but subsumed the latter under the former. It was only in the 20th century that the ‘polytechnic’ and ‘artistic’ traditions converged in and through the paradigms of the industrial machine and cybernetics, vis-à-vis a synchronization of the latter with the traditional discourse on organicism and nature. In 1946, Le Corbusier met with Albert Einstein in Princeton and took a picture together under a tree. Seeking ‘scientific’ validation for his *Modulor* from Einstein, Le Corbusier’s pursuit represents Architecture’s eternal desire to be bound to Science, while keeping its natural and organic origins. It is through ‘scientific metrics’ that norms in architecture – from ADA to the stability of structure, from light and acoustics to indoor air quality – are defined, measured and legitimized. While Architecture employs science for assembling material realities, it also embodies its scientific thought processes in form. For example, in their *Electronic Poem* Iannis Xenakis and Le Corbusier captured the dynamic physics of sound in ruled surface-structures; Gaudi’s hanging chain models informed his catenary masonry arches; and Frei Otto used the material reactions between wool and water as a ‘model’

to form-find and to design structure. Furthermore, notions of space, time, form, architecture, atmosphere, and so on – matrices of objectivity that architectural historians inevitably employ – are also legitimized by allusions to science. Empiricism, objectivity, and rationalism in architectural history are indebted to methods and discourses in the Sciences. The History of Architecture is thus analogous with the History of Science.

The relationship between form, techno-science, and the city may be taken less for granted and become less obvious, given the fact that our expectations and anticipations are more uncertain than ever. Such relationship must undoubtedly be revisited again in our new, irreversibly changing world. How is the relationship among science, technology, architecture, and the city reconfigured in the context of technoscience? Our reality today is not only mediated but steadily transformed, re-produced, and re-invented through technoscience both at a macro and microlevel. The “com-position” of increasingly miniaturized hardware with increasingly personalized and *personalizing* software implicates scientific knowledge at every scale. Such “com-position” points to spatio-temporal realities that can hardly be accounted for through the traditional concepts of composition, geometry, boundary, or threshold. If we agree with Fredrick Jameson’s hypothesis that postmodernism is a “force field” that affects a wide spectrum of cultural, economic and social practices, then what form will architecture and the city take under such technoscientific dominance? Are the ‘archipelagoes’ of gated communities with smart homes amid a chaotic sprawl in the margins the only form that the contemporary city can take? How does architecture figure in the “com-position” of techno-science?

Such questions only become more tangible and urgent during crisis, such as these pandemic times. The world resembles a complex web where everything is entangled in a knot: technoscience, politics, economy, health care, media, morality, popular myths, conspiracy theories, history, education, as well as urbanism and architecture. As often happens in postmodernity, the high and the low come dangerously close to one another. Our techno-scientific milieu contributes to this polarized and oversaturated landscape, rendering us fragile and powerless: on the one hand, we have a lot of information; on the other hand, we don’t have a clue what and how to deal with it. The city becomes the empty stage where the crisis *body without organs*, to borrow a term from Gilles Deleuze, is played out. Some of the questions the 23rd issue of *Forum A+P* addresses are:

- How does digital design and modeling technologies influence and figure in the design process of architecture and the city?
- How do the technological and scientific methods, product and applications figure in the construction and occupation of buildings, and how they bear on the social experience of architecture and the city?
- How do the disciplines of architecture and urban planning define and frame their object of research, and how does techno-science influence the way we research architecture and the city?

- What are the epistemological intersections between science and architecture and how they are mediated through technics and technology?

- How does techno-science relate to the housing rights for a Security of tenure, Affordability, Habitability and Accessibility?

- In line with Nietzsche’s dictum that there is no such thing as an eternal return, and Bruno Latour’s argument that we should not “go back to the pre-crisis production model,” what things should we forever change or not change, do or not do, in architectural practice and education?

Such questions were first explored in various workshops and Conference contributions in Tirana Architecture Week 2020 - *Science and the City in the Era of Paradigm Shifts*. The workshops were conceptualized and directed by young architects and planners whose work was selected from Future Architecture Platform. The workshops dealt specifically with multiple dimensions of the city of Tirana; its tangible and intangible qualities, its history and contemporary urban conditions, its people, and its built environment, and how these different aspects intersect with new information technologies. Sonia Latic’s workshop maps “the fabric of the everyday life that unfolds in the form of the intimate and individual experiences of residential space through the perspective of the ‘open architecture’.” Fabio Ciaravella’s workshop “Architecture of Shame [Matera]” investigates the shifting legacies of the avant-garde architecture in Tirana in history and today. Eduarado Corales workshop “Daily Monoliths” explores placemaking through furniture. Matilde Igual and Luis Hilti’s workshop “Parallel T” investigates the “scientific spatial systems imposed upon territories” and how could architecture critically and creatively tap into this systems. Miguel Braceli’s workshop “Body Politics of the Pandemic” explores the “ephemeral architecture and social practices in the public space,” and such architecture enables “a critical perspective facing the social, political, and health challenges of the present.” Renzo Sgolachia’s workshop “Learning from Films” explores the intersection of architectural representation and film. Diego Sologuren’s and Brad Downey’s “Architecture on the Move” explores “the urban potentialities of a set of spots of the city of Tirana through the conception of architectural interventions which share a common feature: movement.” Marcio Sequira’s and Nikolla Vesho’s workshop dealt with exploring structures through form and statics, while Enkeleda Kucaj’s and Eriona Canga’s workshop dealt with the topic of the resilience of rivers.

The contributions of the invited keynote speakers explore the intersection of artificial intelligence, the city, and environment. In “Altect: Can AI maker designs? Architectural Intelligence/Artificial Intelligence,” Makoto Sei Watanabe probes the limits of digital technologies in relation to the design process and how architectural intelligence is irreducible to algorithmic thinking. He concludes that AI will make designs only when the machines, like people, will have dreams: “Getting ready for

¹Bernard Stiegler

that day will involve exploring that path of fortunate cooperation between the brain and machines.”² In “This City Does Not Exist: An attempt at a theory of Neural Urban Design,” Matias Del Campo takes Watanabe’s hypothetical conclusion as a starting point, by suggesting that big data is indeed a form of unconsciousness that can produce machinic dreams, and that different strategies of mining, analyzing, and interpreting big data can change the way we arrive at news forms, authorship(s) and fiction(s). If the machine can dream, could, then, the plugged-in city of today as the ultimate stage of neural exteriorization also dream new fictions of its past and future? Such question drives Antonino Saggio’s “TEVERE CAVO: An Ecological Infrastructure for Rome between Past and Future,” which proposes to reconceptualize Tiber River “as a new generation infrastructure based upon five essential principles: *multitasking, green systems, slowscape, information technology foam and galvanizing*. Such proposal ranges from “multifunctionality to ecological systems, from mobility to information networks, up to the relaunch of the civic and symbolic role of the infrastructures to foster interventions in the built environment.”³ Tracing different discursive genealogies of the science(s) of complexity in “Science and Urban Planning In Times of Climate Crises,” Alessandro Melis proposes that we must come to grips with marginalized conditions – or the ‘dark matter’ of our built environment in order to learn to address the complex and indeterminate issues of the built environment and climate crisis.

The very same issues are investigated in a more detailed and methodical way in a series of peer reviewed scientific papers. What is at stake is the very possibility of urban intelligence, and how such concept can be embodied in different scales and with different meanings. Luca Lezzerini’s paper “Autonomous, real-time, and dynamic configuration of public space in smart cities” explores how the smart, plugged-in cities can “temporarily reconfigure the use of their public spaces, either autonomously or in a human supervised way.” If space is reconfigured in and through the ‘Internet of Things’, then how does our perception change among such things? Jacopo Costanzo and Valeria Guerrisi’s “Urban Architecture: Eyes from the city” attempts to map and understand the intelligence or ‘smartness’ of our gaze through eye-tracking technologies and then instrumentalize it toward the design of urban architectures. How such architectures can be built through robotic processes is the topic of Sara Codarin’s “The Robots are Leaving the Cage.” Etleva Dobjani’s and Dorina Papa’s paper “The [dis]position of Albanian Adobe Constructions” shifts from ‘high’ to ‘low tech’ to deal with the traditional adobe constructions in Albania at the turn of the twentieth century, and how such methods could extend and expand the notion of building’s sustainability. The latter, in its literal sense of the building being upheld, is the topic Steisi Vogli’s and Kristiana Meço’s paper “Non-Normative Buildings After Earthquake in Durrës,” which investigates normative and non-normative building and planning practices in Durrës, in light of the 2019 earthquake. As per its tradition, Forum A+P ends with the Tel Quel - or as is - section, which deals with quick but informed opinions

and observation among crucial local or international issues or events, recent publications, and speculative ideas embodied in drawing. Here L Lazar Kumaraku writes about “Downtown One” building in Tirana where the Albanian Geography of the façade collapses into one access point in the entrance. Skender Luarasi writes on the Albanian Pavillion “In Our Home” in the Venice Biennale in 2021 and suggests it is only from outside home that one can re-invent one’s own home and language...