

Floating Mansions, Empirical Inquiry and the Appraisal of Architectural Theories

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How to cite

Jorge Mejía Hernández and Jasper Cepl, 'Floating Mansions, Empirical Inquiry and the Appraisal of Architectural Theories', *Footprint* 37 (2025): 3–8, <https://doi.org/10.59490/footprint.19.2.8407>

Submitted 1 October 2025

Revised 3 October 2025

Accepted 10 October 2025

Published 15 December 2025

Abstract

Taking Rafael Moneo's introduction to *Theoretical Anxiety and Design Strategies In the Work of Eight Contemporary Architects* as a starting point, this editorial reflects on the appraisal of architectural theories. To support that reflection, the article uses Moneo's distinction between reflection and critical discourse on the one hand, and on the other the desire to elaborate systematic theories of architecture. Together, the reasons that motivated the editorial process and key takeaways from the different articles published in this issue of *Footprint*, suggest that there is indeed use and value in appraising theories of architecture, especially in relation to each other. By comparing theories and their performance, important distinctions can be made. Among them, the article mentions the differences that exist between critical thinking and criticalism, or between theory and what Frederick Crews refers to as 'theoricism.'

Keywords:

Theoretical anxiety, empirical inquiry, systematic theories of architecture, the appraisal of architectural theories

One Sentence Summary

This editorial reflects on the reasons that motivated this issue of *Footprint* and brings forth new insights regarding the appraisability of architectural theories which resulted from the editorial process.

In the brief preface to *Theoretical Anxiety and Design Strategies In the Work of Eight Contemporary Architects*, Rafael Moneo justifies the title of his book based on an intriguing thought.¹ 'I use the word "anxiety"', he says, 'because the study of architecture has in recent times been tackled in a way that is closer to reflection and critical discourse than to any desire to elaborate a systematic theory'.² The book collects a series of lectures Moneo gave at Harvard's Graduate School of Design between 1992 and 1994, and then in Madrid at the Círculo de Bellas Artes in the autumn of 1995, where he described the design strategies used by eight architects of singular renown at the time. Similar catalogues published contemporaneously (such as Juan Antonio Cortés's *Nueva Consistencia*, or Sarah Williams Goldhagen's and Réjean Legault's *Anxious Modernisms*) came to a similar conclusion: despite the discrete and concrete outcomes of their work, since the Second World War and increasingly towards the end of the twentieth century there seems to have been a reluctance among architects to pit theories against each other.³ That was understood as a sign of pluralism, or 'anything goes', to use Feyerabend's poorly understood axiom.

Moreover, architects seem reluctant to elaborate comprehensive explanations of what they do, how it should be

done, and why or where it should be developed further. Paradoxically, Moneo's book is filled with evidence to the contrary, in the form of images and drawings of built and unbuilt architectural projects that simply cannot be conceived, much less realised without a substantial amount of objective architectural knowledge, extraordinary projective, technical and constructive coordination, and the remarkable polytechnic discipline of a considerable number of people; without a cogent explanation, evaluation and orientation of collaboration and its expected outcomes; without, in other words, a systematic theory of architecture. This issue of *Footprint* originates from this fascinating paradox.

Somehow, our own study of systematic theories might have spared us from the anxiety Moneo attributes to reflection and critical discourse. Unbeknownst to each other, and probably for very different reasons, nearly ten years ago each of us decided to study Imre Lakatos's systematic theory of science adapted to architectural thinking.⁴ Throughout the early 1970s Lakatos – originally a philosopher of mathematics – developed Karl Popper's falsificationist theory of science through a detailed explanation of the different types of hypotheses used in scientific discussion, and the roles they play in the face of trial, error and criticism as basis for the growth of knowledge in that field. Lakatos posited that science and its communities could be understood by looking at the 'research programmes' they adhered to. According to Lakatos, a programme was held together by a 'hard core' of axioms that was surrounded by 'auxiliary hypotheses' and informed by both 'positive' and 'negative heuristics' that provided practical direction. We need not go deeper into this. Suffice it to say that Lakatos developed a highly elaborate (though also quite debatable) explanatory system, and that he hoped that this system would also allow him to distinguish 'progressive' from 'degenerating' research programmes. Though this last aspect of his theory proved particularly shaky, we'd still appraise it as an important attempt to address the same questions this issue of *Footprint* is dedicated to.

It was through our shared interest in the adaption of Lakatosian research programmes that the topic for this issue emerged. More specifically, the issue originates in our respective studies of fellow architects Stanford Anderson and Royston Landau, who used Lakatos's methodology to systematically explain architecture and determine some of the principles on which its practice was based throughout the twentieth century.⁵ While Anderson mostly investigated the past – searching for 'research programmes' in the work of Le Corbusier or Eliel Saarinen – Landau used Lakatos to interpret the architectural discourse of his day, mainly in England, where he lived.⁶ Our respective studies of both trajectories allowed us to identify where Anderson

and Landau succeeded and failed, and made us familiar with the different processes required for systematic theorisation. Key among those processes was an analytical approach to the axiological apparatus in every architectural theory, which determines evaluation and judgment. In fact, Lakatos's contribution can be summarised as an effort to develop that particular apparatus in Popper's falsificationist theory of science, by turning his 'naïve' description of the way scientific conjectures are appraised, criticised, and eventually refuted into a 'sophisticated' explanation that recognises a series of layers and nuances that are instrumental to valuation and judgment, and which Popper did not account for.

Common to Popper's epistemology, Lakatos's methodology, and Anderson's and Landau's architectural historiography is an unambiguous rejection of axiological determinism, understood as the presumption that we can (a) only determine value in relation to some sort of preestablished authority or (b) not determine value at all. While examples of the first of these forms of determinism are overabundant in architectural theory and historiography, the idea that relinquishing judgment is actually a form of determinism shone new light on our previous research. We started wondering what advantage there could be in claiming that architecture in general, and architectural theory in particular, are non-apodictic, meaning that they are not clearly provable or logically certain and therefore do not lend themselves to appraisal in terms of being better or worse.⁷

Confirming this non-apodictic interpretation of architecture, we realised that over the past fifteen years, this and other journals that are expressly dedicated to the study of architectural theory have been notably anxious, if we stick to Moneo's use of the term. It only makes sense therefore that amid the many topics and approaches touched upon in the thirty-six issues of *Footprint* that precede this one, no attempt was ever made to examine different architectural theories in relation to each other, especially in terms of their performance. This may have been due to a culture that shied away from comparison, as it rated pluralism very highly, and to an acceptance that others hold positions one wouldn't oneself subscribe to (as long as one's own personal leanings were left unscathed). Tacitly, the different theories architects and scholars use and study have been taken as equal, notwithstanding the fact that there can definitely be some benefit in trying to appraise different architectural theories as instruments of thought and action, at least in terms of their quality and effect.

Encouraged by the possibility of filling an evident knowledge-gap we set out to edit this issue by extending an open call for research and review articles focused on the appraisability of architectural theories. Among other

things, we asked: Is it actually possible, useful, or even necessary to appraise theories of architecture? If so, what would be the purpose of their appraisal, who should do it, and when should it take place? If one considers, for example, that any theory of architecture is directed at the practice of architecture, should the former be evaluated through the latter? If so, how? And what would this mean, on the other hand, for theories that are deliberately formulated to dwell above practice? How can they be judged – or don't they have to be? Are at least some theories of architecture like scientific hypotheses, which can be tested, corroborated or refuted? Or should they rather be taken as means of pure, unfettered, and therefore unmeasurable understanding? Should we even expect theories of architecture to be appraisable?

Frankly, our earlier interest in Anderson and Landau entailed a progressive sentiment. Most, if not all of our questions are founded on the belief that we can indeed attain at least some objective knowledge of reality, that discovery and the growth of knowledge are possible, discernible, and desirable. From that perspective, it only seems logical that architects' and scholars' ventures into theory should somehow help them to better understand their work as researchers, educators or practitioners. Hoping for the improvement of that work, we wondered what benefit there could be in striving for explanations that are better than the ones we currently have. And how can we tell that they are better? How do we appraise theories? How can we tell good theories from bad ones?

The four research articles and two reviews that we finally selected for publication chose to answer these and other derivable questions piecemeal and dispersedly – like scattered yet interrelated probes in geological prospecting. In that sense each article provides us with valuable, albeit partial evidence to the fact that theories of architecture can indeed be appraised, and that said appraisal is facilitated by abstraction. Abstracting is exactly what Lakatos did when he demarcated scientific research programmes, broke those programmes down into bundles of hypotheses, discriminated between hard-core and auxiliary hypotheses, and broke auxiliary hypotheses down into their constituent heuristics (which he described as 'a series of problem-solving techniques').⁸ This is also what we have done by breaking down theories into onto-epistemological, axiological and teleological apparatuses, which can be examined and evaluated separately in terms of their constitution, nature and performance.

According to our contributors, a first step towards the appraisal of architectural theories can therefore consist in analysing and then classifying those theories according to their epistemological and pragmatic orientation. Among the different theories that are currently used and

debated in schools of architecture, some can be qualified as esoteric and others as existential, based on the respective orientation. Like every other theory, esoteric and existential theories of architecture inevitably incorporate substantial portions of tacit knowledge, as defined by Michael Polanyi, some of which might correspond to what Lakatos termed 'hard-core hypotheses' (or negative heuristics, in the sense that they are deliberately shielded from criticism), and some of which might be practical know-how that simply hasn't found adequate means for systematic conceptualisation. Consequently, the pragmatic assumption that the quality of a theory can be measured in relation to its practical effects should also account, at least to some degree, for unforeseeable effects, generative potential, and so on.

Together with these genuine contributions to our inquiry into the appraisability of architectural theories, we were also reminded that acts of appraisal are often accompanied by feelings of apprehension, and that it is possible to alleviate those feelings by diffusing, relativising, and thus relaxing judgment. Beyond the obvious, we were quite surprised by the recurrence of Peter Eisenman, who appears in half of the articles published here. As a matter of fact, it was in Eisenman's work where Moneo recognised the contemporary architect's disinterest in a systematic theorisation of architecture. 'Theoretical anxiety is a more accurate term than theory ... when we refer to the writings of Peter Eisenman', he noted. 'These are texts that reveal an intellectual capacity to transfer to architecture concepts acquired in readings of contemporary philosophers.'⁹

It is safe to say that among the different philosophies and theories of architecture that were debated in Eisenman's Institute for Architecture and Urban Studies (IAUS), some actually did pursue a systematic comprehension of architecture. A case in point is Aldo Rossi, who argues that

the points specified by Ferdinand de Saussure for the development of linguistics can be translated into a program for the development of an urban science: description and history of existing cities; research on the forces that are at play in a permanent and universal way in all urban artifacts; and naturally, delimitation and definition of the field of study.¹⁰

Likewise, Moneo's essay 'On Typology' and Eisenman's dissertation on modernist architecture's formal basis aren't simply reflections or critical discourse, but rather concrete contributions to the development of a systematic theory of architecture.¹¹ 'It is the desire here', Eisenman's thesis reads, 'to consider buildings as a structure of logical discourse, and to focus attention on consistency of argument,

on the manner in which spatial and volumetric propositions may interact, contradict, and qualify each other.¹²

Instead, other factions within the IAUS opted for different variants of criticalism, via the self-same transfer of contemporary philosophical ideas to architecture attributed to Eisenman by Moneo. The nature of the ideas transferred was such that new forms of determinism were incorporated into architectural thinking, which conform to the two types we've described above. As Alan Sokal and Jean Bricmont have demonstrated, 'famous intellectuals such as Lacan, Kristeva, Irigaray, Baudrillard, and Deleuze' founded their work on a distinct form of 'scientism,' that particular version of determinism that utilises science as an authority to grant value beyond science.¹³ Concretely, Sokal (a mathematician) and Bricmont (a theoretical physicist) offer evidence to the fact that these and other criticalist intellectuals have 'abuse[d] scientific concepts and terminology;[by] either using scientific ideas totally out of context, without giving the slightest justification, or throwing around scientific jargon in front of their non-scientist readers without any regard for its relevance or even its meaning.'¹⁴ The literary critic Frederick Crews, on the other hand, links the same group of popular intellectuals to the other form of determinism we've mentioned: relinquished judgment, or at least the pretension thereof. Crews uses the term 'theoricism' to describe these authors' 'frank recourse to unsubstantiated theory, not just as a tool of investigation but as antiempirical knowledge in its own right.'¹⁵ As Popper, and after him Lakatos, Anderson and Landau made clear in one way or another, determinism is a poor method for knowledge and action because it provenly inhibits exchange while allowing our thought processes to carry on gratuitously, leading – in Crews's terms – to 'creeds that use a dry mechanistic idiom and an empirical façade to legitimise "deep," morally engaged revelations, which can always be placed on some new footing, if their original claims turn out to be baseless.'¹⁶

Oblivious to such creeds, architecture carries on. Buildings are conceived, developed and built, on the basis of clear, concise, yet ever-changing explanations of what architectural work consists of, supported by the constant redefinition of productive principles and values required for decision-making, and encouraged by the formulation of justifications that are convincing enough to lead different people to take risks and act. The appraisal of our explanations, principles and justifications is not only possible, it is inevitable whenever these three fundamental objectives of every theory come in contact with reality and its inexorable constraints, or whenever they come in contact with other explanations, principles and justifications that challenge them. Our brief excursion into architectural theories, especially in relation to their appraisability in terms

of performance, quality, and effect, has certainly shone a much-needed light on the radical difference that exists between critical thinking and criticalism, or – returning to Moneo – between mere reflection and critical discourse on the one hand, and the desire to elaborate systematic theories of what we do, on the other. Supporting that desire, and justifying the duties it entails, is a profound appreciation for the reality we share with others through exchange. Referring to an entirely different sentiment, Crews alludes to chemist C. P. Snow's demarcation of 'two mutually uncomprehending and antagonistic cultures, one scientific and the other humanistic.'¹⁷

In the Grand Academy of Lagado, where "projectors" are busy trying to soften marble for pillows and extract sunbeams from cucumbers, Lemuel Gulliver comes across "a most ingenious architect who had contrived a new method for building houses, by beginning at the roof and working downwards to the foundation." Presumably that project is as insensate as the others. But if Gulliver were to visit our grand academy of theory, he could witness a like feat accomplished daily, with conceptual gables and turrets suspended on hot air and rakishly cantilevered across the void. And if C.P. Snow is perchance observing from a nearby cloud, it may occur to him that his two cultures stack up somewhat differently by now: not scientists versus nonscientists, but the builders of those floating mansions on one side and, on the other, empirical inquirers of any kind.¹⁸

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The authors received no financial support for the research, authorship and/or publication of this article.

Notes

1. Rafael Moneo, *Theoretical Anxiety and Design Strategies In the Work of Eight Contemporary Architects* (Barcelona: Actar, 2004).
2. Ibid., 2.
3. Juan Antonio Cortés, *Nueva consistencia: estrategias formales y materiales en la arquitectura de la última década del siglo XX* (Valladolid: Ediciones Universidad de Valladolid, 2002); Sarah Williams Goldhagen and Réjean Legault, eds., *Anxious Modernisms: Experimentation in Postwar Architectural Culture* (Cambridge, MA: MIT Press, 2000).
4. Jasper Cepl, 'Royston Landau and the Research Programmes of Architecture', in *Architecture Thinking Across Boundaries: Knowledge Transfers since the 1960s*, ed. Rajesh Heynicks, Ricardo Costa Agarez and Elke Couchez (London: Bloomsbury, 2021), 83–102; Jorge Mejía Hernández, *Transactions, or Architecture as a System of Research Programs* (PhD dissertation, TU Delft, 2018).
5. Royston Landau, 'Methodology of Research Programs', in *Changing Design*, ed. Barrie Evans et al. (New York: John Wiley and Sons, 1982), 303–9; Stanford Anderson, 'Architectural Design as a System of Research Programs', *Design Studies* 5, no. 3 (1984): 146–50.
6. Most of Anderson's and Landau's articles about Lakatosian research programmes were published in the early 1980s.
7. We owe this explanation to our esteemed colleague Andrej Radman, as part of the discussions regarding the framing of this issue, which were carried out within the journal's editorial board.
8. Imre Lakatos and Elie Zahar, 'Why did Copernicus's Research Programme Supersede Ptolemy's?', in Lakatos, *The Methodology of Scientific Research Programmes*, Philosophical Papers, Vol. 1 (Cambridge: Cambridge University Press, 1978), 178.
9. Moneo, *Theoretical Anxiety*, 2.
10. Aldo Rossi, *The Architecture of the City*, intr. Peter Eisenman, trans. Diane Ghirardo and Joan Ockman (Cambridge, MA: MIT Press, 1984), 23.
11. Rafael Moneo, 'On Typology', *Oppositions* 13 (Summer 1978): 22–45; Peter Eisenman, *The Formal Basis of Modern Architecture* (Zurich: Lars Müller Publishers, 2006).
12. Eisenman, *The Formal Basis of Modern Architecture*, 17.
13. Alan Sokal and Jean Bricmont, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science* (New York: Picador, 1997).
14. Ibid.
15. Frederick Crews, *Skeptical Engagements* (Oxford: Oxford University Press, 1986), 164.
16. Ibid., 167.
17. Ibid., 159.
18. Ibid., 174.

Biography

Jorge Mejía-Hernández graduated as an architect in Colombia, and developed his PhD at TU Delft, where he currently researches and teaches. His dissertation *Transactions; or Architecture as a System of Research Programs* (2018) advances a methodological framework to examine the individual and social rationales that determine the growth and development of architectural knowledge. He was a member of Footprint's Editorial Board between 2015 and 2024.

Jasper Cepl, born 1973, Architect. Chair for the Theory and History of Modern Architecture at Bauhaus-Universität Weimar, Germany. Studied architecture at RWTH Aachen and TU Berlin, where he graduated in 2000. He received his doctorate in 2006 for a study on Oswald Mathias Ungers, published as Oswald Mathias Ungers: Eine *intellektuelle* Biographie in 2007. Jasper Cepl taught at TU Berlin (2003–2013) and, as a professor for architecture theory, at Hochschule Anhalt, Dessau (2014–2019) before being appointed as a professor at Bauhaus-Universität Weimar in 2019. His research focuses on the history of ideas in modern architecture.

