

Endnotes

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Anthropocene, architecture, and modernity

In the last decades, the concept of the Anthropocene has become remarkably common in many fields, although sometimes, it is reduced to a catchword. This essay investigates how such concept may require the development of a specific historiography of architecture.

The full titles of this essay is 'Prolegomena to a Narrative: Anthropocene, Architecture, and Modernity'.

text by **Giacomo Pala**

Almost inexorably, any essay concerning the Anthropocene must confront the problem of its definition. This is due to the plethora of descriptions either providing philosophical discussions, referring to scientific studies, or defining specific artistic trends³⁶. However, it seems legitimate to start from an assumption shared by more or less everyone: the Anthropocene is the era of human impact on the Earth's ecosystem, including its geology. Or, as we can read in one of the many publications on the topic: "the Anthropocene remains a conceptual work in progress, argued about by human beings who are, in what is also taken to be indicative of the novel age of the Anthropocene, the first species to be self-consciously aware of their power in having transformed the earth."³⁷

A "conceptual work in process" that has not spared architecture either.³⁸ The most common use of the word in our field may be understood as a generic concept adopted to describe a series of tendencies that reject historically determined languages and embrace performative approaches, using computational tools and looking at nature as a source of a more or less literal inspiration. Even though there is no agreement on what the implication of the "Anthropocene" in architecture may actually be (not least because the field is known to be particularly susceptible to ever-faster fashion changes in both aesthetics and conceptual terms), it is possible to pinpoint a certain number of emerging topics: the simulation of natural processes in architectural design, a renewed interest in materials and their provenance, as well as new urban theories. If there is any single shared aim between these topics, it is the interest in finding common points between nature and the built environment; or even the desire of looking at architecture as if it were a natural object.

Moreover, as architects are always subject to influence from other disciplines, and particularly philosophy, another use of the term Anthropocene has become quite popular over recent years: one that attempts to link architecture to a generalised interest in metaphysics and new philosophical tendencies, frequently associated with "Speculative realism"³⁹. Simplifying to the extreme, the goal, in this case, can be summarized with Tom Wiscombe's words, who defined a

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“Flat Ontology for Architecture” as “a way of seeing the world as a collection of lively, complete entities that cannot be reduced to universal elements or systems”.⁴⁰

It should be immediately apparent that, in architecture, the adoption of the term Anthropocene is a way to open-up its discourses, in an attempt to generate new forms, concepts, practices, and new aesthetics. It doesn't really matter whether the Anthropocene is a new geologic era or not, as debated in the sciences. The term Anthropocene, rather, is used as a conceptual reference just as notions such as “postmodernism”, or “digital” already have. In a way, it is a demonstration of what Bruno Latour already clearly stated: “What makes the Anthropocene a clearly detectable golden spike way beyond the boundary of stratigraphy is that it is the most decisive philosophical, religious, anthropological and [...] political concept yet produced as an alternative to the very notions of ‘Modern’ and ‘modernity’”.⁴¹

Whether one agrees or not with Latour's certainties, his words highlight something quite interesting for architecture's history and theory: as the notion of modernity enabled the invention of “modern” architecture, so the Anthropocene could be understood as a way of reading and interpreting architecture. In this sense, one may wonder: what might be a possible impact of the “Anthropocene” in architecture history and theory? Or, even better: as the notion of modernity has produced a sprout of historiographies and theories of what modern architecture's historical determinations may be, would it be possible to use the concept of the Anthropocene to open up the historiography of architecture?

These are the questions this essay will try to answer. Nonetheless, before proceeding – and since the field of investigation granted by a single text is inevitably limited – it is appropriate to clarify from the very beginning this essay's objectives and its main hypothesis. First of all, the Anthropocene is looked at as a concept: a conceptual point of view from which it could be possible to read certain moments, events and facts of architecture's history. The second preliminary remark is related to the previous one: even though the Anthropocene could be defined as a geologic era, it cannot be understood as new socio-cultural epoch. That is to say: the concept of the Anthropocene is here first and foremost used as an excuse to critically look at some of modernity's theoretical chores, and first of all modernity's attempt at granting a central role in the ecosystem to humanity. Then, the notion of the Anthropocene is used as a tool to look at modernity itself, if not as one of modernity's by-products: the name we give to the human influence on the natural world as a whole. In this sense, then, to discuss about the Anthropocene in relation to architecture should not be a matter of defining a new architecture, as if the problems this word signals were not already at work before its invention. Rather, the “Anthropocene” will be used as a concept enabling specific problematizations of architecture's culture. Finally, a remark: this text does not want to represent a well-developed research field. Its aim, rather, is to suggest some theoretical issues, hopefully providing fertile ground for future research.

Anthropocene and History

In its wider meaning, the Anthropocene signals the need of putting an end to the ontological divide between Nature and Culture, at least in western culture. This problem, as discussed by many, is an incredibly interesting topic of research for historical studies.⁴² First of all, it



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Procedural Sinters, 2020

provides the possibility of inaugurating a new interdisciplinary understanding of architecture. It calls for a cross-breeding between the understanding of cultural history and natural history, as it happens in Marrika Trotter's fascinating studies on the Scottish Enlightenment, where we learn the influence of geology in the work of architects such as Joseph Gandy, or John Soane.⁴³ Secondly, the Anthropocene creates the possibility of a different understanding of history. Human history, in-fact, is classically thought of as something separate from the planet's history.⁴⁴ This is so true that, sometimes, history itself has been theorized as the outcome of an opposition between nature and the human:

"Along with the world there began a war that will end together with the world and not before: that of man against nature, of spirit against matter, liberty against fatality. History is nothing else than the account of this interminable struggle."⁴⁵

On the other hand, we see a generalized understanding of natural and geological history as something detached from human history:

"no one of the fixed and constant laws of the animate or inanimate world was subverted by human agency".⁴⁶

These short quotations, respectively from Jules Michelet's "lectures on history" (1831) and Charles Lyell's "Principles of Geology" (1830) are, as proven by Cristophe Bonneuil and Jean-Baptiste Fressoz, two symptoms of the same problem: a binary understanding of the relation between humans and the rest of nature; if not even the illusory opposition between nature and technology;⁴⁷ precisely the kinds of understandings the Anthropocene could help us overcome, or at least to question. Needless to say, this is not a completely new topic. For their part, Darwinism, evolution theory and genetics have already contributed to expanding the time of human history, enlightening the existence of points of conjunction between mankind and the so-called animal kingdom.⁴⁸ However, the history of nature and that of the social world are generally considered to be two different, and sometimes dichotomous narratives. On the one hand, therefore, the inhuman nature; on the other, the unnatural social sciences. The former studies the environment where humans live, its laws and its other inhabitants; the latter studies the history of human becoming, describing a progressive emancipation from the natural world.

If it is true, however, that the Anthropocene is the name we give to the understanding of a complex relationship between nature, economy and culture – as well as the understanding of a deep and almost unthinkable (if not sublime) relationship between nature and technology – then things may be more complex. The Anthropocene, by pinpointing the irruption of nature's temporality and its complex dynamics into what we are used to defining as society and history, forces us to think beyond the limits of a cultural and political economy, and a society unbounded from natural constraints. Or, in Bonneuil's and Fressoz's words: "In the Anthropocene, it is impossible to hide the fact that 'social' relations are full of biophysical processes, and that the various flows of matter and energy that run through the Earth system at different levels are polarized by socially structured human activities".⁴⁹

The objective is then the one of thinking of nature and society as a hylomorphism, not as a duality. To do so, it is at first necessary to understand the relationship between nature and society as a non-linear condition. Nature is not only altered and modified by the social through the extensive exploitation of land and through the adoption of technologies, but nature itself defines the same societies that modify it. Nature lives in the social world, and its histories, defining the environmental conditions allowing any culture, and its own type of lifestyle, to exist.

From this point of view, it is necessary to think of a sort of mutual history of Nature and human societies. For example, it is a common

Nature lives in the social world, and its histories, defining the environmental conditions allowing any culture, with its own type of lifestyle, to exist.

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Gorgonea testa ad Phineo, & alli cópagni, Cum beluina rabie & furore,
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& Amphyone, contra Dirce nouerca.



assumption to think of any historical period as an epoch composed of a variegated set of world-views that simultaneously express and generate specific sociotechnical arrangements. It is not very common, yet, to study the relationship between any world-view with the metabolism of Earth's ecosystem. Something that would seem to be of interest, if only for one reason: any world-view expresses specific ideological and political agencies informing specific ways of looking at nature, while exploiting it. To give an example, a work by the historian Kyle Harper, can be mentioned; a study that surely resonates with everyone's sensibility, today.⁵⁰ The Roman Empire began its fall not only because of the so-called barbarian invasions and various political issues, but also because of environmental problems for which the Romans were ultimately co-responsible. One of the main actors was the Kep's Gerbil (*Gerbilliscus kempi*): a gerbil, originally from northern Africa, which was responsible for the spillover from animal to man of the so-called "plague antonine." This plague was particularly serious precisely because of the overlap between society and nature: the Roman Empire of that time was in-fact an immense and, to use a contemporary notion, "globalized" world. In such context, "the merchants hugging the African shore and sailing the monsoon winds were also the agents of an invisible exchange. Where goods and gods go, so do germs."⁵¹ Here we see a real overlap between society, geography, and biological rhythms, all of them contributing to the evolution of a common history.

This is just one example among the many possible that have tried to combine readings of natural history with cultural histories⁵². Nonetheless, it should be enough to make a point: the Anthropocene should not be understood just as a natural condition. It is also intertwined with cultural beliefs, ideological systems and their institutionalizations. To understand the relationship between the elements of such a complex system is one of the first things to do for anyone studying and discussing the "Anthropocene", whether in the context of architecture, or not.

Architecture and Modernity – through the Anthropocene

as again discussed by Bonneuil and Fressoz, the starting date of the Anthropocene is uncertain. The most common consideration is that it began in the second half of the twentieth century, with what John Robert McNeill and Peter Engelke have called "Great Acceleration":⁵³ the never-decreasing consumption of energy and the start of an exponential growth of the population. A similar starting date is provided by the "Anthropocene Working Group", who has also verified the existence of clear stratigraphic signals of petrochemical products, as well as traces of radionuclides dating back to the first nuclear test in Nevada in 1945.⁵⁴ Others, instead, are convinced that the Anthropocene has more distant origins, going back to the first industrialization processes. According to the Nobel prize winner Paul Crutzen, for instance, the Anthropocene would have begun as early as 1784, precisely when James Watt patented the steam engine.⁵⁵ Instead, according to others (Simon Lewis and Mark Maslin), the Anthropocene even began with the colonization of the Americas. This is because, since then, the world would have lived a turmoil of agricultural systems due to the mixing of plants, flowers, seeds and faunae originally belonging to different continents.⁵⁶

Far from wanting to discuss the Anthropocene's date of birth in this context, it is important to notice that these dates more or less

Francesco Colonna

Hypnerotomachia Poliphili, 1499



J.G. Levasseu

The angel of death striking a door during the plague of Rome, 1789

coincide with the different understandings of modernity's birthdate. Whether we want it to begin in 1492, and therefore when Christopher Columbus arrived in North America while thinking he was in India; in the 18th century; in the 19th century; or in the 20th, the dates provided by scientists about the beginnings of the Anthropocene are peculiarly similar to the ones commonly used to theorize about the beginning of modernity. This fact shouldn't surprise anyone. After all, modernity is partly defined by technological improvements and by the generalised sense of crisis ("the signature of the modern era"⁵⁷) these contribute to produce. And this is also why every historical period – including ours – experiences itself as a moment of crisis, allowing a re-reading and re-writing of the past starting from the diagnosis of the present time: a constant reflection on the present situation (the "modus" of modernity) allowing a specific knowledge of its own past and an opinion on its future.

The intersection between the concept of Modernity with the "Anthropocene", then, is an interesting concept not because – as



Hubert Robert

Le Pont sur le Torrent, mid 1780s

some might be tempted to think – it would undermine the discussions on the Anthropocene. But, quite the opposite: the notion of the Anthropocene may allow a re-writing of modernity or, at the very least, the identification of a new topic to add to the already complex set of themes defining what “modernity” is, or may be. A second reason, albeit not secondary, for looking with interest at this conceptual intersection is due to the fact that it gives us the possibility of opening-up the common narrative of architecture’s history. In other words, the theme of Anthropocene seems to provide the opportunity to open new fields of research in the history of architecture, studying its relationship with the natural world both in conceptual and material terms.

Before continuing, however, it seems appropriate to outline – albeit in an extremely short space – what can be understood as “architecture of modernity”, throughout architecture’s historiography. Most commonly, histories of modern architecture share some common assumptions.

I. One of the most significant events allowing historians to talk about “modern” architecture is the technical development that has taken place since the eighteenth century, onward.

II. Modern architecture finds some of its roots in the ideal of reason, if not rationalism, classically assumed to be a notion developing from the Enlightenment, and in the establishment of modern sciences; if not even – as it happens in Manfredo Tafuri’s history – in the ideology of the Renaissance.⁵⁸

III. Architecture becomes modern once it starts to mirror the social changes of the 18th and 19th centuries (particularly the development of industrial productions). As unforgivably brief as this summary is, it is nonetheless instrumental to note how the histories of modern architecture are as various as the ones of the Anthropocene’s history. In other words, architecture’s history presents a multitude of genealogies, readings and accounts of historical processes.

Depending on the author, different ideas and concepts (reason, positivism, social revolution) are defined to be inherently modern, and then applied as conceptual categories useful to provide specific readings of the present’s historical determinations. To give some examples: Alberto Pérez-Gómez’s “Architecture and the Crisis of Modern Science” studies the theories of the 17th and 18th century architecture (mainly French), in the attempt to understand the origins of “the crisis of contemporary architecture”.⁵⁹ Reyner Banham rewrote the history of early 20th century architecture by looking at experiences such as “Futurism”, in order to provide a different interpretation of modernism (a modernism that was beyond the *international style*); a history providing an agenda for a certain architecture of his time.⁶⁰ Charles Jencks’ “Modern Movements in Architecture”⁶¹ shows a hidden plurality in the world of modern architecture that serves as a discourse useful for the kind of postmodernism he would then define as “radical eclecticism”.⁶² Even Manfredo Tafuri, the one who tried to detach historical studies from the need of the present (what he would define as “operative criticism”⁶³), cannot avoid writing a history of modern architecture that serves the present’s needs: he manipulates the past as a way to criticise the present.⁶⁴ As we can see, to write a history of architecture – of modern architecture – is a way of understanding the present: to define genealogical paths through which facts, objects, people and events are ordered in a narrative providing an explanation of the present.

Anthropocene, Architecture, and Modernity

So far, then, we have noted three major aspects in the relation between Architecture, the concept of the Anthropocene, and Modernity.

I. In Architecture, today, we witness a generalized interest in the Anthropocene, used as a concept to rethink architecture’s relationship with nature and the various entities populating the world.

II. The Anthropocene, by challenging the ontological divide between the human and the rest of the world asks us to review our conception of history, no longer understood as eminently social and cultural. It becomes a narrative capable of telling the story of the world as a complex structure in which all kinds of actors play a central role.

III. History, especially that of modern (and contemporary) architecture, is always a reinterpretation of the past at the service of the present.

If it is so, then one can think of a history of contemporary and modern architecture from the point of view of today’s need of reducing the divide between architecture and nature. A history, then, able to reread modernity in the light of the relationship between architecture and



Anurupa Chowdhury

Navi Mumbai Skyline, 2011

nature, in an attempt to find real points of intersection between the two. Or, anyway, a kind of history enabling the understanding of how - and if - architecture has contributed to the definition of the Anthropocene (also culturally, and metaphorically) during the tumultuous development of modernity.

To reach such a goal, at first it is needed to include the notion of “Anthropocene”, or what it means, within the notion of modernity. This is only doable by trying to understand how the usually studied relationships between architecture, economy, ideology, and style may be related to nature and the environment.

But how to do so? At first, to engage the notion of the Anthropocene requires the tackling of topics such as architecture’s reliance on energy consumption, architecture’s relation to non-human species, materiality and materials (including their origins and scale). Or, as put by Esther da Costa Meyer – professor of the “Architectural History/Theory of the Anthropocene”⁶⁵ at Yale University: “if global warming affects primarily the poorest nations or the impoverished swaths of rich ones, architectural historians must track the ways in which their discipline conveys, silences or ignores issues of environmental colonialism”.⁶⁶

As also demonstrated by more recent works (Space Caviar’s “Non-Extractive Architecture”,⁶⁷ Elisa Iturbe’s work on “Carbon Form”,⁶⁸ or Daniel A. Barber’s *Modern Architecture and Climate: Design before Air Conditioning*),⁶⁹ it is evident that architecture must now open up its field of investigation, if it is true that history making is always a way of thinking about the present.

What seems to be necessary, and into production through the work of many researchers and historians, is a re-reading of modern architecture’s genealogy, tracing a history of possible processes that – within modernity – have produced, or foreshadowed today’s condition.

In conclusion, all that is needed to be stressed is the following: in an interconnected and heterogeneous world such as ours, it is important to attempt the elaboration of a history that is able to produce a specific understanding of modernity, from the point of view of today’s needs. This does not mean that the historian should elaborate the narrative of yet another alternative modernity, but – rather - that historical studies need to understand how the relationship between architecture and nature has developed through architecture’s forms, typologies, pol-

icies, styles and ideologies.

A kind of discourse, therefore, that is as all-encompassing as possible, enabling the connection of natural entities with social ones; humans with in-humans; history with technology. A type of theoretical and design culture for which the concept of Anthropocene, beyond sterile slogans, seems to be useful in order to write a history that - having a proper narrative function – allows for an expansion (not removal) of its canons, and the discovery of new points of view on already known facts and objects.

Ultimately, this history would tell one of the many tales of the non-essentialist and non-deterministic world we have ended up living, designing and building in, helping us to open up a prospect of sense for today’s world.

Endnotes

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- [14] See: Christophe Bonneuil, Jean-Baptiste Fessoz, *The Shock of the Anthropocene: the Earth, History and Us*, cit.
- [15] An interesting example of a philosophy of history under these terms is Michel Serres’. See: Michel Serres, *Darwin, Banoparte et le Samaritain - Une philosophie de l’histoire*, (Paris: Le Pommier, 2016)
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- [18] *Ibid.*, p.97
- [19] See: Clive Hamilton, Christophe Bonneuil and François Gemenne (edited), *The Anthropocene and the Global Environmental Crisis*, (London and New York: Routledge, 2015) and Joy McCriston and Julie Field (edited), *World Prehistory and the Anthropocene*, (London: Thames & Hudson, 2019)
- [20] John Robert McNeill and Peter Engelke, *The Great Acceleration: An Environmental History of the Anthropocene since 1945*, (Harvard: Belknap Press, 2016)
- [21] Jan Salasiewicz et al., “When did the Anthropocene Begin? A mid-Twentieth Century Boundary Level Is Stratigraphically Optimal”, (<https://www.science-direct.com/science/article/pii/S1040618214009136>) (12/07/2020)
- [22] Paul J. Crutzen, “Geology of Mankind”, in *Nature*, 415, 2002 <https://www.nature.com/articles/415023a> (12/07/2020)
- [23] “[...] Brunelleschi razionalizza la tecnica e i modi della produzione edilizia, spezza la continuità dell’organizzazione collettiva del cantiere tradizionale, fa emergere impetuosamente il tema della moderna divisione sociale del lavoro”. Manfredo Tafuri, *L’Architettura dell’Umanesimo*, (Bari: Edizioni Laterza, 1969), p.19
- [24] Reinhart Koselleck, “Krise”, in Otto Brunner, Werner Conze and Reinhart Koselleck (edited), *Geschichtliche Grundbegriffe*, Volume 3, (Stuttgart: Klett-Cotta Verlag, 1982), p.627
- [25] “Da ciò che oggi fa problema, [le osservazioni che hanno dato origine al presente volume] si volgono all’indietro, tentando un dialogo con l’età della rappresentazione. [...] Confronteremo, infatti, sull’uso del rappresentare agli inizi dell’età convenzionalmente chiamata moderna: uso molteplice e problematico, differenziato a seconda che esso riguardi artisti, programmatori, committenti. Ed è a cause i tale problematicità che il Rinascimento che appare nel titolo non è dato per scontato”. Manfredo Tafuri, *Ricerca sul Rinascimento, Principi, Città, Architetti*, (Torino: Giulio Einaudi Editore, 1992), p.XXI
- [26] Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science*, (Cambridge, MIT Press, 1983), p.8
- [27] Reyner Banham, *Theory and Design in the First Machine Age*, (Cambridge, MIT Press, 1980)
- [28] See: Charles Jencks, *Modern Movements in Architecture*, (London: Penguin Books, 1973)
- [29] Charles Jencks, *The Language of Post-Modern Architecture*, (New York: Rizzoli, 1977), p.127
- [30] As put by Tafuri: “to re-joint history and theory meant, in fact, making history itself into an instrument of theoretical reasoning elevated to a planning guide”. In: Manfredo Tafuri (translated by Giorgio Vercchia), *Theories and History of Architecture* (1968), (New York: Harper & Row, 1979), p.149
- [31] For a further reflection on Tafuri’s contradictions, see: Mark Wigley, “Post-Operative History”, in *ANY: Architecture New York*, No. 25/26, *Being Manfredo Tafuri: Wickedness, Anxiety, Disenchantment*, (New York: Anyone Corporation, 2000), pp. 47-53
- [32] Space Caviar, *Non-Extractive Architecture: On Designing Without Depletion*, (Berlin: Sternberg Press, 2021)
- [33] see: Elisa Iturbe (edited by), *Overcoming Carbon Form*, LOG 47, (New York: Anycorp, 2019)
- [34] Daniel A. Barber, *Modern Architecture and Climate: Design Before Air Conditioning*, (New York: Princeton University Press, 2020)

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