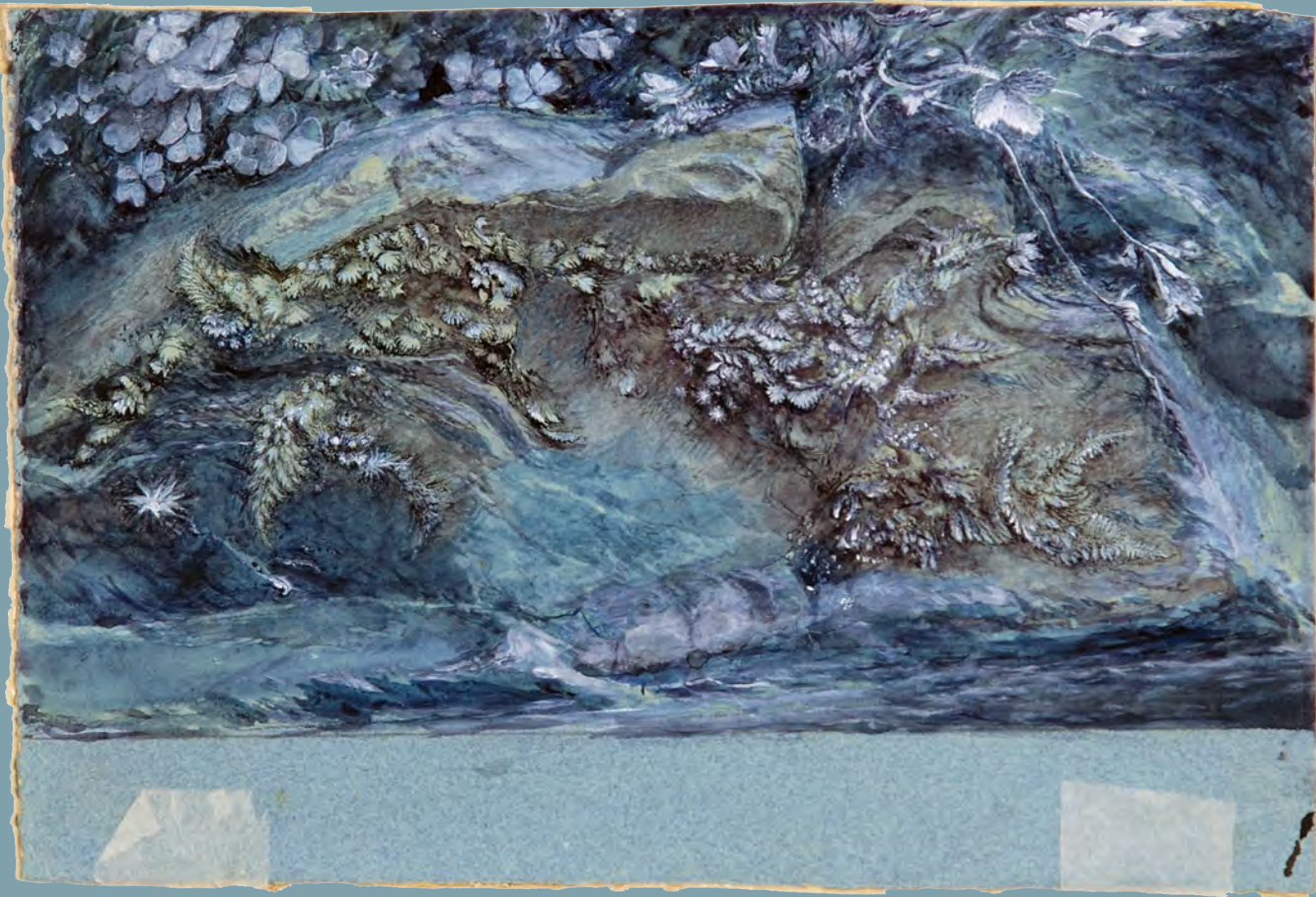


The Ecological Sensibility: Between Ruskin and Banham

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Supervisor **Prof. Lara Schrijver**

Thesis submitted for the degree of Doctor of Architecture
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**University
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The Ecological Sensibility: Between Ruskin and Banham

PhD thesis submitted for the degree of Doctor of Architecture at the University of Antwerp to be defended by **Bart Decroos**.

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English Summary

Contemporary architecture seems to be increasingly described as sustainable, circular, re-usable, environmentally friendly or carbon hostile, as being recycled, upcycled, downcycled and recycled once more, and coloured in shades of green no one even knew existed. Indeed, most of the words we use to describe architecture today seem to have shifted in a new direction – in the direction of ‘ecology’. Yet, it is not always clear what such ecological notions in architecture mean. The above terms are often used interchangeably, and even in ways that lead to opposite outcomes.

Drawing from contemporary posthuman theory, this dissertation proposes the notion of an ‘ecological sensibility’ to describe this general re-orientation of architectural discourse today. The roots of this developing sensibility are traced back to two defining moments in Western modern history: the Romantic response to industrialization and scientific progress in the nineteenth century, and the rise of environmentalism and techno-optimism in the second half of the twentieth century. To do so, it takes the work of John Ruskin (1819-1900) and Reyner Banham (1922-1988) to navigate the theoretical notions of nature, materiality and technology, around which this ecological sensibility seems to revolve.

As such, this dissertation demonstrates two things. On the one hand, while ecological debates in architecture might appear as something new, the themes of nature, materiality, and technology around which they revolve run deep in modern architectural history. Yet, on the other hand, it also demonstrates how the way we understand these notions does seem to be changing. Throughout much of modernity, these themes have been understood within strict binary oppositions: in short, nature in opposition to the human, the material in opposition to the immaterial, and technology in opposition to the organic.

Today, however, these binary oppositions are actively being questioned and approached from more hybrid perspectives. Tracing these notions throughout modern architecture history, especially in the work of Ruskin and Banham, it becomes clear that the modern binaries through which they were framed were perhaps always already untenable, and that things have always been entangled with each other. The questions with which Ruskin and Banham struggled as well as their peers, remind us of the impossibility of holding on to the modern insistence on such strict binaries. Instead, a contemporary ecological sensibility revolves around the hybridization of these themes. What emerges from this is a politics of vitality that might illuminate our contemporary struggle with the environmental crisis.

Dutch Summary

Hedendaagse architectuur lijkt steeds vaker beschreven te worden als duurzaam, circulair, herbruikbaar, milieuvriendelijk of koolstofneutraal, als gerecycled, geupcycled, gedowncycled en nog eens gerecycled, en gekleurd in groentinten waarvan niemand het bestaan vermoedde. De meeste woorden die we tegenwoordig gebruiken om architectuur te beschrijven lijken inderdaad in een nieuwe richting te zijn verschoven - in de richting van 'ecologie'. Toch is het niet altijd duidelijk wat dergelijke ecologische begrippen in de architectuur betekenen. Bovenstaande termen worden vaak door elkaar gebruikt, en zelfs op manieren die tot tegengestelde uitkomsten leiden.

Dit proefschrift, dat put uit hedendaagse posthumanistische theorie, stelt de notie van een 'ecologische sensibiteit' voor om deze algemene heroriëntatie van het hedendaagse architectuurdiscours te beschrijven. De wortels van deze zich ontwikkelende sensibiteit gaan terug tot twee bepalende momenten in de moderne westerse geschiedenis: de romantische reactie op de industrialisatie en wetenschappelijke vooruitgang in de negentiende eeuw en de opkomst van vele milieubewegingen en een techno-optimisme in de tweede helft van de twintigste eeuw. Hiervoor wordt het werk van John Ruskin (1819-1900) en Reyner Banham (1922-1988) gebruikt om de theoretische noties van natuur, materialiteit en technologie te navigeren, waar deze ecologische sensibiteit om lijkt te draaien.

Zodoende demonstreert dit proefschrift twee dingen. Aan de ene kant lijken ecologische debatten in de architectuur misschien iets nieuws, maar de thema's natuur, materialiteit en technologie waar ze om draaien zijn diep geworteld in de moderne architectuurgeschiedenis. Aan de andere kant laat het wel zien hoe de manier waarop we deze begrippen begrijpen lijkt te veranderen. Gedurende een groot deel van de moderniteit werden deze thema's begrepen binnen strikte binaire tegenstellingen: kort gezegd, de natuur tegenover de mens, het materiële tegenover het immateriële en technologie tegenover het organische.

Vandaag worden deze binaire tegenstellingen echter actief in twijfel getrokken en vanuit meer hybride perspectieven benaderd. Als we deze noties doorheen de moderne architectuurgeschiedenis volgen, vooral in het werk van Ruskin en Banham, wordt duidelijk dat de moderne tegenstellingen waarbinnen ze werden gekaderd misschien altijd al onhoudbaar waren en dat de dingen altijd al met elkaar verstrengeld zijn geweest. De vragen waarmee zowel Ruskin en Banham als hun tijdgenoten worstelden, herinneren ons aan de onmogelijkheid om vast te houden aan dergelijke moderne tegenstellingen. In plaats daarvan draait een hedendaagse ecologische sensibiteit om de vermenging van

deze thema's. Wat hieruit naar voren komt is een zogenaamde politiek van vitaliteit die onze hedendaagse strijd met de milieucrisis zou kunnen verhelderen.

Introduction: What We Talk about When We Talk about Ecology

No matter which architecture magazine you open nowadays, or which architecture exhibition you visit, which lecture you attend, or anyplace else where contemporary architecture is debated, it seems like every other project is described as sustainable, circular, reusable, environmentally friendly or carbon hostile, as being recycled, upcycled, downcycled and recycled yet again, and coloured in shades of green no one even knew existed. Indeed, the way we talk about architecture today, the words we use and the concepts we refer to for the most part seem to have shifted in recent years in a new direction, which I will call, for now, that of ‘ecology’. While this term seems to have been inflated with all kinds of meanings and has become a container term for all kinds of agendas, in its broadest sense it still serves as an arrow, a direction, a suggestion of what kind of questions and issues have become central to much of recent discourse in contemporary architecture.

To illustrate this, let us look at some recent architecture journals, the medium that often captures clearly what is current at a given moment. For example, in the anglophone sphere: in the Fall of 2019, the 47th issue of the American journal *Log* was titled ‘Overcoming Carbon Form’, which claims to ‘[reconceive] architecture’s role in climate change, away from sustainability and solutionism and toward architecture’s formal complicity and potential agency in addressing the climate crisis’.¹ Or take issue 1459 of the long-standing British journal *The Architectural Review*, published in October 2022 and simply titled ‘Energy’, which proposes that ‘recognising that architecture is formed from the fuel we extract to create and sustain it could be a transformative way of thinking about our built environment’.² From this starting point, the issue ‘seeks to make visible the often obscured links between buildings and the energy sources they are built from, and around’. In the German-speaking world, something similar can be seen, such as the summer issue of *Detail* in 2022, titled ‘Grüne Städte’ or ‘Urban Green’, which focused on so-called ‘green cities’, featuring projects like Stefano Boeri’s tree-covered ‘Trudo Tower’ in Eindhoven or Sou Fujimoto’s hotel extension in Maebashi, Japan, completely covered in grasses, plants and trees.³ The 250th issue of the German journal *ARCH+*, published in December 2022, was titled ‘The Great Repair’ and focused on practices of reparation, as a counterpoint to ‘capitalist modernity, with its emphasis on innovation, growth and progress, its economic

¹ ‘Overcoming Carbon Form’, *Log* 47 (2019).

² ‘Energy’, *Architectural Review* 1495 (2022).

³ ‘Grüne Städte’, *DETAIL* (June/August 2022).

system based on consumption, use and waste, and the ruthless exploitation of natural resources that goes with it, [which] has enshrined a throwaway mentality in our minds: everything is replaceable'.⁴ In the francophone sphere, there is the important journal *l'Architecture d'aujourd'hui*, of which the 453rd issue 'Construire Local', published in February 2023, asked the question of what it means to 'build local . . . at a time of widespread shortage of resources and building materials'. The editors asked this question 'because it is understood: to reduce a carbon footprint, reduce greenhouse gas emissions, in short fight against global warming, it is necessary to build as close as possible to selected resources, within the framework of short circuits'.⁵ Or, closer to home, there is also the 112th issue of the Dutch-English journal *OASE*, dedicated to 'Ecology & Aesthetics', which argues that 'in these first decades of the twenty-first century, architecture's complicity in the environmental crisis has become difficult to further ignore, and as cultural production, the question whether architecture can and should contribute to the need for what might be called an "ecological culture" is becoming increasingly present as well'.⁶ These are but a few examples from recent years, which indeed demonstrate the increased attention to ecological questions, and in which words such as 'climate change' and 'the climate crisis', and a need for 'sustainability', 'green architecture', 'ecological practices', 'circular economies', 'carbon-neutrality' and so on proliferate. Moreover, these editorials are often driven by a rhetoric of urgency, suggesting that ecological questions offer a chance for architecture to fundamentally renew itself, of which it is assumed that this is also highly necessary. In short, and at the risk of slightly exaggerating things, it seems that architecture in the twenty-first century will have to be ecological, or it will not be architecture.

The problem, however, is that it is not always clear what all of these ecological notions, concepts, questions or issues mean. The proliferation of a lot of technical terms often seems more confusing than illuminating and a lot of these terms pop up in different contexts with different uses and outcomes. This results in a certain 'murkiness' when it comes to the topic of ecology, as noted, for example, by architecture theorist Peg Rawes in the introduction to her *Relational Architectural Ecologies*.⁷ More importantly, perhaps, while the language with which such ecological issues are described and discussed suffers from a certain sense of confused complexity, the way such discourse translates into the material practices and projects of contemporary architecture often seems even more unclear, or, at least seems to produce widely diverging results. Let us have a look at such projects, too, and for the purpose of this manuscript, let us look at three very different examples that seem to advance the three major themes around which, I argue, much ecological questions revolve: the use of natural elements in the work of Stefano Boeri, the

⁴ 'The Great Repair', *ARCH+* 250 (2022).

⁵ 'Construire Local', *L'Architecture d'aujourd'hui* 453 (2023).

⁶ Bart Decroos et al., 'Ecology & Aesthetics', *OASE Journal for Architecture* 112 (2022): 3.

⁷ Peg Rawes, 'Introduction', in *Relational Architectural Ecologies: Architecture, Nature and Subjectivity*, ed. Peg Rawes (London: Routledge, 2013), 1–16.

importance of materiality in the practice of BC Architects & Materials, and the reliance on technology in the projects of Bjarke Ingels Group (BIG).

Nature, Materiality, Technology

First, the widely published Bosco Verticale project in Milan, Italy, by Italian architect Stefano Boeri, completed in 2014. In recent years, Boeri has made a name with his ‘vertical forests’, of which the Bosco Verticale was the pilot project (Figure 1). The idea is rather simple: a seemingly conventional tower complex with housing, offices and retail space, but covered in greenery, and more precisely, covered with actual trees. The claim Boeri makes is that in light of the environmental crisis, society, and thus architecture, too, needs to reconnect with nature – which is a common idea in environmentalist circles.⁸ The modern division between spaces of culture and spaces of nature – both ideological and physical – needs to be undone and we, as human beings, need to recognize our place within the so-called ‘web of life’ again. The Bosco Verticale enacts such thinking in quite a literal way: the building is presented as both architecture and nature, building and forest, at the same time. As Boeri states: ‘The Vertical Forest is the prototype building for a new format of architectural biodiversity which focuses not only on human beings but also on the relationship between humans and other living species.’⁹ Even stronger, human beings come second, as the architect claims the project is a ‘home for trees that also houses humans and birds’.¹⁰ Much can be said about the validity of these claims: that the presence of the trees seems more decorative than ecological, since a collection of potted plants does not make for an actual forest, which needs a much higher level of biodiversity, one that is lacking here; or that it is not architecture (and thus humankind) that is projected back into nature, but rather the opposite, that nature is appropriated into an architectural structure, suggesting that human beings are still in control of where and how nature is allowed to be – a very modern position, still. Yet, aside from such criticisms, the project and its popularity do demonstrate an increased sensitivity to the question of nature and a desire to reconnect with what we seem to have lost and are increasingly losing in real time. In a generous reading, the Bosco Verticale can be seen as an honest attempt to – although at perhaps too small a scale to make an actual difference beyond the symbolic – restore some kind of connection between culture and nature, while a more critical reading might interpret the project as another example of greenwashing, in which nothing fundamentally

⁸ See for example Jaboury Ghazoul, *Ecology: A Very Short Introduction* (Oxford: Oxford University Press, 2020).

⁹ ‘Vertical Forest | Milan’, *Stefano Boeri Architetti* (blog), accessed 14 August 2023, <https://www.stefano-boeri-architetti.net/en/project/vertical-forest/>.

¹⁰ ‘Vertical Forest | Milan’.

changes but the veneer of ecological discourse and aesthetics serves as a cover to build yet another development project.



Figure 1: Bosco Verticale, Milan, Italy, Stefano Boeri Architetti, completed in 2014 (photography by Paolo Rosselli).

A different approach to ecological questions can be found in the practice of the Belgium-based BC Architects & Studies, of which the name already suggests a more expanded approach to architecture. Beyond the mere design and construction of buildings, BC has also set up a practice of material recycling and production, in which they use the waste of other construction sites, such as the earth that is often dug up and discarded as waste, to make rammed earth bricks, blocks and entire constructions. In the Fort V project, for example, an educational centre inside a former warehouse, built in 2015 in Edegem, Belgium, BC built a simple box with arched windows out of rammed earth blocks made of local clay, finished with ‘hempcrete’ for insulation (Figure 2). The 19,000 blocks were produced in a three-week workshop with volunteers, while the hempcrete was installed during another workshop of two weeks. While the design is a rather modest but adequate proposal, it is clear that for BC, the process of building is as important as the final result, if not more. As the architects state: ‘[Fort V] reflects this educative and ecological approach

through a radically sustainable and participative architecture.¹¹ While the building serves its function, ecological questions are addressed in the practice of making it, which is not only about questioning the usual processes of material extraction and production, but also about the people involved, the collaboration and education with local participants, architects and non-architects, to recover a sense of craftsmanship and knowledge, and to educate themselves and others in doing so.



Figure 2: Fort V, Edegheem, Belgium, BC Architects & Studies, completed in 2018 (photography by Thomas Noceto).

By contrast, finally, one of the major international firms that has also been advancing an explicit ecological agenda is the Danish Bjarke Ingels Group, known as BIG. In 2019, BIG completed their CopenHill Energy Plant and Urban Recreation Center in Copenhagen, which has two functions: on the one hand, it is a waste incinerator that produces electricity, on the other, the roof features a ski slope – an unexpected combination, indeed (Figure 3). The project exemplifies what Ingels once described in a TED talk in 2011 as ‘hedonistic sustainability’, which he differentiates from other ecological approaches that he finds too

¹¹ ‘Fort V | Bc-As’, accessed 14 August 2023, <https://bc-as.org/projects/fort-v>.

moralizing.¹² Instead, as he also stated in an interview in 2018, sustainable architecture should be:

. . . ecologically but also economically profitable, and where the outcome doesn't actually force people to alter their lifestyle to have a better conscience. They can live exactly the way they want, or even better because the world and the city are designed in such a way that they can actually do so.¹³

To achieve this, Ingels relies on technological solutions, meaning that he – and other firms like BIG – look at environmental problems as technical ones, to be fixed with technology, while our ways of living and inhabiting the planet are free to continue as they are now. The combination of an energy plant and a ski slope is meant to demonstrate how 'fun' sustainability can be. Much can – and will, later on – be said about this type of approach to environmental problems, but a brief look at the office of BIG as a whole, which collaborates mainly with billionaire investors, gentrifying real estate developers and politicians like Jair Bolsonaro, already suggests that such an approach mostly favours the vested interests of the status quo, while the problems we are facing are largely structural and might require challenging that status quo – something from which such 'fun' architecture only detracts. Aside from such a critical reading, however, the project demonstrates how ecological questions are often still understood as one of many technical aspects architecture needs to consider, and to be solved by experts and technological solutions, rather than as a central design concern.

In short, while the above examples all claim to have some sort of ecological agenda, what is important here is how they demonstrate the different directions such agendas go in. In the case of the Bosco Verticale, ecological concerns translate into an aesthetic staging of nature, and of symbolically suggesting a way to reconnect with it. In the case of BC Architects & Studies, ecological concerns are instead understood as questions of material extraction and production, as well as a (re)discovery of craft knowledge. And in the case of BIG, ecological concerns are addressed as technical problems, for which solutions can be invented. In summarizing them this way, what also becomes clear is how different responses to ecological questions have their roots in much older, historical debates: the Bosco Verticale seemingly evokes a Romantic worldview in which human beings and nature are reconnected, a sentiment that dates back to at least the late eighteenth century in response to industrialization. In the case of BC Architects & Studies, there is a renewed interest in low-tech craftsmanship and local production, echoing nineteenth-century debates on the role of the artisan within increasingly industrialized societies. And, by

¹² *TEDxEastSalon - Bjarke Ingels - Hedonistic Sustainability*, 2011, accessed 14 August 2023, https://www.youtube.com/watch?v=ogXT_CI7KRU.

¹³ Eliza Jordan, 'Bjarke Ingels on Achieving Sustainability Through Info-Driven Design', *Whitewall*, 18 July 2018, accessed 14 August 2023, <https://whitewall.art/design/bjarke-ingels-achieving-sustainability-info-driven-design>.

contrast, BIG instead seems to reaffirm a very modern agenda, which has become rather problematic in recent years, given its contemporary association with a perhaps naïve or all too optimistic trust in industry and progress. As such, these examples are of course not chosen at random: they are here to illustrate the overall idea behind this manuscript. The way architecture today seems to address ecological questions largely relies on these older historical debates, which are often not made explicit or even acknowledged. In what follows, I will argue that there are three main themes that run through ecological questions today and which the above examples illustrate, namely the themes of *nature*, *materiality* and *technology*, to which I will return again and again throughout this manuscript. And the way these themes are addressed relies heavily on inherited ideas about them, which are deeply embedded in modern architecture history. Moreover, as I will argue in the next chapter, these three themes are often framed within binary oppositions: whether architecture does or does not belong to nature, whether materials are passive objects or active agents in processes of construction, and whether technology is or is not opposed to craftsmanship. But before diving into these three themes more deeply in the next chapter, I first need to briefly address the terminology that will be used throughout this manuscript and clarify a little more what we talk about when we talk about ecology.



Figure 3: CopenHill Energy Plant and Urban Recreation Center, Copenhagen, Denmark, Bjarke Ingels Group, completed in 2019 (photography by Dragoer Luftfoto).

From Environmental Crisis to the Anthropocene and Back

As the reader may have noticed, in the above text I have mostly used the term ‘environmental crisis’, in contrast to ‘ecological crisis’, ‘global warming’, ‘climate change’, ‘Climate Emergency’, ‘Sixth Mass Extinction Event’, ‘Anthropocene’ and so on. All of these terms proliferate in debates on the environmental crisis today, and often without much nuance or deliberation. Each of these terms has its own uses and histories and thus has different implications and meanings. The reason why I have used, and will continue to use, the term ‘environmental crisis’ is because it seems to me to describe our current situation in the broadest way possible, indicating what is at stake. Let me briefly unpack most of these terms to be more precise.

The term ‘environmental crisis’ echoes the rise of environmentalist movements from the 1960s and 1970s, a major moment in the development of a widespread consciousness of problems that had already been happening for a long time.¹⁴ In common usage, it describes the fact that there is something called the ‘environment’, something out there, beyond human society, that has reached a state of crisis, a turning point, in the sense that things are shifting and have become unstable, with major consequences for both human and non-human beings.¹⁵ At the time, in the 1960s and 1970s, the focus largely lay on multiple separate environmental crises, which were unfolding locally. But now it is important to realize that these are not separate events, but part of a broader problem, and can be seen as symptoms of how the environment in general – that is, the global or planetary environment as such – is changing in all kinds of ways. By the 2000s, in large part due to American presidential candidate Al Gore and American director Davis Guggenheim’s popular documentary *An Inconvenient Truth*, the focus in public discourse seemed to have shifted mostly towards the problem of global warming.¹⁶ While oceanic acidification, soil degradation, air pollution, plummeting insect populations and so on also became more acute, the problem of global warming became the central focus, as it acts as a multiplier on all of these other problems. Due to political manoeuvring and PR stunts, both well-intended and maliciously propagated, the term ‘global warming’ at some point seemed to have morphed to some extent into ‘climate change’, which, as a term, seems to suggest a less acute problem, as if the planet isn’t necessarily warming and thus threatening most life, but merely ‘changing’, suggesting that life on this planet merely needs to change and

¹⁴ See for example Ghazoul, *Ecology: A Very Short Introduction*.

¹⁵ As the English-American philosopher Timothy Morton remarks, the word ‘environment’ is a slippery one, especially today: ‘*Environment*, the upgrade of *Nature*, is fraught with difficulty. This is ironic, since what we often call the environment is being changed, degraded, and eroded (and destroyed) by global forces of industry and capitalism. Just when we need to know what it is, it’s disappearing.’ See Timothy Morton, *The Ecological Thought* (Cambridge MA: Harvard University Press, 2010), 10.

¹⁶ *An Inconvenient Truth* (Paramount Classics, 2006).

adapt as well. Another shift has taken place in public discourse in recent years, in which the term ‘climate change’ is again receiving a more urgent implication, namely in the reformulation of the ‘Climate Emergency’ – capitalized. This term was mostly popularized in public debates by activist groups such as Extinction Rebellion, to signal the urgent nature of the problem while also suggesting a political approach: to treat it as an emergency situation, similar to the reorganization of societies in times of war.¹⁷ However, the term still foregrounds, or even at times reduces, the problem to a question of the climate. While we might technically still be able to reduce carbon emissions and avoid the warming or changing of the global climate to some extent, other problems like the ones mentioned above would still remain. Aside from these popular terms, there are also more technical and academic terms found in current debates, such as the ‘Sixth Mass Extinction Event’, which names the widespread disappearance of all kinds of lifeforms from a geological perspective, compared to the five other such events in the history of this planet.¹⁸ The term ‘Anthropocene’ also refers to a geological perspective on the current situation and, paradoxically, foregrounds human impact on the geological record while it is often used in contexts where anthropocentrism is questioned and criticized – something I will return to in the next chapter.¹⁹ One last remark relates to the – what seems to me – erroneous use of ‘ecological crisis’. If we understand ‘ecology’ as a word to refer to the interconnectedness of things with other things – as it was originally coined by zoologist Ernst Haeckel in 1866 in a biological sense – then it makes little sense to speak of an ecological crisis, as if these connections are in danger, on the contrary.²⁰ It is not the ecological relations that are in crisis, but what we call the environment, precisely because we are connected, and thus, in turn, human societies are in crisis as well. And while we are living in an *environmental* crisis, we need to address *ecological* questions, which means that we need to think about the inevitable connections between human actions and the world we inhabit.

From the Present to the Past and Back (Into the Future)

The present manuscript is the result of five years of research. I started this research in October 2018, with the observation that contemporary ecological debates in architecture were in need of a more thorough investigation. At the time – and to some extent this is still the case – ecological questions were seen as something new to the field, even external to it, while at the same time they were mostly framed in a technocratic perspective.²¹ In

¹⁷ Extinction Rebellion, *This Is Not a Drill: An Extinction Rebellion Handbook* (London: Penguin, 2019).

¹⁸ Elizabeth Kolbert, *The Sixth Extinction: An Unnatural History* (New York: Henry Holt, 2015).

¹⁹ Paul J. Crutzen and Eugene F. Stoermer, ‘The “Anthropocene”’, *Global Change Newsletter* 41 (2000): 17–18.

²⁰ Timothy Morton, *Dark Ecology: For a Logic of Future Coexistence* (New York: Columbia University Press, 2016).

²¹ See, for example, Peg Rawes, ‘Introduction’.

architectural practice, this mostly meant and still means that ecological questions are reduced to technological problems, to be solved by engineers rather than being addressed as a fundamental part of the design question. In architecture discourse, too, ecological questions are reduced to matters of energy and materials, in the quantitative sense. Yet, I had a hunch that such questions needed a more thorough investigation, including from a cultural perspective.

The basic idea of my research was to do two things: on the one hand, it seemed necessary to expand contemporary ecological debates in architecture by connecting them to other discourses, outside of the field of architecture, most notably to what I will describe in the next chapter as posthuman discourses. In doing so, it became possible to reframe ecological issues as broader cultural questions, rather than mere technical problems. The result of this reframing was the appearance of three dominant themes around which ecological debates seem to revolve: nature, materiality and technology. On the other hand, it also seemed necessary to trace the roots of these contemporary ecological questions throughout modern architecture history and to demonstrate how they have long-standing precedents of debate. This made it possible to demonstrate how much of the contemporary debate revolves around inherited ideas on the themes of nature, materiality and technology, which are often not acknowledged. In short, the research project consisted of a widening and a deepening – a widening of the perspective towards posthuman discourses and a deepening of the perspective to include architecture's own disciplinary history. As a result, we might look with new eyes at the questions facing us today, which prompt us to reconsider much of our assumptions with which we still act in the world.

The manuscript has been written in the same way as the research was conducted over these past five years.²² This can be described as a circular movement: from the present, to the past, and back again to today, even into the future. Specifically, this means that, as we have seen above, the manuscript started out with an overview of the present situation in contemporary architectural practice and discourse. To get a grasp on the murkiness of this situation, a broader perspective is needed, which will be addressed in Chapter 1, titled '**An Ecological Sensibility**'. There, I will argue that the present confusion is characteristic of an emerging cultural sensibility. Additionally, I will expand the perspective towards so-called posthuman discourses, which help in defining the already mentioned, dominant themes around which this ecological sensibility revolves, namely, nature, materiality and technology. What is this thing we call nature? How do we deal with material relations between human beings and such nature? And what is the role of technology, which has

²² Over the years, my research into these questions has been published in various books and journals. See, for example, Bart Decroos and Lara Schrijver, "Give Me Some Wiggle Room": How to Feel at Home in the Gap Between Design, Building and Decay', in *Spaces of Tolerance*, ed. Igea Troiani and Suzanne Ewing (London: Routledge, 2021), 45–62. I also edited an issue of *OASE* dedicated to these questions, see Bart Decroos et al., *OASE Journal for Architecture* 112 (Rotterdam: OASE foundation, 2022). At the end of this manuscript, a full list of my publications can be found.

both the potential for solutions and is the source of many problems at the same time? These questions often seem to be caught up in historically inherited binaries: nature is commonly defined as that which is not human, outside of us; materiality is often considered as inert and passive, as opposed to the active agency of humans; and technology, as conceived within the (over-)industrialized conditions of contemporary societies, seems to be opposed to craftsmanship. From this broader perspective, I will then look back to the history of architecture, specifically the work of Ruskin and Banham. As I will argue in Chapter 2, **‘Between Ruskin and Banham’**, these two figures can be understood as a historical unit, centred on the question of industrialization and modernity, but who take opposing views on the matter, largely exemplifying the binaries I just mentioned. In Chapters 3, 4 and 5, I will then stage a conceptual dialogue between Ruskin and Banham, by conducting a close reading of their writings, tracing the themes of **‘Nature’**, **‘Materiality’**, and **‘Technology’**. Specifically, I will focus on how their arguments, written in different historical contexts from today, nonetheless prefigure contemporary debates on ecology, by referring to contemporary authors, most notably Timothy Morton, Jane Bennett and Bruno Latour, as well as a whole range of others, where necessary. The ambition here is twofold: on the one hand, to plausibly argue how contemporary debates often rehash historical arguments, which need to be recognized to move beyond our current situation. On the other hand, in the writings of Ruskin and Banham I will also identify moments where the modern binaries mentioned collapse, which is where contemporary authors are brought in, to further conceptualize these collapsing binaries. In Chapter 6 on **‘Time’**, then, I will connect these three themes with the dimension of time and demonstrate what is fundamentally at stake in the emergence of an ecological sensibility: a shift in the temporal perception of the world we live in now, as opposed to the linear time of modernity. Here, the themes of nature, materiality and technology appear not as separate categories, but as different manifestations of this temporal dimension. Finally, in Chapter 7, I will formulate some concluding thoughts on a **‘Politics of Vitality’**, to promote further debate on how to act according to this emerging ecological sensibility, both in architecture and in general.

While this research draws from a whole range of sources, from the theory and history of architecture as well as from posthuman discourses found in philosophy and sociology, it is nonetheless a work of architecture theory, first and foremost. Yet, as is often the case in architecture, things inevitably get entangled with other things. As such, architecture here appears as a privileged field to investigate things that are happening in our contemporary society at large. Moreover, while I borrow from other disciplines such as philosophy and sociology to make an argument in architecture theory, the findings might be relevant to those other fields, too. And finally, while the argument largely pertains to theory, it also has consequences for architecture criticism: it suggests how we might need to look differently at contemporary architectural projects and practices. As such, the manuscript is perhaps also a demonstration of how ‘ecological thinking’ operates: a mode of thought

that does not isolate, but rather looks for connections, across different disciplines, scales and time.

This shift towards ecological questions in architecture culture is of course not an isolated phenomenon, but part of a wider cultural shift. For example, in 2005, American environmentalist Bill McKibben criticized the art world for its lack of engagement with the topic of climate change in his essay ‘What the Warming World Needs Now Is Art, Sweet Art’.²³ In recent years, however, the topic of the environmental crisis has become more present in the arts, for example in the work of Icelandic-Danish artist Olafur Eliasson, whose *Ice Watch* installation (2014) explicitly tried to offer a direct and tangible experience of climate change (Figure 4).²⁴ In literature, too, the attention has partly shifted towards such topics, with the birth even of a new genre, described as ‘cli-fi’ or climate fiction, a term attributed to American novelist Dan Bloom, who coined it in 2007.²⁵ Prominent so-called cli-fi authors include the novelists Kim Stanley Robinson, Richard Powers and Barbara Kingsolver, who write novels in which the theme of climate change or environmental crisis is not merely a backdrop, but an active element of the narrative. Likewise, in cinema climate change is becoming increasingly present as a narrative device.²⁶ While science fiction has long addressed themes of environmental disaster, from *Soylent Green* (1973) to *Snowpiercer* (2014), the theme can now be seen in more mainstream films as well, from *The Day After Tomorrow* (2004) to *Don’t Look Up* (2021). Despite these developments, however, Indian novelist and writer Amitav Ghosh argues in his book *The Great Derangement: Climate Change and the Unthinkable* that there is something fundamentally incompatible between narrative fiction and climate change, since they operate at different scales:

All of this makes climate change events particularly resistant to the customary frames that literature has applied to “Nature”: they are too powerful, too grotesque, too dangerous, and too accusatory to be written about in a lyrical, or elegiac, or romantic vein.²⁷

²³ Bill McKibben, ‘What the Warming World Needs Now Is Art, Sweet Art’, *Grist*, 22 April 2005, accessed 8 November 2023, <https://grist.org/article/mckibben-imagine/>.

²⁴ Madeleine Bunting, ‘The Rise of Climate-Change Art’, *The Guardian*, 2 December 2009, accessed 8 November 2023, <https://www.theguardian.com/artanddesign/2009/dec/02/climate-change-art-earth-rethink>.

²⁵ Rodge Glass, ‘Global Warning: The Rise of “Cli-Fi”’, *The Guardian*, 31 May 2013, accessed 8 November 2023, <https://www.theguardian.com/books/2013/may/31/global-warning-rise-cli-fi>.

²⁶ See for example Mark Bould, *The Anthropocene Unconscious: Climate Catastrophe Culture* (New York: Verso Books, 2021).

²⁷ Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable* (Chicago: The University of Chicago Press, 2016), 33.



Figure 4: *Ice Watch*, London, United Kingdom, Olafur Eliasson, 2014 (photography by Martin Argyroglou).

Indeed, our struggle to grasp the reality of something as all-encompassing as the environmental crisis causes our political, social and economic modes of life to remain fundamentally unchanged, which Ghosh describes as a state of ‘derangement’. Instead, Ghosh argues, we should invent new modes of storytelling, not only to be able to understand what is happening and how it could be different, but to *feel* it as well. The above examples are steps in that direction and, as Welsh culture critic Raymond Williams argued, the emergence of new genres of artistic production are often indicative of the emergence of a new sensibility.²⁸ In this chapter, therefore, I will argue that what is happening in the field of architecture as well as in culture in general is the emergence of exactly such a new kind of sensibility – an ecological sensibility. In short, the environmental crisis is challenging a number of the fundamental assumptions on which much of modern culture has been built, but that are becoming increasingly untenable. As a result, such an emerging ecological sensibility, despite its current confusion and

²⁸ Similar to the term ‘sensibility’ being used here, Raymond Williams used the term ‘structures of feeling’ to describe the experience of a changing present, as opposed to descriptions of ‘culture’ or ‘the social’, which are always already established and thus in the past. See Raymond Williams, *Marxism and Literature* (New York: Oxford University Press, 1977), 128–35.

contradictions, is perhaps first and foremost a challenge to the modern worldview within which overindustrialized societies operate.

1.1 Towards An Ecological Sensibility?

If historical moments can be described in terms of a certain sensibility, which is here in short understood as an ‘attitude of mind’,²⁹ then we are perhaps witnessing the emergence of an ‘ecological sensibility’ today. One might argue that the very notion of ‘sensibility’ is determined by an ontology of evasion, since, once it is described it stops being immediately sensible, but instead becomes rationally legible. Yet, some aspects can be named and it is in the tension between those explicit elements that the lived experience of a certain sensibility becomes detectable. In his *Keywords: A Vocabulary of Culture and Society*, Williams – famous for his development of the perhaps even vaguer notion of ‘a structure of feeling’ – traces the term ‘sensibility’ back to the middle of the eighteenth century. Originally, he observes, the word described ‘a social generalisation of certain personal qualities, or, to put it another way, a personal appropriation of certain social qualities’.³⁰ More simply, at the time it functioned in a similar way as the word ‘awareness’ functions today (‘not only *consciousness* but *conscience*’), and in its stronger variation as ‘the ability to feel’.³¹ As such, it overlapped partly with the word ‘sentimentality’, as ‘a conscious openness to feelings, and also a conscious consumption of feelings’.³² While the word ‘sentimentality’ received a rather negative connotation during the nineteenth century, the word ‘sensibility’ survived and by the twentieth century, it became the unifying word to describe ‘a whole activity, a whole way of perceiving and responding, not to be reduced to either “thought” or “feeling”’.³³ As such, the word became closely associated with the arts: ‘For an important period, sensibility was that from which art proceeded and through which it was received.’³⁴ Although the term may have faded from active discussion by the middle of the twentieth century, now, in the context of both a political and theoretical questioning of binary thought patterns, we seem to be in need of a renewed vocabulary that can address the space in between binary oppositions, including the one between the rational and the emotional, the abstract and the lived. By using the term ‘sensibility’ here in the context of an ecological reorientation of cultural production, I want to emphasize how this contemporary reorientation is not only a matter of political discourse and

²⁹ This definition is borrowed from Reyner Banham’s use of the term ‘sensibility’, which will be further addressed in chapter 6. See Reyner Banham, *Theory and Design in the First Machine Age* (London: The Architectural Press, 1960), 99.

³⁰ Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (Oxford: Oxford University Press, 2015 [1976]), 219.

³¹ Williams, 219.

³² Williams, 219.

³³ Williams, 220.

³⁴ Williams, 220.

academic theories, but also impacts the quality of daily life in overindustrialized societies, where people's everyday emotions, actions and thoughts are increasingly affected by ecological questions. And, following Williams, the arts – or more specifically, here, architecture – perhaps offers a privileged site to investigate the emergence of such a more general ecological sensibility.

What is fundamentally at stake today is a questioning of the condition of many contemporary overindustrialized societies, a condition that has long been known as 'modernity'. While this is a complex term with various uses in various fields, in general one of the recurring features of modernity is the centrality of the human being, its anthropocentrism, and its separation from everything else in the world, usually described as nature.³⁵ In recent years, however, a heterogeneous collection of theorists, writers, artists and others have started questioning such anthropocentrism and, especially in the context of ecological thinking, it is now deemed important to recognize the interconnectedness of things and beings, in which no one is more central than any other. This broad questioning of the anthropocentrism of the modern worldview can especially be found in what is usually referred to as posthuman theory, in the sense of going beyond the human as the sole measure for things. And indeed, in posthuman theory, the themes of nature, materiality and technology appear again and again, since these concepts are traditionally marked by a sharp binary opposition between what is human and what is not. As such, a brief understanding of posthuman arguments will help to grasp what is shifting in the emergence of an ecological sensibility.

1.2 The Posthuman

As Italian philosopher Rosi Braidotti and Slovakian curator Maria Hlavajova write in their *Posthuman Glossary*, the posthuman can be defined as 'a field of enquiry and experimentation that is triggered by the convergence of post-humanism on the one hand and post-anthropocentrism on the other'.³⁶ While humanism can be traced back to the anthropocentric discourses on individualism and rationalism of the Enlightenment, the term posthumanism is used to refer to a mix of philosophy, literature, art and science fiction that questions the autonomy of the human individual. As such, the heterogeneous group of authors and artists associated with the posthuman share an interest in the porous edges of what is described as the human, foregrounding its non-human constitution and thus opening towards non-human perspectives.

³⁵ See for example Bruno Latour, *We Have Never Been Modern* (Cambridge, Massachusetts: Harvard University Press, 1993).

³⁶ Rosi Braidotti and Maria Hlavajova, *Posthuman Glossary* (London: Bloomsbury, 2018), 1.

More specifically, as Italian curator Giovanni Aloï and American theorist Susan McHugh write in their introduction to *Posthumanism in Art and Science: A Reader*, central to posthumanism is the refusal of ‘hierarchical dualisms through which people once separated and elevated themselves from “the other” in its many permutations’, and instead ‘the posthuman unravels through heterogeneous assemblages that not only shift intellectual and political baselines but also transform the very terms of creative and ethical practice’.³⁷ Methodologically, this results in cross-disciplinary formations that combine bioinformatics, multispecies ethnography and poststructuralist theory, among other things. Looking back from this perspective, the influential 1985 essay *A Cyborg Manifesto* by American philosopher Donna Haraway appears as foundational for the field. In her essay, Haraway proposes the image of the cyborg as a human-animal-machine hybrid that emerges from the remnants of humanist philosophy but evades the clear-cut categories of the natural and the artificial, the physical and the immaterial, the organic and the technological.³⁸

The questioning of modern binary hierarchies is also what marks the fashionable term ‘the Anthropocene’, which has become a central point of discussion in much posthuman discourse. The term refers to the idea that humankind has now become a ‘major geological force’ with the scientific and technological power to transform the entire planet on an unprecedented scale.³⁹ The term has various uses in contemporary literature: it originated to indicate the destructive force human activity had become, disrupting entire ecosystems through material extraction and pollution, and leaving behind a geological record of these activities. At the same time, it also suggests how interwoven humankind has become with the natural world, and perhaps always has been, undermining clear distinctions between nature and culture. But the term has also been criticized for its anthropocentrism, for the suggestion that, indeed, human beings have the power to shape the entire planet, which may lead us towards a ‘good Anthropocene’ according to some optimistic authors.⁴⁰ In addition, the term has also been criticized for its generalization: it is not humankind as such that has impacted the natural world to this extent, but rather a select group of human beings at the control buttons of colonial, racist and capitalist systems, for which the term ‘Plantationocene’ has been proposed by, among others, authors such as Haraway.⁴¹ As an alternative, Haraway has also suggested the term ‘Chthulucene’ to describe a different

³⁷ Giovanni Aloï and Susan McHugh, eds., *Posthumanism in Art and Science: A Reader* (New York: Columbia University Press, 2021), 2.

³⁸ Donna J. Haraway, ‘Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s’, *Socialist Review* 80 (1985): 65–108.

³⁹ Paul J. Crutzen and Eugene F. Stoermer, ‘The “Anthropocene”’, *Global Change Newsletter* 41 (2000): 17–18.

⁴⁰ John Asafu-Adjaye et al., ‘An Ecomodernist Manifesto’, *An Ecomodernist Manifesto* (blog), 2015, accessed 8 November 2023, www.ecomodernism.org.

⁴¹ Donna Haraway, ‘Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin’, *Environmental Humanities* 6, 1 (2015): 159–65.

approach to living on this planet, foregrounding multispecies collaboration as opposed to human-centred domination. Or maybe it is not even human beings themselves, but a specific economic system, namely capitalism, that can be seen as the origin of the destructive forces that have ravaged the planet, for which the substitute term ‘Capitalocene’ has been put forward by authors such as American historian Jason W. Moore.⁴²

Whatever interpretation or critique of the Anthropocene one adheres to, the questions seem to remain the same: should (modern) human beings assume a more modest position in the web of life of the natural world, or are they indeed the exception and capable of mastering it? Should the material world be seen as a network of active agents beyond our reach, or do we still live in some kind of predictable universe that can be calculated and controlled? And to what extent is technology inevitably bound up with notions of such control, or is a different kind of technics possible, which collaborates rather than dominates?

Of course, these questions are incredibly broad and perhaps impossible to answer in any straightforward way, but they do describe the discomfort that drives the emergence of an ecological sensibility that can be found in contemporary society, and in the context of this manuscript they will also steer the interrogation of Ruskin and Banham that I will conduct. Before we get there, however, let us take a brief look at how these questions are dealt with in contemporary theory, specifically in the work of three authors that each have dealt at length with one or more of these questions, and are exemplary of what kind of questions are being asked in contemporary posthuman theory.

1.2.1 Nature

One of the contemporary theorists who has engaged widely and deeply with the notion of nature is English-American philosopher Timothy Morton. Once described by *The Guardian* as the ‘philosopher prophet of the Anthropocene’,⁴³ already a brief look at their bibliography gives an idea of the extent that the concept of nature has been problematized in their work: from the ecocritical approach in *Ecology Without Nature* (2007) and the environmental theory of *The Ecological Thought* (2010) to the end-of-the-world philosophy in *Hyperobjects* (2013), the speculative theory in *Dark Ecology* (2016), the eco-Marxism in *Humankind* (2017) and the popularization of ecological theory in *Being Ecological* (2018). In all of these books, Morton presents variations of a basic idea, namely

⁴² Jason W. Moore, *Anthropocene Or Capitalocene? Nature, History, and the Crisis of Capitalism* (Oakland: PM Press, 2016).

⁴³ Alex Blasdel, “‘A Reckoning for Our Species’: The Philosopher Prophet of the Anthropocene”, *The Guardian*, 15 June 2017, accessed 8 November 2023, <https://www.theguardian.com/world/2017/jun/15/timothy-morton-anthropocene-philosopher>.

that the ideological notion of ‘nature’ should be understood as a stumbling block for effective ecological action.

Morton traces the development of our contemporary understanding of nature back to the Romantic period, as they write in *Ecology Without Nature*: ‘Nature, practically a synonym for evil in the Middle Ages, was considered the basis for social good by the Romantic period.’⁴⁴ In contrast to industrialization, nature came to embody all that was lost to the world of the machines in which human beings since have dwelled. As such, nature became inaccessible, removed from human societies, as they write in *Dark Ecology*: ‘The ecological value of the term Nature is dangerously overrated, because Nature isn’t just a term – it’s something that happened to human-built space, demarcating human systems from Earth systems.’⁴⁵ Yet, the concept is riddled with contradictions, they argue:

Since the Romantic period, nature has been used to support the capitalist theory of value and to undermine it; to point out what is intrinsically human, and to exclude the human; to inspire kindness and compassion, and to justify competition and cruelty.⁴⁶

While human society, especially the (over-)industrialized type, may appear to have been separated from the natural world, at the same time it heavily relies on that world, not only in the material sense, but to ideologically define what is human.

As such, Morton’s work can be characterized as posthuman in the sense that they incessantly problematizes many of the ideological binaries on which much of the modern worldview has been built. The distinction between nature and culture, a main feature of modern societies, completely unravels in their writing, both from a historical perspective and in contemporary ecological questions. Yet, as Morton’s work demonstrates, for now, we cannot seem to think about ecology without resorting to some version of nature, which they present as a thoroughly artificial category that needs to be deconstructed at every turn. Exploding the idea of ‘Nature’ – as they often capitalize it to indicate its artificial construction – proves to be a fruitful exercise in thinking about ecological questions on a more fundamental level. As such, their work has been especially useful for contemporary artists and curators, with people like Hans Ulrich Obrist, Philippe Parreno and Olafur Eliasson describing their writings as a ‘toolbox’ with which to address the current situation.⁴⁷

⁴⁴ Timothy Morton, *Ecology without Nature: Rethinking Environmental Aesthetics* (Cambridge, Massachusetts: Harvard University Press, 2007), 15.

⁴⁵ Timothy Morton, *Dark Ecology: For a Logic of Future Coexistence* (New York: Columbia University Press, 2016), 58.

⁴⁶ Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*, 19.

⁴⁷ Blasdel, “A Reckoning for Our Species”: The Philosopher Prophet of the Anthropocene’.

1.2.2 Materiality

Similar to such deconstruction of the notion of nature, contemporary theory has also witnessed a renewed interest in the role of matter, in which various post-human theorists have explored the notion of ‘material agency’. This turn towards materiality has resulted in what is often described as ‘new materialism’. As British theorist Diana Coole and American theorist Samantha Frost write in the introduction to their edited volume that gives an overview of such recent developments: ‘Foregrounding material factors and reconfiguring our very understanding of matter are prerequisites for any plausible account of coexistence and its conditions in the twenty-first century.’⁴⁸ The basic move underlying this development is indeed to attribute a sense of agency to matter and, in doing so, to dismantle or, at least, question the causal relationship between the active – and usually human – subject and the passive – usually non-human – object. Instead, objects have come to be seen as active participants on their own within the complex of relations between human beings and the world.

Perhaps one of more popular books on the topic in recent years is *Vibrant Matter: A Political Ecology of Things* by American philosopher Jane Bennett, which was picked up widely, again especially in the art world, celebrating a newfound engagement with messy matter after the triumph of twentieth-century abstraction and conceptualization. Bennett is concerned with the agency of matter, with the reciprocal relationships human beings can develop with their environments. In her book, she tries to understand the inevitable call that goes out to us from the material world. To develop such a theory of ‘vital materialism’, she largely draws from poststructuralist thought – from Foucault to Deleuze and Derrida – arguing that there is a theory of materialism to be found there, but different than the historical materialism that places human beings at the centre.⁴⁹ Instead, as she explicitly emphasizes, her project is an ontological one, not epistemological, in which she tries to give a language to matter so that we might see how things exert force, and that we might even feel that force. Fundamentally, Bennett tries to dismantle the conventional distinctions between living and non-living things: ‘One moral of the story is that we are also nonhuman and that things, too, are vital players in the world.’⁵⁰

1.2.3 Technology

Finally, one of the contemporary authors whose work has shown a persistent commitment to the theme of technology is of course the late French philosopher Bruno Latour. His work, though incredibly varied and ranging from philosophy to sociology and

⁴⁸ Diana Coole and Samantha Frost, eds., *New Materialisms: Ontology, Agency, and Politics* (Durham: Duke University Press, 2010), 2.

⁴⁹ Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010).

⁵⁰ Bennett, 4.

anthropology, from history to architecture theory and art curation, can perhaps be described as a continuous questioning of modernity, in which technology is a central concern. In a well-known early essay from 1991, Latour argues that technology ‘is society made durable’.⁵¹ This statement refers to the idea that nothing in society, as in the world in general, can be stable or durable without the help of non-humans. In other words, a purely ‘social’ world, according to Latour, can only exist as heterogeneous networks comprised of humans and non-humans, social facts as well as technologies. What produces stability is thus the way in which these usually separate categories are assembled together, or folded, into fixed situations, stabilized by technology. Such a technological stabilization, however, often hides the fact that human and non-human agencies intermingle, and his major contributions to the development of actor-network theory (ANT) were aimed at revealing the way in which the social is always pervaded by the natural, the material and the technological.⁵² This is then one of the major questions Latour’s work confronts us with in the context of this manuscript: If modernity considered technology as a mere instrumental set of practices to engage with and control the world around us, what kind of role does technology acquire within an ecological sensibility that acknowledges collaboration instead?

I mention these three authors here briefly as exemplary figures questioning the topics of nature, materiality and technology, as they demonstrate the logic according to which this manuscript will proceed. Throughout the text, they will reappear where necessary, to identify similar arguments already present in the work of Ruskin and Banham, and will serve as points of reference to identify what we can learn from these two figures to contribute to ecological debates today.

1.3 Ecological Critiques

Of course, the emerging ecological sensibility that we are witnessing today does not come out of nowhere. At least since the 1960s, there has been a growing awareness of environmental issues, which has produced all kinds of ecological critiques of the anthropocentric modern worldview, on which the abovementioned posthuman authors also build. Moreover, the history of Western environmentalism in a very general sense is perhaps as old as Antiquity, where Greek and Roman poets already professed their love for nature. Similarly, various medieval and Renaissance authors celebrated the natural world, and the Romantic response to industrialization explicitly projected a vision of a return to nature, to escape the illnesses of modern society. But it was probably not until

⁵¹ Bruno Latour, ‘Technology Is Society Made Durable’, in *Sociology of Monsters: Essays on Power, Technology and Domination*, ed. John Law (London: Routledge, 1991), 103–31.

⁵² See, for example, Latour, *We Have Never Been Modern*.

the second half of the twentieth century that something developed that we would now describe as environmentalism proper. In the 1960s and 1970s, several things happened at the same time: there were a number of important publications that discussed how both humankind and the natural world were under threat, there were several large-scale and widely mediatized environmental disasters around the world that fuelled a sense of anxiety in the general population, and several environmentalist organizations were founded during these years that continue to weigh on the debates to this day.

The examples are well-known: there was Rachel Carson's *Silent Spring* in 1962 about declining bird populations as a result of insecticide pollution. In 1968, Paul Ehrlich and Anne Howland Ehrlich published *The Population Bomb*, popularizing the controversial Malthusian idea of overpopulation. There was the oil spill off the coast of Santa Barbara in 1969, which in turn inspired the first Earth Day on 22 April 1970. Greenpeace was founded in 1971, while the more radical Earth First! was founded a decade later in 1980. In between, in 1972, the Club of Rome published its famous *Limits to Growth* report, addressing the tension between an economic system of infinite growth on a planet with finite resources. And by the end of the 1980s, in 1987, the Brundtland Commission published the report *Our Common Future*, popularizing the notion of 'sustainability' as a possible political and economic paradigm to address the unfolding environmental crisis.

In the context of these latter decades of the twentieth century, the word 'environmentalism' has come to refer to a concern about the environment, usually linked to specific environmental issues or disasters, like the ones that occurred at the time. By contrast, the word 'ecology' has come to refer to a more general perspective, in which the world appears as a set of relations, rather than discrete things. The latter word itself in the strict sense refers to a branch of the scientific field of biology founded in the mid-nineteenth century. In recent decades, however, it has increasingly become intertwined with political and ideological agendas, and has developed a more diffuse meaning to include the activities of naturalists, poets, organic farmers, birdwatchers, academics, researchers and activists, eventually referring to a wider, cultural view on the world we live in.⁵³ In the latter decades of the twentieth century, various perspectives were formulated to understand and critique the increasingly problematic relations between modern societies and the environment. I want to briefly mention three of them here as examples, because the following types of ecological thought set out a spectrum of the ways in which modernity has been critiqued in the past from an environmentalist perspective, which to some extent still structures the debate today, namely deep ecology, the Gaia hypothesis and ecofeminism.

⁵³ See for example chapter 7 'Ecology in Culture' in Ghazoul, *Ecology: A Very Short Introduction*.

1.3.1 Deep Ecology

Perhaps the most radical form of ecological thinking is the discourse of deep ecology, a term coined in 1973 by Norwegian philosopher Arne Naess. In short, Naess and his followers view the biosphere not as something that is made up of discrete entities, but as a whole of interconnected and interdependent beings that work together to constitute that which we call nature. While this may not seem to be such a provocative view, deep ecology also emphasizes a radical egalitarianism, in which all organisms have inherent value, derived from their partaking in the larger whole. As such, deep ecologists have always rejected mainstream environmentalism, which still prioritizes human welfare above the rest and is mostly concerned with environmental disasters in as far as they might threaten human society. Over time, deep ecology has shown itself to be a fundamentally reactionary type of ecological thinking, which ultimately blames human civilization as a whole for the environmental crisis and proposes a reduction of the human population to a fraction of its current size as a remedy. For example, as recent as 2011, in *Deep Green Resistance*, the prominent American writer Derrick Jensen, along with his co-authors Aric McBay and Lierre Keith, argues that ‘a truly sustainable number would be somewhere between 300 and 600 million’.⁵⁴ To do so, they try to convince their readers of the necessity of inducing ‘widespread industrial collapse, beyond any economic or political systems’, in order to eliminate most of human life and hand the planet back to the so-called animal kingdom. It is indeed industrialization that is often considered as the main culprit, although at times deep ecologists also suggest that ‘the fall’ occurred with agriculture, projecting the hunter-gatherer model as the only ‘natural’ way of life.⁵⁵ While this might seem like an extreme case, the idea that humanity is a ‘virus’ and that the world would be better off without its presence seems to resurface in popular culture again and again, and can be understood as a symptom of the despair and pessimism people feel in the face of the ongoing environmental crisis.⁵⁶

1.3.2 The Gaia Hypothesis

The Gaia hypothesis was formulated in the 1970s by James Lovelock, an English atmospheric chemist, and Lynn Margulis, an American evolutionary biologist. As the

⁵⁴ Aric McBay, Keith Lierre, and Derrick Jensen, *Deep Green Resistance: Strategy to Save the Planet* (New York: Seven Stories Press, 2011), 210.

⁵⁵ For example, Timothy Morton at times flirts with deep ecology when they criticize the agricultural revolution as being the operating system of humankind’s exploitation of the nature world, which he sums up with the term ‘agrilogistics’. See Morton, *Dark Ecology: For a Logic of Future Coexistence*.

⁵⁶ Especially at the start of the COVID-19 pandemic in March 2020, the sentiment of human beings being ‘the virus’ proliferated in the public sphere. For a critique of such a sentiment, see Jennifer Johnson, ‘We Are Not the Virus’, *Verso*, 27 March 2020, accessed 8 November 2023, <https://www.versobooks.com/en-gb/blogs/news/4622-we-are-not-the-virus>.

word Gaia indicates, Lovelock and Margulis tried to formulate a perspective on the planet in which everything and everyone was viewed as part of a larger whole. The basic idea is that Earth can be understood as being alive, in the sense that it is ‘a self-organising adaptable entity derived from the interactions of organisms with each other and their geological, marine, and atmospheric environments’.⁵⁷ This vision of Earth as a living organism called Gaia has since spread throughout popular culture and has come to represent a holistic approach that goes beyond the typical reductionist approach of scientific research, which isolates the phenomena it studies. Additionally, the idea of a living Gaia also suggests an approach that goes beyond merely mechanistic interpretations of the world, which led to the birth of the field of Earth system science.⁵⁸ At the same time, Gaian thinking also led to various metaphysical and spiritual interpretations, which go beyond Lovelock and Margulis’s original intentions. Since the 1970s, Lovelock has published widely about the Gaia hypothesis, emphasizing that it is not teleological, instead relying on Darwinian thought and arguing that the self-regulating processes of Gaia have no purpose to sustain life, but that life is sustained, nonetheless. Whichever way it is interpreted, the ideological image of Gaia (along with the literal image of planet Earth, as seen in the popular photograph *The Blue Marble* that was taken in 1972 by the crew of Apollo 17) embodies the idea that we are an integral part of a larger whole, based on interdependent relations.

1.3.3 Ecofeminism

Ecofeminism is a type of feminism that connects with political ecology and employs feminist frameworks to analyse the relationship between human beings and the natural world. The term ‘ecofeminism’ was originally coined by French writer Françoise d’Eaubonne in her 1974 book *Le Féminisme ou la mort*. In these essays, d’Eaubonne demonstrated how the suppression of women and the suppression of nature are entangled and rely on similar social structures.⁵⁹ Ecofeminism has been developed by activists and authors all over the world, and in many different ways, but they are nonetheless connected through similar concerns. As scholars Greta Gaard and Lori Gruen outline in their 1993 essay ‘Ecofeminism: Towards Global Justice and Planetary Health’, there seem to be various explanations for the separation between the human and the natural world, which is understood as a patriarchal problem.⁶⁰ For some ecofeminists, this separation can be

⁵⁷ Ghazoul, *Ecology: A Very Short Introduction*, 208.

⁵⁸ The birth of Earth system science is usually traced back to 1983, when NASA established the Earth System Science Committee (ESSC). For one of the earliest contributions to the field, see NASA Advisory Council and United States, *Earth System Science Overview: A Program for Global Change* (Washington DC: National Aeronautics and Space Administration, 1986).

⁵⁹ Françoise d’Eaubonne, *Feminism or Death* (London: Verso, 2022 [1974]).

⁶⁰ Greta Gaard and Lori Gruen, ‘Ecofeminism: Toward Global Justice and Planetary Health’, *Society and Nature* 2 (1993): 1–35.

traced back to the mechanistic conception of the natural world as a result of the scientific revolution, in which all things are seen as dead and inert resources. For others, it is the result of the rise of patriarchal religions, as a result of a shift from goddess-worshipping cultures to male deities, that shifted the perspective from an immanent divinity found in the sacredness of nature to a hierarchical structure with a 'sky god' at the top, and who created nature for human beings to use. Other critiques target the popular but erroneous interpretation of evolutionary development, in which the man is portrayed as stronger, as a result of the hunt, while the woman is claimed to be 'naturally' weaker, and thus supposedly inferior. Still others target the ideological dualist hierarchies between self and other, as, for example, in conceptualizations of 'nature/culture, man/woman, white/non-white, human/non-human animal, civilized/wild, heterosexual/homosexual, reason/emotion, wealthy/poor etc.', in which both nature and women are always configured as 'other'.⁶¹ Finally, other ecofeminists also draw from Marxist critiques of capitalism and its inherent need for exploitation, destruction and instrumentalization of natural resources and animals as well as certain groups of people. As such, ecofeminism, while focusing on the similarities between the exploitation of both women and nature, based on patriarchal structures, relies on intersectional frameworks of analysis to address the environmental crisis.

From deep ecology to the Gaia hypothesis to ecofeminism, it is clear that in recent history various ways of thinking about the ecological relations between human beings and the natural world have already been developed. Aside from both the historical and contemporary specificities of these discourses, what they here demonstrate is the range within which ecological questions are debated. While deep ecology advances the view that human beings should drastically limit their presence on this planet, if not disappear altogether, the Gaia hypothesis instead posits that human beings are an intrinsic part of the puzzle, although some kind of balance may indeed have been disturbed, while ecofeminism instead claims that it is the patriarchal ideology of the modern world that threatens both certain groups of human beings and the environment. Fundamentally, however, in varying degrees of radical politics, these responses challenge the foundation of human supremacy over the natural world – which is nothing less than a challenge to modernity itself. Not surprisingly, then, modernity – especially in its manifestation of a liberal democracy combined with industrial capitalism – has responded with its own type of ecological thought.⁶²

⁶¹ Gaard and Gruen, 4–5.

⁶² Francis Fukuyama, *The End of History and the Last Man* (New York: Perennial, 1992).

1.4 Re-affirming the Modern

Following the environmental activism of the 1960s and 1970s, the political establishment of modern societies saw the need for its own response to the unfolding environmental crisis, a response that has become known as ‘sustainable development’. It is important to briefly note that this is not exactly the same as ‘sustainability’ in general, which is a notion that can be traced back to the eighteenth century, when Saxon administrator Hans Carl von Carlowitz applied the German word *Nachhaltigkeit* to forestry, to describe the long-term responsible use of a natural resource in his work *Sylvicultura oeconomica*.⁶³ Of course, the idea of long-term responsible use is part of sustainable development too, but as a political and economic concept, the way it was developed over the past decades, it has received a more specific definition, which, by now, is often assumed as primary in discussions about sustainability in general, resulting in a conflation of two historically distinct concepts.

1.4.1 Sustainable Development

In 1980, the International Union for Conservation of Nature published its *World Conservation Strategy*, one of the first policy documents to include a short chapter on the concept of ‘sustainable development’, in which guidelines are proposed to reconcile economic development with conservation.⁶⁴ While the report was not widely read, in 1987 the United Nation’s Brundtland Commission published its report *Our Common Future*, which further developed and popularized the notion of sustainable development, giving it the definition that is still prevalent today: ‘Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’⁶⁵ The way this definition is then further interpreted, is by focusing on ‘three pillars’: human, social and economic development, which are supposed to go together. However, as history has shown since then, the idea of sustainable development as it has been adopted in politics worldwide seems first and foremost concerned with economic development and, thus, is quite literally an attempt to merely ‘sustain’ things as they already are. As Morton sums it up diplomatically: ‘What exactly are we sustaining when we talk about sustainability? An intrinsically out-of-control system that sucks in grey

⁶³ Hans Carl von Carlowitz, *Sylvicultura Oeconomica, Oder Haußwirthliche Nachricht und Naturmäßige Anweisung Zur Wilden Baum-Zucht* (Leipzig, 1713).

⁶⁴ International Union for Conservation of Nature and Natural Resources, United Nations Environment Programme, and World Wildlife Fund, *World Conservation Strategy: Living Resource Conservation for Sustainable Development* (Morges: IUCN, 1980).

⁶⁵ World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).

goo at one end and pushes out grey value at the other.’⁶⁶ In architecture, therefore, the discourse on sustainability has mostly resulted in a whole range of new and highly marketable building technologies to solve problems of energy and materials, while avoiding more fundamental questions about, for example, economic growth as such. Despite best intentions, the idea of sustainable development seems to have amounted to not much more than a new market for global capitalism to exploit, and as the environmental crisis worsens, it is no surprise that the discourse on sustainability is radicalizing as well – into something that in recent years has become known as ‘ecomodernism’.

1.4.2 Ecomodernism

In April 2015, a collective of 18 scientists, activists and scholars published a pamphlet titled *An Ecomodernist Manifesto*. The manifesto started with the recognition that humanity must limit its impact on the environment but rejected the idea that in order to do that, human societies should ‘harmonize’ with nature. Rather than seeing the Anthropocene as a recipe for disaster, the manifesto proposed to conceive of a ‘good Anthropocene’, affirming that this should indeed be ‘the Age of Humans’.⁶⁷ In line with such optimism, the manifesto proposed to drop the goal of ‘sustainable development’, that is the idea that the growth of human societies should remain within the limits of what nature can offer, and suggested that we can instead keep such growth by minimizing humanity’s footprint through technological innovation, aimed at using natural resources more intensively. In a perhaps surprising conclusion, the authors argue that economic growth is even necessary to preserve the environment. As they write:

Intensifying many human activities – particularly farming, energy extraction, forestry, and settlement – so that they use less land and interfere less with the natural world is the key to decoupling human development from environmental impacts. These socioeconomic and technological processes are central to economic modernization and environmental protection. Together they allow people to mitigate climate change, to spare nature, and to alleviate global poverty.⁶⁸

In short, and in contrast to the critique of modernity often found in ecologist circles, the authors of the manifesto instead argue with full conviction in favour of more modernity – a so-called ‘triumphalist modernity’. The manifesto gained widespread attention and has been appreciated for its optimism and hope in human agency but has simultaneously received widespread criticism for its uncritical celebration of modernity and for what

⁶⁶ Timothy Morton, *Hyperobjects: Philosophy and Ecology After the End of the World* (Minneapolis: University of Minnesota Press, 2013), 113.

⁶⁷ Asafu-Adjaye et al., ‘An Ecomodernist Manifesto’, 6.

⁶⁸ Asafu-Adjaye et al., 7.

ultimately reads as a defence of the industrial-capitalist status quo. Aside from the technical debates on the feasibility of such techno-optimism, what the ecomodernist agenda proposes is ultimately a reaffirmation of the anthropocentrism of the modern project: the idea that human beings have somehow transcended the realm of nature from which they came, as an exception in the animal kingdom, and fitted with the ability for rational thought they are uniquely positioned to become the caretakers of the planet, not merely a part of it. Since the publication of this manifesto, many political actors around the world have embraced the discourse of ecomodernism to argue in favour of more development, more industry and more economic growth.

1.5 Ruskin and Banham

To summarize: as knowledge of the environmental crisis (both in its localized disasters as in its global impact) has spread throughout society since at least the 1960s, overindustrialized societies have seen the rise of environmental activism and ecological critiques from all kinds of directions and in all kinds of fields. These developments have not remained isolated, but have in recent years been further developed in contemporary theory, explicitly so in what we might describe as posthuman discourses. But perhaps more importantly, the dissemination of scientific knowledge about what is happening to the world around us, to the environment, has also resulted in widespread cultural discomfort, in which simple actions such as eating meat or taking an airplane, which at some point were evident features of modern life, have become problematic. Even the most die-hard climate change denier has become conscious of the controversial nature of such actions in daily life – which is exactly what the denial focuses on. This generalized sense of a changing attitude between modern society and the environment we live in can be described as a new kind of sensibility: an ecological sensibility. Such a sensibility largely revolves around our relation to the natural environment, the materials with which we have built and continue to build our societies, and the effects of technological innovations, which now often seem more of a problem than a solution – in short, nature, materiality and technology. As such, these themes inevitably permeate the architecture discourse and practice as well. Despite the confusion sketched out in the previous chapter, fundamentally, the debate on environmentalism in architecture seems to largely revolve around these three topics too. It is not my intention to go through these contemporary debates here, however, instead I want to trace the historical development of these three major themes in modern architecture history, to shed light on the background out of which contemporary debates emerge, and by which they are still to some extent structured. Specifically, I will focus on two moments in the past two centuries since the Industrial Revolution, and will largely base my discussion on the work of two figures who were deeply involved in the debates at the time, both within the field of architecture and in society in general. On the one hand, I want to focus on the middle of the nineteenth century, when the legacy of Romanticism

became a mainstream bourgeois ideology, precisely at a time the large-scale impacts of industrialization on both human beings and the natural environment became visible. On the other hand, I want to focus on the post-war years in the middle of the twentieth century and onwards, the moment when the machine, which until that moment had remained a distant thing for the general populace, started to infiltrate most households and people were getting increasingly entangled with technology everywhere. Representative for these two moments are two men, who lived a century apart but occupied similar positions in their respective periods. Both Londoners, both formally educated, both writers, critics and eventually professors, and both intimately engaged with the architectural production of the time. I am of course referring to John Ruskin and Reyner Banham.

In the previous chapter, I tried to give an idea of a changing cultural sensibility in the face of the environmental crisis – an ecological sensibility revolving around the themes of nature, materiality and technology. As posthuman theory reminds us, modern culture has largely developed through the enforcement of strict binaries that run through these three categories: for the modern mind, nature is opposed to human society and culture, the material world is understood as a passive reservoir of resources as opposed to human agency, and technological control is opposed to the supposed organic manipulations of pre-modern craft. Not surprisingly, these notions run through modern architecture history as well, but perhaps with some nuances. Since the very construction of a building requires an engagement with the messiness of the world, in which nature and culture, matter and intentionality, and technology and craft inevitably become entangled, these modern binaries are not as easy to maintain, despite attempts to do so. Two authors that seem to have engaged with these topics at length are John Ruskin (1819-1900) and Reyner Banham (1922-1988), the figures I will use as guides in this manuscript to navigate such topics.

Not only have these two figures developed extensive arguments revolving around these three notions, they have done so from two very different, even opposite perspectives, two perspectives that seem to hybridize in our contemporary ecological sensibility today, I would argue. As I have mentioned in the previous chapter as well, debates on environmental issues often come down to a polarization between some variation of Romanticism, on the one hand, which argues on behalf of nature in the broadest sense and seems to exhibit a tendency to return to a moment in time when things were still ‘whole’. And, on the other, some kind of Futurism in the broadest sense, which argues on behalf of modernity and seems to believe we can still solve things with enough technological progress and control. This tension can also be found in the work of Ruskin and Banham, with the former having been received in architecture history as a nostalgic conservative, whose work largely revolves around Romantic versions of nature while criticizing the effects of industrialization in the nineteenth century. By contrast, Banham has been received in architecture history as a ‘champion of Futurism’, exhibiting a large interest and belief in technological progress and embracing its effects on architecture culture, as opposed to what he perceived as an inherited Ruskinian conservatism of the architectural establishment at the time.⁶⁹ Yet, again, while these figures have been canonized as such, returning to the original texts of these respective authors shows that things are not that

⁶⁹ Nigel Whiteley, *Reyner Banham: Historian of the Immediate Future* (Cambridge, Mass: MIT Press, 2002), 201.

binary, and that their arguments often extend into different directions too, making room to interpret things differently. Moreover, in today's environmental crisis, the binary opposition of Romanticism and Futurism, of conservatism and progress, is not as clear-cut anymore either. The notion of nature is not merely a nostalgic one, but a concern for the future. Technology is not simply a vector of progress anymore, but often seen as the source of many problems. And the way we engage with the material world seems to change depending on how we understand these two former categories.

From a strictly historiographical point of view, it might make little sense to place two figures from two very different historical periods together. However, this manuscript is not really a historical argument, rather it is a theoretical and slightly speculative argument on how today's ecological debates seem to revolve around inherited ideas associated with these three notions, which were largely shaped over the past two hundred years since the start of industrialization, and which these two figures have theorized extensively. By approaching them as two theoretical figures, whose arguments are resurfacing in contemporary debates, together they help to shed light on what we are talking about when we talk about ecology. At the same time, while these two figures lived in two different periods, as I will argue below, they do form an extended historical unit, and have also been received in architecture history as such. Moreover, despite their historical and theoretical differences, there are also certain similarities that connect the two across time, putting them closer to each other than we might expect. But before going into all of that, let us briefly remind ourselves of how these two figures are conventionally understood.

2.1 John Ruskin

In his 'critical biography' of John Ruskin, published in 2015, English historian Andrew Ballantyne describes how Ruskin 'tried to bring wonder and an appreciation of beauty to the lives of the working classes in the new industrial towns'.⁷⁰ In addition, Ballantyne observes, Ruskin 'decried mechanization and railways, and loved craftsmanship', while 'he praised art that had good moral character, taking for granted that artists would strive for a flawless technique'.⁷¹ As such, Ballantyne argues, in a time of industrialization, Ruskin played 'the role of the nation's conscience'.⁷² Ruskin was indeed largely a representative of the establishment at the time, having been born as an only child in a bourgeois family in London, and having grown up surrounded by artists such as J.M.W. Turner and Samuel Prout. As a result, the Ruskin family spent much time travelling the European continent, in search of the Picturesque sights these painters had painted, grounding Ruskin firmly in

⁷⁰ Andrew Ballantyne, *John Ruskin* (London: Reaktion Books, 2015), 8.

⁷¹ Ballantyne, 8.

⁷² Ballantyne, 11.

a Romantic tradition while teaching him to draw and paint natural scenery extensively as well. Even though his fascination for nature was largely the result of this artistic background, it also provoked an interest for the at the time developing fields of geology and botany, on which he would later write as well. Indeed, Ruskin was a prolific writer, and his topics ranged from art and architecture to literature, education, ornithology, geology, botany and even political economy. In general, he is perhaps best known for his magnum opus, the five volumes of *Modern Painters*, which he wrote and published between 1843 and 1860 and which dealt with art theory and history. At the same time, he wrote two influential treatises on architecture, one titled *The Seven Lamps of Architecture*, published in 1849, and a three-volume work titled *The Stones of Venice*, published between 1851 and 1853, both of which mainly dealt with Gothic architecture. The second volume of the latter also contained the chapter 'The Nature of Gothic', in which Ruskin formulated an influential critique of industrialization that was later reprinted as a separate publication by William Morris's Kelmscott Press in 1892. I mention these publications here because they will be the main primary sources for this manuscript when it comes to Ruskin's theories, but they are but a tip of the iceberg, as the collection of Ruskin's publications is hard to fully oversee. While Ruskin remains a key point of reference in modern architecture history, his work is often reduced to his defence of the Gothic, but his publications were widely read, even by the general population. Moreover, as the first Slade Professor of Fine Art at Oxford University (he was appointed in August 1869), Ruskin's pupils would include people such as Oscar Wilde, who would also be heavily affected by Ruskin's ideas. It is no overstatement to argue that Ruskin shaped an entire generation of artists and architects, who would go on to employ his ideas in their own work. This is but a brief suggestion of who Ruskin was and what he did, and throughout this manuscript I will return again and again to his life and work, which will not only help me formulate my own arguments but will also give a more thorough idea of what Ruskin wrote.

2.2 Reyner Banham

Banham is of course a different story. He was born in Norwich, England, to a working-class family, a background that would shape his work. He was trained as an engineer at the Bristol Aeroplane Company, where he worked for the most part of the Second World War and would witness highly damaged planes return from the continent, an experience that would equally affect his work. In 1949, Banham went to study at the Courtauld Institute of Art in London, where he studied under Siegfried Giedion and Nikolaus Pevsner, among others, and of which the latter would become his doctoral supervisor. In the 1950s, Banham worked for the *Architectural Review*, became involved with the Independent Group, and by 1960, he published his first book, based on his thesis, *Theory and Design in the First Machine Age*, which would become a standard work of reference for a whole generation of architects. From then on, Banham's output would be prolific: for example,

in 1966, he published *The New Brutalism: Ethic or Aesthetic?*, in 1969 *The Architecture of the Well-Tempered Environment*, and in 1971 *Los Angeles: The Architecture of the Four Ecologies* – all books that would be widely read and have become major contributions to the history of modern architecture. In between, Banham got involved with the London-based Archigram, learned to drive a car and started to travel to the United States. Over the course of his career, he would teach at the Bartlett School of Architecture in London (1964-1976), the State University of New York Buffalo (1976-1980), and in the 1980s at the University of California in Santa Cruz. During all of this, Banham would still regularly write and publish articles in journals like *New Statesman* and *New Society*, totalling between 750 and 1,000 articles over his life.⁷³ In short, as historian Richard J. Williams observes in his recent monograph *Reyner Banham Revisited* (2021): ‘If you care about the architecture of the modern movement, or Brutalism, or Pop Art, or post-war industrial design, you will undoubtedly have read fragments of Banham: he is ubiquitous in the literature on those things.’⁷⁴

It is difficult to really characterize Banham in one specific way, as he developed different personas over the years. In Williams’s monograph, a chapter is dedicated to most of these personas: the futurist, the new brutalist, the autophile, the environmentalist, the Angeleno, the desert freak and the connoisseur of ruins. Yet, there are certain themes that return nonetheless, and it is perhaps easier to describe what Banham was opposed to, as historian Nigel Whiteley does in the introduction to his monograph *Reyner Banham: Historian of the Immediate Future* (2002):

. . . first, a vehement opposition to any parochialism of value (usually associated with a call for national identity or Englishness); second, a comprehensive rejection of revivalism or architectural historicism; and, third, a deeply unsympathetic attitude to preservation and the conservation lobby. All of these positions were justified in terms of a commitment to modernity and progress.⁷⁵

Indeed, what runs through Banham’s work over the years, sometimes explicitly, sometimes in the background, is a rather positivist belief in progress and technology, and much of what he wrote had to do with questioning to what extent technology affected culture, architecturally and in general. Again, this is but a brief assessment of Banham here, since I will return again and again to his work in more detail to develop my own arguments, but which will give a better insight into Banham’s work as well.

⁷³ Richard J. Williams, *Reyner Banham Revisited* (London: Reaktion Books, 2021), 17.

⁷⁴ Williams, 17.

⁷⁵ Nigel Whiteley, *Reyner Banham: Historian of the Immediate Future*, 11.

2.3 From Ruskin to Bauhaus (and Banham)

Despite the apparent contrasts between Ruskin's work in the nineteenth century – and the broader context of the Gothic Revival at the time – and the Modern Movement, several authors have observed before how there is an almost straight line connecting both. Already in 1936, when the dust had not yet completely settled on the maturation of modernist architecture, Pevsner observed such a continuity, when he claimed in his *Pioneers of Modern Design* that:

. . . the history of artistic theory between 1890 and the First World War proves the assertion on which the present work is based, namely, that the phase between Morris and Gropius is an historical unit. Morris laid the foundation of the modern style; with Gropius its character was ultimately determined.⁷⁶

While Pevsner limited himself to merely mentioning Morris, it is difficult to think of Morris without associations to Ruskin, who influenced him greatly. And indeed, Banham, following his mentor, would later make a similar claim in his *Theory and Design in the First Machine Age*, but go as far as to acknowledge Ruskin explicitly: 'The human chain of Pioneers of the Modern Movement that extends back from Gropius to William Morris, and beyond him to Ruskin.'⁷⁷ However, this observation is made in a paragraph on the changing attitude towards the machine around the turn of the twentieth century and is preceded by an important qualification:

Under these changed circumstances, that barrier of incomprehension that had stood between thinking men and their mechanised environment all through the nineteenth century, in the mind of Marx as much as in the mind of Morris, began to crumble. Men whose means of moving ideas from place to place had been revolutionised at their writing desks by the typewriter and the telephone, could no longer treat the world of technology with hostility or indifference, and if there is a test that divides the men from the boys in say, 1912, it is their attitude to Ruskin. Men whose view of the aims of art and the function of design were as diverse as could be, nevertheless united in their hatred of *ce déplorable Ruskin*.⁷⁸

The very last sentence of this quote demonstrates Banham's efforts to distance himself from Ruskin and his legacy, efforts that would not always succeed, as we will see later on when discussing Banham's writings on the New Brutalism. In addition, the full quote also suggests what is at stake: while Ruskin was a vehement critic of industrialization and Banham a champion of technological progress, they are nonetheless connected as two sides

⁷⁶ Nikolaus Pevsner, *Pioneers of Modern Design: From William Morris to Walter Gropius* (Harmondsworth: Penguin, 1974 [1936]), 39.

⁷⁷ Banham, *Theory and Design in the First Machine Age*, 12.

⁷⁸ Banham, 11–12.

of the same coin. They sit at opposite ends of the same process unfolding over time, with seemingly opposite attitudes, but facing similar questions, although in different terms dictated by the different historical conditions that they lived in. While Ruskin responded largely to the effects of early industrialization on the practice of making architecture, Banham found himself in a fully developing consumer culture, and focused instead on the products delivered by technological progress. Yet, they are united in their questioning of the 'mechanized environment'. And while Banham here observes the historical process from Ruskin to Gropius, today, we might include Banham as well in this historical unit, since his early work was an attempt to further theorize the project of the Modern Movement to its logical conclusion. However, as Banham suggests, between Ruskin and Gropius, something fundamental did change – something to do with the figures of the artisan and the machine.

Banham does not offer a satisfying explanation for this change, he merely remarks that 'the precious vessel of handicraft aesthetics that had been passed from hand to hand, was dropped and broken, and no one has bothered to pick up the pieces'.⁷⁹ However, while Ruskin's resistance against the machine can indeed be read as an aesthetic argument – as I will discuss in the chapter on 'Materiality' – fundamentally it was also an argument on labour. What really changed was a change in the understanding of labour as life, as Ruskin would have it, and labour as a means to an economic end, as the Moderns would see it.⁸⁰ And while Banham seems to gloss over Marx in the above statement, it is precisely the difference between Ruskin and Marx that clarifies things here.

In the context of industrialization in the nineteenth century, Ruskin and Marx are often mentioned as the two main authors to have formulated far-reaching critiques of this development. Yet, Ruskin is often considered to be the rather naïve precursor to Marx, whose economic theories had more credibility than the religiously inspired ones of Ruskin.⁸¹ In architecture theory, the differences between Ruskin and Marx have often been reduced to their respective positions on the importance of ornament.⁸² For Ruskin, ornament was fundamental to architecture, for various reasons, but mainly because it was the result, even proof, of human agency in the laborious construction of architecture. For Marx, however, ornament was superfluous, as it required unnecessary labour from workers during construction. Underneath these opposite understandings of ornament thus lies a different conception of the notion of labour. As Morris sums it up for Ruskin in the preface to the Kelmscott Press's publication of *The Nature of Gothic*:

⁷⁹ Banham, 12.

⁸⁰ See Anirudh Sridhar, 'From Ruskin to the Automation: What Happened?', *Carlyle Studies Annual* 32 (2017): 155–78.

⁸¹ Sridhar, 158.

⁸² Sridhar, 159.

For the lesson which Ruskin here teaches us is that art is the expression of man's pleasure in labour; that it is possible for man to rejoice in his work, for, strange as it may seem to us to-day, there have been times when he did rejoice in it.⁸³

Indeed, 'pleasure in labour', the joy with which something was made, was perhaps Ruskin's primary concern, as he wrote in *The Seven Lamps of Architecture*: 'I believe the right question to ask, respecting all ornament, is simply this: was it done with enjoyment, was the carver happy while he was about it?'⁸⁴ By contrast, Marx did not think of labour as something that could be enjoyable. On the contrary, labour was to be minimized, which is why the machine was welcomed with open arms. In his 1956 'Speech at the Anniversary of *The People's Paper*', discussing the apparent contradictions of his time, he observed: 'Machinery gifted with the wonderful power of shortening and fructifying human labour, we behold starving and overworking it.'⁸⁵ In other words: for Ruskin, labour was to be celebrated, as a sign of life, while for Marx, labour was merely a means to an economic end, something that should be limited as much as possible, for which the machine was a welcome tool. But rather than following Ruskin, it was the latter Marxist approach to labour that was taken up by later generations of architects.

Already in perhaps one of the most famous and foundational texts of modern architecture's development towards functionalism, 'Ornament and Crime' (1913), Adolf Loos echoes the Marxist interpretation of labour in relation to ornament: 'Ornament means squandered manpower and thus squandered health. It has always been so.'⁸⁶ And along with this approach to labour, the machine was welcomed too. For example, already in 1888, when C.R. Ashbee started the Ruskin-inspired Guild and School of Handicraft, he explicitly stated: 'We do not reject the machine. We welcome it. But we desire to see it mastered.'⁸⁷ This sentiment would persist for decades, as, for example, Gropius would also write in his 1935 essay *The New Architecture and the Bauhaus*:

But in the last resort mechanization can have only one object: to abolish the individual's physical toil of providing himself with the necessities of existence in order that hand and brain may be set free for some higher order of activity.⁸⁸

⁸³ William Morris, 'Preface to The Nature of Gothic by John Ruskin', in *News From Nowhere and Other Writings*, ed. Clive Wilmer (Cambridge: Proquest, 2011).

⁸⁴ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. VIII (London: George Allen, 1908), 218.

⁸⁵ Karl Marx, 'Speech at Anniversary of The People's Paper', *Marxists.org*, accessed 8 November 2023, <https://www.marxists.org/archive/marx/works/1856/04/14.htm>.

⁸⁶ Adolf Loos, 'Ornament and Crime', in *Ornament and Crime: Selected Essays* (London: Penguin, 2019), 87–94: 91.

⁸⁷ As quoted in Rudolph Rosenthal and Helena L. Williams Ratzka, *The Story of Modern Applied Art* (New York: Harper, 1948), 15.

⁸⁸ Walter Gropius, *The New Architecture and the Bauhaus* (Cambridge: The MIT Press, 1965 [1935]), 33.

In short, rather than turning artisans into extensions of the machine, as Ruskin interpreted industrialization, the moderns accepted the machine as a possible ally in the liberation of workers, through the alleviation of labour. And with the acceptance of the machine, the Ruskinian ‘vessel of handicraft aesthetics’ was indeed dropped and broken, and replaced with an aesthetics of utility. As Loos also argues in his essay ‘Chairs’ (1898), ‘the degree of usefulness, together with harmony with the other parts, is what we call pure beauty.’⁸⁹ And while he is discussing works of art in relation to nature, what else is this but a description of a machine as well? In short, while there was an explicit recognition of the influence of Ruskin and Morris on the Modern Movement, such an influence was not straightforward, but became inverted on the topic of the machine. By the 1950s, then, at the time Banham started writing about architecture, the acceptance of the machine had reached its completion, and as we will see later on, Banham completely embraced its presence.

2.4 Between Ruskin and Banham

The above-described historical connection between Ruskin and the Modern Movement, and Banham’s further development of the Modern Movement’s ideas, demonstrates how Ruskin and Banham were both dealing with a similar phenomenon, despite being a century apart: industrialization. Yet, they sat at opposite ends of the historical unfolding of this process: Ruskin witnessed how industrialization started to change the rather conservative world he grew up in, while Banham witnessed how it seemed to reach its fulfilment in the consumer culture of post-war Europe, when machines were present in most households and everywhere you looked in public life. While Ruskin resisted the changes brought about by industrialization, and modern society in general, Banham enthusiastically, and perhaps at times naïvely, celebrated them. As such, Ruskin has often been described as a conservative, resisting progress and change, while Banham profiled himself as a radical progressive, even trying to contribute to such progress and change. Such an orientation in terms of conservatism and progressivism has perhaps to do with the vector of technology: as a notion, it is often associated with moving forward, in the form of invention and innovation, leading modern societies into the future. Yet, in today’s environmental crisis, such a simplistic association between technology and progress has become problematic to a certain extent. Much of the technological innovations of the past are now revealed to have also damaged and destroyed the natural world we live in, jeopardizing the very future it promised us. At the same time, while modernity seems to have unquestionably accepted the idea that the future is something we should want, looking at today’s predictions for the future, especially how the environmental crisis will worsen over the coming decades and increasingly endanger both human and non-human

⁸⁹ Adolf Loos, ‘Chairs’, in *Ornament and Crime: Selected Essays* (London: Penguin, 2019), 77–81: 78.

life on this planet, the future now appears to be something we want to avert instead. A lot of technological innovation today is therefore aimed at the opposite: at postponing such disastrous future scenarios and trying to hold on to what we still have.

I will develop this argument in more depth in the chapter on 'Time', but I would argue that, today, it is not easy to distinguish between conservatism and progressivism, or between nostalgia and futurism anymore. As such, Ruskin and Banham are perhaps not as easy to oppose in today's debates anymore either, we might rather need to hybridize them as theoretical figures. This manuscript will attempt to do exactly this: to theorize our contemporary ecological sensibility, I will stage a conceptual dialogue between these two theoretical figures, in which I will try to demonstrate how the binary oppositions they embody as an extended historical unit is no longer tenable, and how the binary oppositions that mark the three major themes of nature, materiality and technology around which their work revolves are no longer tenable either. The work of Ruskin and Banham both propose to think along such binary lines as well as they also demonstrate where such thinking falls short. As such, retracing the historical roots of contemporary ecological debates in architecture in their work might help us to think through some of the pressing questions of today and give us a deeper understanding of what it would mean to think and feel ecologically.

Chapter 3 Nature

Let us start with the obvious question: What is nature?

‘Any full history of the uses of *nature*,’ wrote Welsh cultural critic Raymond Williams, ‘would be a history of a large part of the history of human thought.’⁹⁰ Indeed, the question of nature runs deep in Western history, not only because of what it presumably is on its own, but also what it in turn tells us about ourselves, whether we belong to it or not. As British philosopher Kate Soper observes: ‘Nature is that which Humanity finds within itself, and to which it in some sense belongs, but also that from which it seems excluded in the very moment in which it reflects upon either its otherness or its belonging.’⁹¹ Yet, the concept of nature is difficult, if not impossible, to pin down – it is a ‘*mille-feuille* of meanings’, as American historian Lorraine Daston writes:

It can refer to everything in the universe (sometimes including and sometimes excluding human beings), to what is inborn rather than cultivated, to the wild rather than the civilized, to raw materials as opposed to refined products, to the spontaneous as opposed to the sophisticated, to what is native rather than foreign, to the material world without divinity, to a fruitful goddess, and a great deal else, depending on epoch and context.⁹²

As such, the term not only functions to define what something is, but also to define what something is not, to distinguish between things, to categorize them.

Despite such complexity, in the modern period, as French philosopher Bruno Latour reminds us, it has become increasingly important to distinguish between what is natural and what is human, and to rigidly define both categories. But as Latour also reminds us, this attempt is an enduring exercise that relies on a constant ‘purification’, to keep out any hybrid entities – which of course inevitably arise.⁹³ As such, there is perhaps nothing natural about nature: it is an artificial construction, whose varying definitions over the course of history have served various goals and agendas. As I quoted English-American philosopher Timothy Morton earlier already:

Since the Romantic period, nature has been used to support the capitalist theory of value and to undermine it; to point out what is intrinsically human, and to exclude

⁹⁰ Williams, *Keywords: A Vocabulary of Culture and Society*, 166.

⁹¹ Kate Soper, *What Is Nature? Culture, Politics and the Non-Human* (Oxford: Blackwell, 1995), 49.

⁹² Lorraine Daston, *Against Nature* (Cambridge, Massachusetts: MIT Press, 2019), 7.

⁹³ See Latour, *We Have Never Been Modern*.

the human; to inspire kindness and compassion, and to justify competition and cruelty.⁹⁴

As such, Morton instead argues for an ‘ecology without nature’, treating the term with suspicion and viewing it as an ideological stumbling block that prevents effective ecological action.⁹⁵

Despite its many meanings, and as Soper suggested above, one of the general tensions within which the concept of nature is caught is the question of whether human beings are part of it or not. While this seems like a simple binary categorization, it runs across many different perspectives, usually complicating the question more than elucidating it. It is not simply a matter of a modern worldview on the one hand, which views nature as something outside of human society, and a Romantic worldview on the other, which argues that we should return to it, having indeed become estranged from it. Instead, even within the modern mind, there is a tension between the idea that human beings have transcended their natural origins through science and technology, and scientific insights into the natural processes to which our very own bodies belong. Similarly, for the Romantic mind, human beings have indeed become estranged from nature and supposedly might need to return to it in one way or another, but by arguing as such, the Romantic worldview effectively confirms that human beings can be understood as something other than nature. The mere use of the word ‘nature’ opens up a Pandora box of different and contradicting definitions, which refuse to be pinned down definitively. Not surprisingly then, given its proliferating presence over time, the question has left its mark on the history of architecture as well.

3.1 Architecture and Nature

In architecture, the question of what nature is and whether human beings belong to it or not is often understood as the question of whether architecture, the act of building, is or can be seen as a part of nature too. Especially since the beginning of the modern period, in which architecture has been increasingly organized along rationalized and industrialized modes of production, the relation between architecture and nature (or its absence) has become more and more problematic. In this sense, in his *Words and Buildings* (2000), in the lemma on ‘nature’, English architecture historian Adrian Forty opens with the observation of how ‘for most of the last five hundred years “nature” has been the main,

⁹⁴ Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*, 19.

⁹⁵ See Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*.

if not *the* principal category for organizing thought about what architecture is or might be.⁹⁶

In the description that follows, Forty traces a sprawling collection of different definitions of and approaches to the notion of 'nature' throughout modern architecture history and its relation with the discipline. He observes how nature is variously interpreted as a source of beauty, regarded as the origin of architecture, serves as a model for imitation, invoked to justify artistic license, seen as embodying the political idea of freedom, is understood as a construct of perception, is used to justify art as a 'second nature', is the antidote to culture, is rejected in favour of technology and is understood as an ecosystem. Taken together, Forty observes how these ten, perhaps somewhat artificially defined, historical interpretations largely fall into two categories, which can be distinguished as:

... those that propose that architecture is *like* nature, in that it follows the same laws or imitates it, and those that say that architecture *is* nature – that in so far as man and woman are objects of nature, architecture's providing them with shelter or symbolic expression makes it a natural product, in the same way that speech is.⁹⁷

In other words, in architecture we find the same binary opposition as in modern culture in general: various attempts have been made to project architectural construction as an extension of the natural environment, but at the same time, architecture has also often been perceived as being opposed to nature, as an artificial construction distancing human dwelling from the natural environment.

In this chapter I will trace how, since the onset of industrialization, people like Ruskin attempted to project architecture back into nature, arguing that modern society was at risk of losing touch with the world in which they lived. In the work of Banham, however, we find the opposite position, an attempt to view architecture as the means with which the natural environment is made fit for human inhabitation, to the point where nature becomes part of such artificial construction and disappears. In such a conventional reading, Ruskin appears as the defender of nature while Banham appears to want to get rid of nature altogether, but as I will demonstrate, it is perhaps the opposite: Ruskin's arguments thoroughly artificialize what he called nature, while Banham is perhaps the one who took nature – in its broadest and perhaps undefinable sense – seriously on its own terms. As such, the usual opposition between the natural and the artificial is turned on its head: what is often claimed to be natural is often a thoroughly artificial construct, while the artificial is often more real than what is claimed to be natural. In the context of the environmental crisis, in which the construction industry is seen as complicit in destroying

⁹⁶ Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (London: Thames & Hudson, 2004), 220.

⁹⁷ Forty, 220.

the natural environment, revisiting these positions reminds us that we should be suspicious of anyone claiming to speak on behalf of nature.

3.2 The Invention of Nature

A simple Google search for the term ‘nature’ generally yields images of green and mountainous landscapes, filled with forests and wildly growing vegetation, adorned by meandering streams of clear water with small or large waterfalls, filled with birds flying overhead, insects buzzing all around and wildlife passing by under the shadows of the trees. These images feel familiar to the modern mind, not only because we have seen them countless times in the pictures of friends and family on holiday or in advertisements for both budget and luxury holidays that promise a detox from the stress and noise of the urban environments in which a lot of us live. But also because these images are over two centuries old: even in their updated contemporary versions, they are still roughly the same images of ‘nature’ that were invented around the turn of the nineteenth century by Romantic landscape painters as John Constable or J.M.W. Turner (Figure 5). As English art historian Kenneth Clarke observed before, landscape painting was ‘the chief artistic creation of the nineteenth century’ and it firmly shaped the modern conception of what nature looks like, which still shapes our perception of it today.⁹⁸ Specifically, Romantic art relied on the categories of the Beautiful, the Picturesque and the Sublime to portray and aestheticize natural landscapes in various ways, with varying degrees of anthropocentrism. And especially the aesthetic conventions of the Picturesque seem to have defined what we imagine when we hear the word ‘nature’.

As a small reminder, in its conventional definition, the Picturesque appeared in the eighteenth century, as a middle ground between the Beautiful and the Sublime. As such, it was meant as an alternative to the use of symmetric compositions and ideal proportions, instead favouring irregularities and rugged textures, but not to the point that these would become overwhelming and seemingly threaten human presence. In other words, its paradox is that it is the careful composition of the unconstrained, the deliberate attempt to capture casual informality, the precise portrayal of the imprecise, of harmless ruination and minor decay, of the soft passing of time, of things coming and going at walking speed. Or, in its most famous definition by English artist William Gilpin, given in his *An Essay on Prints* (1768), it is ‘a term expressive of that peculiar kind of beauty, which is agreeable in a picture’.⁹⁹ And it is indeed through pictures that nature has been largely defined.

⁹⁸ Kenneth Clark, *Landscape into Art* (Boston: Beacon Press, 1961 [1949]), xvii.

⁹⁹ William Gilpin, *An Essay on Prints*, 1768.



Figure 5: St Maurice, J.M.W. Turner, 1826-1827 (illustration in Samuel Roger's *Italy: A Poem*, 1830).

The Picturesque tours organized by Gilpin in the 1790s were invented as a challenge to the more classical Grand Tours of Italy and Greece, and they inspired countless proto-tourists at the time to go see and appreciate the English countryside instead, its undulating landscapes filled with fields and forests, dotted with sheep and cattle, a rustic farm here and there, the hard and rough labour of peasants that from afar looks almost idyllic, and the occasional ruin of what looks like the remains of a medieval castle or pavilion. Such so-called Picturesque hunters did not just travel at random, on the contrary, they were consciously 'hunting' for the sight of paintings, of places that looked like paintings, and for which, to appreciate these sights even more, some of them carried a so-called 'Claude Glass' in their pockets, named after the French, seventeenth-century landscape painter Claude Lorrain.¹⁰⁰ This was a curved piece of brown-tinted glass that, when standing with your back to the landscape, would reflect and distort the sight into proportions and colours reminiscent of the paintings that had motivated these hunters to go out of the door in the first place. In this sense, the Picturesque is still very much alive today, although in an

¹⁰⁰ Arnold Berléant, 'Aesthetic Sensibility', in *Ambiances* [online], 30 March 2015.

updated way. The laborious travelling has been smoothed out by cheap air travel and the Claude Glass replaced by Instagram filters, but the desire to go see the same sights someone else already saw, projected through pictures in popular and social media, persists.

Taking some distance from the historical debates, and for the purpose of this text, we might rely on different, and more contemporary terms. Here, I would like to think of the Beautiful, in its idealized harmony, as a thoroughly anthropocentric aesthetic experience, placing the human observer firmly in the centre of the world, while the Sublime, on the other hand, appears as a radically non-anthropocentric aesthetic experience, that which overwhelms and surpasses human intention or presence. The Picturesque, then, is the attempt to put the human back into the non-human, to stabilize the instability between humanity and the surrounding world. And that is where it becomes problematic: as it propagates an image of harmony between human beings and the natural world, it tends to essentialize such relations with all of the 'miserable' consequences such essentialization usually has.

3.2.1 Picturesque Misery

The way the Picturesque plays a role in the invention and construction of what we call nature, can explicitly be seen in the work of Ruskin, along with the problems it tries to cover up. Ruskin was born in 1819 and while the Picturesque might have been a radical aesthetic notion at the end of the eighteenth century, by the time Ruskin grew up, it had become an established, bourgeois taste.¹⁰¹ The Ruskin family lived and breathed the Picturesque sensibility. Not only did John James Ruskin have landscape painters as close friends, such as J.M.W. Turner and Samuel Prout, with whose work the young Ruskin grew up, they also engaged in frequent travels through Europe to go see the actual sights that inspired the work of these painters. Ruskin's fondest memories, as he recounts in his diaries, are of his travels by horse and carriage through the European landscapes, especially the mountains of the Alps.¹⁰² These travels took place in a post-Napoleonic Europe, at a time when nation-states were being built and the idea of national identities flourished, a context that further shaped Ruskin's experiences.

It is in the first essays of Ruskin that the themes of the Picturesque, of the landscapes he saw, and the upcoming nationalism would converge. The pseudonym under which he published them, 'Kata Phusin', which means 'according to nature', announced the agenda for his writings, as did the full title of the book: *The Poetry of Architecture; or, The Architecture of the Nations of Europe Considered in its Association with Natural Scenery and National Character*. As the subtitle indicates, Ruskin sought to conflate human-made

¹⁰¹ Ballantyne, *John Ruskin*, 26.

¹⁰² Ballantyne, *John Ruskin*, 31.

dwelling with national characteristics and environmental conditions, from a Picturesque perspective in which things fit aesthetically together as they would in a painting. Indeed, in Ruskin's writings, the Picturesque is revealed as an attempt to fit human activities within non-human environments, neither separate from nor overwhelmed by them, but in accordance with each other, even supporting each other. As Ruskin writes in the introduction:

Of all embellishments by which the efforts of man can enhance the beauty of natural scenery, those are the most effective which can give animation to the scene, while the spirit which they bestow is in unison with its general character.¹⁰³

The essays take us on an embellished, literary trip along the sights that Ruskin himself encountered: to the cottage architecture of England, France, Switzerland and Italy, and to the villa architecture around Windermere and Lake Cuomo (Figure 6). His aim was to establish a standard of good taste in architecture, in the same way an art critic would do for the general public in relation to art, and the standard of good taste he pursued was an architecture that connected 'climate, country and people'. For example, in the first essay, Ruskin contrasts the English cottage with the French one, in which he attributes the difference between both quite simply to the landscape in which they each sit:

England is a country whose every scene is in miniature. Its green valleys are not wide; its dewy hills are not high; its forests are of no extent or, rather, it has nothing that can pretend to a more sounding title than that of 'wood.' . . . The English cottage, therefore, is equally small, equally sheltered, equally invisible at a distance.¹⁰⁴

By contrast, Ruskin writes:

France is a country on a large scale. Low, but long, hills sweep away for miles into vast uninterrupted champaigns; immense forests shadow the country for hundreds of square miles, without once letting through the light of day; . . . The French cottage, therefore, is on the same scale, equally large and desolate-looking.¹⁰⁵

Beyond such a presumed and perhaps rather comically straightforward equation of landscape and architecture, climate and cottage, or environment and dwelling, Ruskin examines the specific architecture of both cottages in relation to a generalized, and often stereotyped, characterization of the countries to which they belong. He observes how 'the principal thing worthy of observation in the lowland cottage of England is its finished neatness',¹⁰⁶ which he explains by stating that:

¹⁰³ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. I (London: George Allen, 1908), 11.

¹⁰⁴ Ruskin, I:13–14.

¹⁰⁵ Ruskin, I:14.

¹⁰⁶ Ruskin, I:12.

England is a country of perpetually increasing prosperity and active enterprise; but, for that very reason, nothing is allowed to remain till it gets old. Large old trees are cut down for timber; old houses are pulled down for the materials; and old furniture is laughed at and neglected. Everything is perpetually altered and renewed by the activity of invention and improvement. The cottage, consequently, has no dilapidated look about it; it is never suffered to get old; it is used as long as it is comfortable, and then taken down and rebuilt; for it was originally raised in a style incapable of resisting the ravages of time.¹⁰⁷

By contrast, Ruskin says: 'There is a general air of nonchalance about the French peasant's habitation, which is aided by a perfect want of everything like neatness.'¹⁰⁸ Why? Because

... the French cottage ... is just such as we should have expected from the disposition of its inhabitants; its massive windows, its broken ornaments, its whole air and appearance, all tell the same tale of venerable age, respected and preserved, till at last its dilapidation wears an appearance of neglect.¹⁰⁹

These generalizing comparisons continue for a while, until finally, Ruskin concludes:

Thus, we have shown that, while the English cottage is pretty from its propriety, the French cottage, having the same connexion with its climate, country, and people, produces such a contrast of feeling as bestows on it a beauty addressing itself to the mind, and is therefore in perfectly good taste.¹¹⁰

The other essays continue in the same vein, retracing Ruskin's travels across the continent and portraying different architectures as the extension of their inhabitants' characters, their culture and their environment. More importantly, however, this argument sets the scene for Ruskin to condemn the mixing and moving of these supposedly typical cottages to other places. For example, at the time of his writing, a number of architects had been constructing Swiss chalets in London, a prominent one being the chalet in Regent's Park, which Ruskin condemned as being completely out of place and out of taste. While the chalet might look like a Swiss chalet, without Swiss inhabitants, without a Swiss landscape and without a Swiss climate, this is not a Swiss chalet, he concludes. At times Ruskin seems to make sense, at others the argument appears to be stretched to the point of caricature, but what is important here is that in these writings, a direct line can be drawn between the conventions of the Picturesque, which reduce the world to an aesthetic image of minimal and non-threatening differences, straight to an essentializing perspective that reduces climate, country and people to a stabilized and homogeneous totality. At best, Ruskin's thought exhibits a sensitivity for relational wholes, in which a Swiss chalet is anything but

¹⁰⁷ Ruskin, I:14.

¹⁰⁸ Ruskin, I:13.

¹⁰⁹ Ruskin, I:15.

¹¹⁰ Ruskin, I:17.

Swiss if it doesn't sit in the Swiss landscape, built through Swiss construction practices and conventions, and imbued with the traditions of Swiss culture. At its worst, it is a static view of the world in which the whole is fixed and unable to move – with just a small step towards fixing the people who might inhabit these cottages in their place as well, reduced to cultural stereotypes, unable to change.



Figure 6: Swiss Cottage, printed in *The Poetry of Architecture*, John Ruskin, 1837.

Eventually, this is exactly what happens in Ruskin's celebrated text 'The Nature of Gothic', in which he sets out his arguments on craftsmanship in relation to Gothic architecture, to which I will return later on, in the chapter on 'Technology'. Here, I want to observe how, with the best intentions, Ruskin formulates a defence of the humanity of craftsmen, which he sees threatened by industrialization, but in doing so, he resorts to a certain paternalizing idealization of the people who constructed the Gothic cathedrals of Northern Europe. In Ruskin's Picturesque perspective, the Gothic appears as a natural extension of the northern 'savage' environment – 'this look of mountain brotherhood between the cathedral and the Alp' – built by human beings who were equally as 'savage' – 'creatures of ungainly shape and rigid limb, but full of wolfish life; fierce as the winds that beat, and changeful as the clouds that shade them' – thus conflating architecture, people and climate into one harmonious whole.¹¹¹ Over time, however, Ruskin himself would start to feel uneasy with such a constrained view of the world. On one of his travels later on, Ruskin visited the region around Amiens, and wrote in his diary on 12 May 1854:

All exquisitely picturesque, and as miserable as picturesque. We delight in seeing the figures in the boats pushing them about the bits of blue water in Prout's drawings, but, as I looked today at the unhealthy face and melancholy, apathetic mien of the man in the boat, pushing his load of peats along the ditch, and of the people, men and women, who sat spinning gloomily in the picturesque cottages, I could not help feeling how many suffering persons must pay for my picturesque subject, and my happy walk.¹¹²

As miserable as picturesque . . . What Ruskin discovers here is the not so pleasant, often ordinary reality underneath the aesthetic surface of Picturesque representation, which would not let go of him anymore. For example, six years later, in the final volume of his *Modern Painters*, published in 1860, Ruskin would describe a perfectly Picturesque scene of 'a little valley of soft turf' that is crossed by a winding river, 'a clear brown stream, drooping into quicker ripple as it reaches the end of the oval field', but, he writes, we suddenly stumble on 'the carcass of a ewe, drowned in the last flood', which 'lies nearly bare to the bone, its white ribs protruding through the skin, raven-torn', while further down the stream, we see 'a man fishing, with a boy and a dog – a picturesque and pretty group enough certainly, if they had not been there all day starving', since we can see how the dog's ribs 'are nearly as bare as the dead ewe's; and the child's wasted shoulders, cutting his old tartan jacket through, so sharp are they.'¹¹³ As Ruskin intends in this paragraph of

¹¹¹ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. X (London: George Allen, 1908), 186–88.

¹¹² John Ruskin, *Diaries*, ed. Joan Evans and John H. Whitehouse, vol. II (Oxford: Clarendon, 1956), 493.

¹¹³ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. VII (London: George Allen, 1908), 268–69.

writing, the idyllic image of the Picturesque scene he evokes starts to completely fall apart once the material reality underneath its aesthetic appearance comes to the fore.

While Ruskin's travels with his parents followed the footsteps of late-eighteenth century Picturesque hunting, later in his life Ruskin found himself confronted with the uneasy implications of such a mere aestheticizing approach to the world. The essentializing tendencies to project a harmonious relationship between human beings and nature obscures the simple reality that nature can be quite brutal, and that it often is anything but harmonious. Only seen from a distance, through the frame of a painting or a camera, does the natural world attain its pleasing character. Ruskin would continue to struggle with the Picturesque throughout his entire life, often distinguishing between a 'surface Picturesque' and a 'noble' one. Ultimately, what is important here is to note the fact that an aestheticization of the natural world always runs the risk of idealizing a state of nature, in which things have not yet been disrupted by modern human activities but are still in their proper place, still whole – a view commonly described as 'holism'.

In his critique of such holism, Morton observes:

As well as being a major ecological ideology, holism constitutes the 'feel' of nationalism – 'we' are interconnected in a whole greater than the sum of its parts. . . . Organisms are politically all-important, and yet they are easily sacrificed for the sake of the greater whole.¹¹⁴

To some extent, this is indeed what Ruskin discovered: that the lives of actually existing beings, human or otherwise, is made to confirm to the overall aesthetic picture, disregarding their own individual needs or wants. It is a logic that defines nationalism as much as Picturesque projections of nature, and it is therefore no coincidence that Ruskin conflates both here too.

3.2.2 The Essence of Nature

While the Picturesque became an established, bourgeois taste around the time national identities were being shaped, it is perhaps no surprise that a similar sentiment resurfaced over a century later, in the second half of the twentieth century, around the time such national identities had run their course and the world seemed to have become a McLuhanesque 'global village'.¹¹⁵ In this context of increased global displacement, certain architecture discourses turned towards the question of place and how to retain, or rediscover, the specificities of the local. Perhaps one of the more prominent authors to

¹¹⁴ Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*, 101.

¹¹⁵ Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1962).

address these questions was Norwegian architecture theorist Christian Norberg-Schulz, who in the 1970s imported the philosophical discourse of Heideggerian phenomenology into architecture theory in order to argue in favour of a so-called 'genius loci', or spirit of place.

Norberg-Schulz drew extensively from Heidegger's arguments on dwelling, formulated in his famous text *Bauen Wohnen Denken* (1951). The rather abstract fourfold Heidegger discusses there ('By a *primal* oneness the four – earth and sky, divinities and mortals – belong together in one.'¹¹⁶) is transformed by Norberg-Schulz into four more concrete themes: the topography of the Earth's surface, the cosmological light and the sky as natural conditions, human-constructed buildings, and the religious, symbolic and existential meanings in the cultural landscape.¹¹⁷ Relying on this architectural interpretation of the Heideggerian fourfold, Norberg-Schulz criticizes the loss of place in the modern world:

Lost is the settlement as a place in nature, lost are the urban foci as places for common living, lost is the building as a meaningful sub-place where man may simultaneously experience individuality and belonging. Lost is also the relationship to earth and sky. Modern buildings exist in a 'nowhere'; they are not related to the landscape and not to a coherent, urban whole, but live their abstract life in a kind of mathematical-technological space which hardly distinguishes between up and down.¹¹⁸

Norberg-Schulz's argument addresses the modern world as a whole, abandoning an all too simplistic return to nature, given the proliferation of urban environments. Yet, the spectre of nature, or better the spectre of a Picturesque nature, haunts the argument. Even though the concept of genius loci has become a classic in modern architecture theory, from the very start Norberg-Schulz was criticized for his traditional and even nostalgic tendencies.¹¹⁹ This becomes obvious in the examples Norberg-Schulz employs in his main book on the subject, *Genius Loci: Towards a Phenomenology of Architecture* (1979), which emphasize traditional architecture and town centres connected to natural landscapes and largely lack urbanized environments, except to criticize them. In addition, the book relies on extensive visual imagery to support the argument, but as other authors have noted, the use of this imagery is highly staged. In Norberg-Schulz's argument, the genius loci of a place seems to rely on a visual harmony, not unlike the Picturesque paintings of the eighteenth and nineteenth centuries, in which landscapes and architecture resonate

¹¹⁶ Martin Heidegger, 'Buiding Dwelling Thinking', in *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper & Row, 1971 [1951]), 149.

¹¹⁷ See Gunila Jivén and Peter J. Larkham, 'Sense of Place, Authenticity and Character: A Commentary', *Journal of Urbanism* 8, 1 (2003).

¹¹⁸ Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenology of Architecture* (New York: Rizzoli, 1979), 190.

¹¹⁹ Jivén and Larkham, 'Sense of Place, Authenticity and Character: A Commentary', 70.

aesthetically. As, for example, the Spanish artist and architect Jorge Otero-Pailos remarked, Norberg-Schulz's argument 'presumed a universal and ahistorical subject who learned through picturing, irrespective of the local topography he or she confronted'.¹²⁰ Indeed, Norberg-Schulz's concept of *genius loci* seems to rely on an ahistorical understanding of place. In the words of Australian historian Harriet Edquist:

If there is a *genius loci*, how is it manifested? For Norberg-Schulz it would appear to manifest itself directly to the human consciousness. It is, at base, an idealist and essentialist notion, an appeal to a 'cosmic reality' which because 'natural' can therefore be directly apprehended.¹²¹

Aside from any further possible debates about Norberg-Schulz's specific argument, his work is exemplary of a certain recurring tendency that looks towards nature or the natural to address the ills of modern society. If late eighteenth-century Romanticism was a response against industrialization, the late twentieth-century defence of 'place' is a response against globalized space. Yet, it is the very question of place that might be problematic in the first place. It presupposes a stable ground, preferably embedded in a natural environment, in which human beings are at home – a supposition that might never have been the case. As Morton writes: 'Our notions of place are retroactive fantasy constructs determined precisely by the corrosive effects of modernity. Place was not lost, though we posit it as something we have lost.'¹²² The idea of a return to nature, both as a Romantic desire and a Picturesque aesthetic, or even as a phenomenological experience, is based on the idea of a harmonious natural whole that was disturbed. Yet, isn't nature, as even Darwin observed, fundamentally disturbed? The popular legacy of Darwinism projects a certain logic into natural evolution, as if there is a plan unfolding according to a 'survival of the fittest'. It is noteworthy that this sentence, the one most often cited in relation to Darwinian thought, was not written by Darwin himself, but added to the manuscript by his editor to suggest a teleological drive underneath evolution, undermining Darwin's radical idea that nature has no purpose, no plan, no order, no whole – which was unacceptable at the time and still, all too often, seems to be unacceptable.

Significantly, the projection of a supposed order into nature shows itself in the very word ecology, as Italian philosopher Emanuele Coccia observes. Derived from the Greek *oikos*, the word literally means 'the science of the household', as if nature is a big house in which every species has its own room. Coccia writes:

¹²⁰ Jorge Otero-Pailos, 'Photo[Historio]Graphy: Christian Norberg-Schulz's Demotion of Textual History', *Journal of the Society of Architectural Historians* 66, 2 (2007): 238.

¹²¹ Harriet Edquist, 'Genius Loci', *Transition* (1988): 80.

¹²² Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*, 11.

First of all, this image is the heart of all patriarchy. Ecology does not realize this, but it continues to be in essence a patriarchal mythology, regardless of all the efforts made by eco-feminists. In antiquity as today, the house is a space in which a series of objects and individuals respect an order, a disposition that aims at the production of a utility and that is subject to the power of an individual. To say that life on the planet is a great house means that it respects that order and that each element that composes it produces a form of utility by virtue of that order.¹²³

More strongly, even, Coccia argues that the metaphor of the household is derived from the concept of private property: this is my home in the world, that is yours, and while we can be good neighbours, we should not trespass. At a distance from fields like ecology and biology, the idea of a natural order that has been disturbed marks most critiques of modernity, from Ruskin's *Poetry of Architecture* to Norberg-Schulz's *genius loci*. This is, however, a stabilized version of nature, an essentialized one, and an aesthetic one, which is projected retroactively. In such a perspective, nature appears as an artificial construct, as a fantasy to return to.

3.2.3 Imitating Nature

Since Picturesque pictures of nature are so deeply ingrained in the cultural consciousness of the modern mind, it is often difficult to look further than such an aestheticized, essentialized and artificial framing of the natural. Yet, parallel to the Picturesque, a different understanding of nature persists, which not only flourished in the nineteenth century against the backdrop of the scientific study of nature's processes, as in the work of Ruskin, but stretches back to at least Antiquity, and is often described as organicism.

The term itself carries complex histories in various fields, from philosophy to politics, biology and art history. It is primarily the latter version that is important here, but before addressing it, a brief reminder of the broader philosophical idea might be useful. Organicism as a philosophical term is often used to refer to the idea that the world should be viewed as alive, similar to an organism, in contrast to reductionist and mechanical understandings of it. The problem organicist architecture in the broadest sense has, is the apparent disconnection between the aliveness of the natural world and the seeming inertia of man-made buildings, especially those constructed through industrialized practices. If human beings are part of the aliveness of the natural world, how can we then understand architectural constructions as similarly alive?

¹²³ Emanuele Coccia, 'Ecology and Home', *Triennale*, 25 August 2020, accessed 8 November 2023, <https://triennale.org/en/magazine/coccia-virus>.

One of the main studies on organicism as it developed in the nineteenth century is *Organicism in Nineteenth-Century Architecture* (1994) by Dutch art historian Caroline Van Eck. As she writes:

Organicism is based on the conviction, generally held in artistic theory from antiquity to the end of the nineteenth century, that art should imitate nature, not with the aim of producing perfectly faithful copies but with the aim of creating the illusion of life, of conferring the qualities of living nature upon the products of man, in the hope of effectuating the metamorphosis of dead matter into living being. Since such metamorphosis will never be complete, we have to content ourselves with the use of metaphor: to speak of architecture as if it were part of living nature, shared her qualities of organic growth and unity, and could copy her methods.¹²⁴

It is indeed this tension between the attempt to render architecture as equally alive as the natural world and its failure to truly grow by itself that Ruskin encountered, which led him at times to abandon earlier arguments on a Picturesque projection into nature – especially in his first architectural treatise *The Seven Lamps of Architecture*.

Contrary to appearances, Ruskin was not really interested in Gothic architecture as a mere style, in the way his contemporary Pugin, for example, was. And indeed, while *The Seven Lamps of Architecture* was published as an architectural treatise, it does not contain a conventional overview of the Gothic, which might have been organized along chronological or stylistic lines, nor does it even attempt to be a systematic study of it, revealing underlying principles or rules, as treatises might be expected to do. Instead, it is a passionate, religious, moralizing text that presents medieval architecture, and especially the Gothic, as the only ‘good’ architecture, based on a series of values rather than architectural characteristics. Throughout the book, Ruskin employs the metaphorical figure of the lamp as a way of discussing the underlying values of architecture, of which he discerns seven, and which shine with different levels of intensity in each building – sacrifice, truth, power, beauty, life, memory and obedience. The reason why ‘nature’ is not listed – which we are here interested in, after all – is simply because the references to nature can be found throughout the entire text, underlying most of these lamps. This omnipresence of nature is already visible by simply looking at the fourteen drawings he included in the publication, and for which, in the first edition, Ruskin apologises for ‘the hasty and imperfect execution of the plates’,¹²⁵ a situation he would improve in later editions, as these were crucial to the argument (Figure 7). The drawings show fragments of buildings that Ruskin encountered, from Salisbury to Rouen and Venice, buildings of Gothic architecture, in which the columns rise towards the sky as do trees, their capitals overgrown with leaves, from which the ribs of the vaults above branch out along the curved

¹²⁴ Caroline van Eck, *Organicism in Nineteenth-Century Architecture: An Inquiry into Its Theoretical and Philosophical Background* (Amsterdam: Architectura & Nature, 1994).

¹²⁵ Ruskin, *The Complete Works of John Ruskin*, 1908, VIII:4.

line of a swallow's flight, or in the way the stem of a flower bends in the wind. . . Indeed, my generic attempt at metaphorical writing here is perhaps a bit too superficial, but it is this kind of naturalist language – though in a much more sophisticated version – that Ruskin employs at various turns in the text. While the seven lamps themselves make no direct reference to nature, the language with which Ruskin writes overflows with comparisons to and analogies with the natural world, which is continuously invoked as the standard against which to judge to what extent architecture confirms to this or that lamp.

As he writes in 'The Lamp of Power', for example: 'An architect should live as little in cities as a painter. Send him to our hills, and let him study there what nature understands by a buttress, and what by a dome.'¹²⁶ However, the architect, and architecture, is not to merely copy nature, as he writes in the 'Lamp of Beauty':

She is not to imitate directly the natural arrangement; she is not to carve irregular stems of ivy up her columns to account for the leaves at the top, but she is nevertheless to place her most exuberant vegetable ornament just where Nature would have placed it, and to give some indication of that radical and connected structure which Nature would have given it.¹²⁷

Architecture should not build trees of stone, of course, but it is to mimic the underlying logic of nature's beauty in its own construction – which, sometimes, does actually include carved ornaments of 'irregular stems of ivy' on her columns, as the drawings in the book demonstrate. Indeed, Ruskin further writes, 'all beauty is founded on the laws of natural forms', even though 'forms are not beautiful *because* they are copied from Nature; only it is out of the power of man to conceive beauty without her aid'.¹²⁸

Reading the text, there is some ambiguity to what extent Ruskin argues for a conceptual rather than a formal imitation of nature, but what is clear is that architecture is not nature itself, it is not simply an extension of it, rather, it is *like* nature, or supposed to be *like* nature. In other words, the construction of stone buildings, which in the modern mind is a cultural activity using inert and passive matter, is supposed to mimic, literally or figuratively, the active life and growth of natural plants and trees. This is indeed a different argument than the Picturesque portrayal of human beings and their dwellings as intrinsic parts of the natural landscape. Here, instead, Ruskin suggests a parallel between nature and architecture, but without collapsing both into one and the same thing. This is also the Romantic mind at work: human beings have been separated from Nature, and to compensate we need to seek refuge in its image. Architecture needs to *represent* Nature, because we, human beings, do not belong to it (anymore):

¹²⁶ Ruskin, VIII:136.

¹²⁷ Ruskin, VIII:151.

¹²⁸ Ruskin, VIII:141.

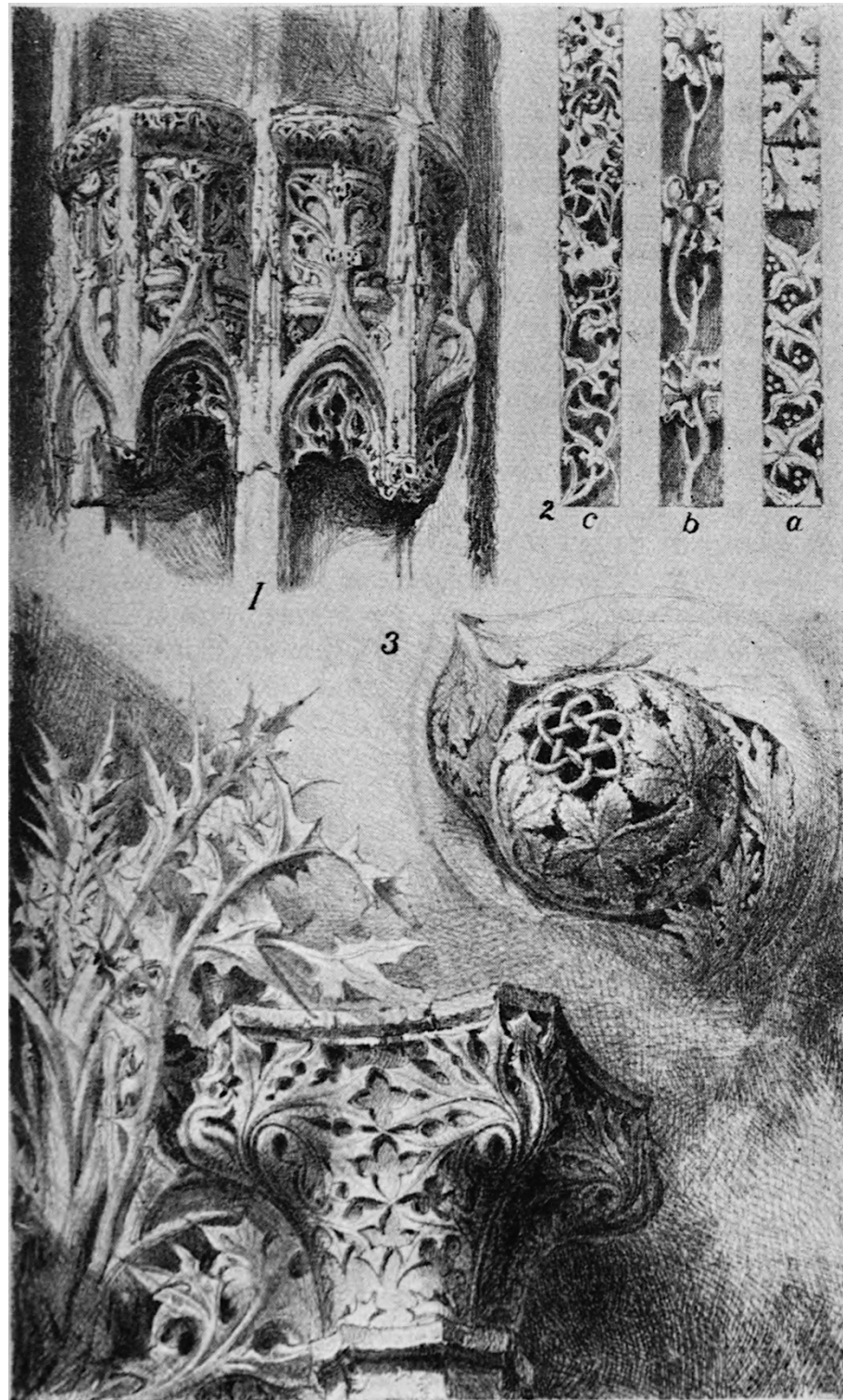


Figure 7: Ornaments from Rouen, St Lo and Venice, printed in *The Seven Lamps of Architecture*, John Ruskin, 1849.

We cannot all have our gardens now, nor our pleasant fields to meditate in at eventide. Then the function of our architecture is, as far as may be, to replace these; to tell us about Nature, to possess us with memories of her quietness, to be solemn and full of tenderness, like her, rich in portraitures of her; full of delicate imagery of the flowers we can no more gather, and of the living creatures now far away from us in their own solitude.¹²⁹

While the above paragraph does evoke a Picturesque image of nature, architecture is not projected into it, but called upon to re-create it. This is a rather strange position for Ruskin, since it echoes the modern position of a strict separation between natural and human affairs, yet he relies on religious arguments to develop his position – a position that Van Eck describes as ‘religious organicism’.

Aside from Ruskin’s argument on how architecture itself should or should not imitate nature, it is perhaps first and foremost his own language, the registers in which he writes, that give the impression that Gothic architecture is like nature. As Van Eck observes: ‘In Ruskin’s descriptions of the Gothic, architecture comes alive through the choice of descriptive verbs: it springs into spires, wreathes itself into the semblance of flowers, or coils into a staircase.’¹³⁰ And while it might appear that this is Ruskin’s attempt to somehow remedy the gap between architecture and nature, van Eck suggests a slightly different ambition. According to her, Ruskin’s metaphorical language was intended as ‘a theological justification for his love of the art’, an attempt to ‘transfer the religious emotion, previously reserved for the worship of God and his creation, to works of art’.¹³¹ To which she concludes: ‘By speaking of art as if it were nature, he makes it part of the work of God.’¹³²

Religiously-driven or not, what Ruskin argues for here is an architecture outside of nature, one that had been separated from the natural world, and to whom the only nature available was in mimetic representation. This is not the nature of a Picturesque landscape that immediately surrounds the building, since many of the Gothic’s motifs and ornaments refer to both generic and imagined types of vegetation. Instead, Ruskin’s argument for representing the ‘radical and connected structure’ of nature, can be read in the etymological sense of the word: from the Latin *natura*, birth. Gothic architecture, in Ruskin’s religious organicism, represents the desire that we, human beings, fallen from nature, might give birth to a living world ourselves, a creation that springs forth from our hands and seemingly lives on. And despite Ruskin’s religious agenda or his Romantic affinities, this is fundamentally a Promethean, modern dream: to master the powers of the gods and (re-)create the world ourselves. So, while the Picturesque produces an artificial

¹²⁹ Ruskin, VIII:411.

¹³⁰ Van Eck, *Organicism in Nineteenth-Century Architecture: An Inquiry into Its Theoretical and Philosophical Background*.

¹³¹ Van Eck.

¹³² Van Eck.

version of nature in which human beings belong, organicism instead produces an artificial version of nature explicitly created by human beings. It seems as if by invoking the concept of nature, architecture becomes even further removed from the actual, existing natural world. Perhaps we can arrive closer to it by taking the opposite route, by forgetting about nature altogether.

3.3 The Disappearance of Nature

While the environmentalism of the 1960s and 1970s often invoked holist fantasies of a Picturesque nature that was being destroyed, at the same time, as we saw in the previous chapter, these decades also saw the birth of more generalized technocratic approaches to nature, in which the natural world – including human beings – became understood as a system of interconnected relational processes, as, for example, with the development of the field of Earth system science. Against the backdrop of such developments, a number of architecture theorists also started to expand and revise their definitions of architecture beyond the singular object, adopting a much wider perspective based on contextual relations. One of the more radical books at the time could be Banham's *Los Angeles: The Architecture of the Four Ecologies*, published in 1971. While Banham did not directly engage with ecological theory, he was very much aware of both environmental sciences and their translation into architecture, such as, for example, in the work of Buckminster Fuller. The use of the word 'ecology' in the subtitle of the book echoes such broad views, but for Banham it was a matter of defining such a notion in architectural terms, abandoning the biological or scientific connotations it might have had elsewhere.

The radical move Banham made with this book was twofold: on the one hand, Banham wanted to understand the city of Los Angeles on its own terms, rather than measured against outdated and conservative urban principles derived from European cities. On the other, this also led him to develop a much wider perspective on architecture, which went far beyond the isolated building, instead including the entire landscape in which the city had developed, its histories, infrastructures, topographies, and social and economic dynamics. To some extent, one might even say Banham went looking for the 'genius loci' of Los Angeles, its specific characteristics, but without the insistence on a natural essence, instead recognizing its fully artificial existence. Banham saw Los Angeles as a thoroughly dynamic and ever-changing thing, in which distinctions between culture and nature, city and landscape, completely collapsed (Figure 8).



Figure 8: The view south from Griffith Park, printed in *Los Angeles: The Architecture of the Four Ecologies*, Reyner Banham, 1971.

The book was part of a broader and more long-standing engagement with the city. In 1965, Banham visited the city for the first time, funded by the Graham Foundation to participate in a symposium hosted by the Urban Design Department at the University of California, and in 1968, he worked on a series of four radio talks, one of which focused extensively on Los Angeles, and of which the texts that were published in the BBC's literary magazine *The Listener* would become the basis for *Los Angeles: The Architecture of the Four Ecologies*. Following the publication, in 1972, the BBC released a film titled *Reyner Banham Loves Los Angeles*, in which Banham himself, as the title emphasizes, declares his great love for the city. The opening scene shows Banham arriving in Los Angeles, walking out of the airport and crossing a busy street to find his way to a rental car. In voiceover, he introduces himself, and poses the question the film sets out to answer: 'You might wonder what I'm doing in Los Angeles, which makes a nonsense of history and breaks all the rules.' To

which he provocatively adds: ‘Well, I love the place with a passion that goes beyond all reason.’¹³³

While Banham’s turn towards the United States was largely the result of an interest in what he perceived as the technological superiority of American architecture at the time, the city of Los Angeles specifically appeared to Banham as a prime example of what a ‘post-urban, radical city for the Second Machine Age’ might be.¹³⁴ In line with the Futurist principles that Banham ascribed to, the dynamic character of the city presented a challenge to traditional architecture history, with its focus on static, singular, and long-lasting buildings. Instead, here, to understand the city, one had to approach it on its own terms, that is, from a more dynamic and moving position, an embodied perspective of the kinetic experience that defined the city as an ongoing process. In the words of British architecture theorist Anthony Vidler, Banham approached Los Angeles with ‘a freeway model of history’¹³⁵ – and that is to be taken quite literally.

After his first visit, in 1966, Banham took up driving lessons and obtained his driving license by the end of the same year. If he was to take the city of Los Angeles seriously, as an environment defined by flows rather than objects, he needed to be able to navigate its freeways, to observe it through the tinted frame of a windshield – ‘To read Los Angeles in the original’,¹³⁶ as Banham put it himself. (This rite of passage, however, came at a personal price: ‘But you’ve spoiled everything by learning how to drive,’ Banham observed when he received his license. ‘People who rave on about technology are supposed to know nothing about it.’¹³⁷)

Banham’s engagement with Los Angeles allowed him to further explore his definition of architecture as a ‘fit environment for human activities’, which he had developed in the 1960s in writings such as the book *The Architecture of the Well-Tempered Environment*, and famous essays like ‘A Home Is Not a House’ and ‘The Great Gizmo’, in which mechanical services and technological devices play a central role. While these writings were still part of Banham’s search for an *architecture autre* and operated on the level of the building, in which he opposed a European, monumental approach focused on outward form to an American, anti-monumental approach focused on what he described as a ‘standard-of-living-package’, Los Angeles allowed him to take this approach to a wider scale and focus on whole ‘ecologies’ instead.

¹³³ Reyner Banham *Loves Los Angeles* (BBC Films Production, 1972).

¹³⁴ Whiteley, *Reyner Banham*, 225.

¹³⁵ Anthony Vidler, *Histories of the Immediate Present: Inventing Architectural Modernism* (Cambridge, Massachusetts: The MIT Press, 1987), 169.

¹³⁶ Reyner Banham, *Los Angeles: The Architecture of the Four Ecologies* (London: The Penguin Press, 1971), 23.

¹³⁷ Reyner Banham, *A Critic Writes: Essays by Reyner Banham*, ed. Mary Banham et al. (Berkeley: University of California Press, 1996), 123.

While Banham never associated himself directly with any of the environmentalist movements of the 1960s and 1970s, his shift towards the city as an environment can still be read against the background of a growing awareness that things are more interconnected than had been assumed up until then. To realize his 'freeway model of history' in Los Angeles, including all the congestion, noise and air pollution, he thus borrowed terminology from the environmentalist movements and set out to analyse the city as an ecosystem in its own right, prominently appropriating the term 'ecology' in the subtitle of the resulting study. Although there is not much in the book that we would conventionally associate with 'ecological' thought in the environmentalist sense, Banham's work does exemplify an expanded view on things: rather than studying architecture in isolation, he was interested in a more relational approach, which could account for the interplay between 'geography, climate, economics, demography, mechanics and culture'.¹³⁸ While it thus might seem ironic that Banham's turn towards 'ecology' coincides with his work on one of the, at the time, largest metropolises in the world, this was exactly the point. Banham was not interested in a Picturesque nature, but in a total environment, which could just as well be urban.

Following the subtitle, the book is mainly structured around what Banham calls the 'four ecologies' of Los Angeles: Surfurbia (the string of beach cities along the Pacific coast), Foothills ('foothill ecology [is really all about] narrow, tortuous residential roads serving precipitous house-plots that often back up directly on unimproved wilderness'¹³⁹), The Plains of Id (the 'great service area feeding and supplying the foothills and beaches'¹⁴⁰), and Autopia (the freeways and their flows of car traffic). In these chapters, Banham gives an overview of each of these distinct environments, relating the geological history of the Greater Los Angeles basin to the omnipresence of surfboards and human-made constructions such as Craig Ellwood's Hunt House; from Angel Flight's funicular railway and the lightly curving roads of Beverly Hills to the earth forms created by 'mountain cropping', which consists of scraping away the mountain until you have a horizontal surface to build on, and which produces continuously crumbling cliffs; the agricultural history of land division to twentieth-century urban sprawl along endless grids and the characteristic 'dingbat' as a minimal form of multifamily residential unit; and the history of Los Angeles's railway infrastructure to its current freeway network (especially the interchange linking the 10 and 405 freeways, which he considered a true work of art) and the Angeleno culture of automobility.

Whatever personal agendas Banham was advancing with this book on Los Angeles at the time (exploding conventional architecture history, challenging distinctions between high and low culture, finding alternatives for the traditional and paternalistic English town

¹³⁸ Banham, *Los Angeles: The Architecture of the Four Ecologies*, 24.

¹³⁹ Banham, 99.

¹⁴⁰ Banham, 173.

planning at home¹⁴¹), what we are interested in here is the underlying perspective that the notion of ecology proposes – and often also its limits. As noted, Banham's ecological approach has little to do with an environmentalist agenda, instead his notion of ecology should be understood in machinic terms, similar to the perspective of the systems theories that were being developed at the time. Perhaps most significantly, and from an environmentalist perspective after all, the *Limits to Growth* report of the Club of Rome, which was published in 1972, the same year as *Reyner Banham Loves Los Angeles* was released, employed systems theory to develop its argument on the limits of a growth-based society. The whole argument of the report drew from computer models developed by American MIT computer engineer Jay Wright Forrester, the founder of the field of 'system dynamics'. His two major books *Urban Dynamics* and *World Dynamics* were an attempt to model the complex interactions between world economy, population growth and ecology, and were illustrated with his characteristic complex diagrams that schematize these interactions. Without going too far into the specifics of these theories, what these diagrams ideologically exemplify is a worldview that does not distinguish between the natural and the human, the social and the material, but maps out all of these different factors as if they were parts of a single machine.

In contemporary terms, the machinic ecologies of such system theories can be seen to operate within a so-called flat ontology, similar to later theories such as actor-network theory. It might be a step too far to characterize Banham the Angeleno as a Latour *avant la lettre*, but his work on Los Angeles does exhibit a similar emphasis on relations (defined by action) rather than on the actors on their own. As others have noted, the problem with such an approach is that, at its most extreme, the parts become subservient to the whole, replaceable even, as long as the system as a whole keeps running.¹⁴² Put differently, and again in contemporary terms, while much of ecological theory is focused on dismantling nature-culture binaries, here we find the downside of such disappearance: the natural loses its defence against the cultural – and thus against the industrial, the consumptive, the extractive.

If this seems like an over-interpretation of Banham's work, that is because it probably is. But at the same time it does help to clarify why Banham remained ever-optimistic about Los Angeles, and failed to condemn some of its problematic aspects, for which he was criticized at the time as well. Such neglect was not a coincidence, but a side-effect of his interest in the machine as a whole. For example, the year Banham visited the city for the first time, in 1965, was also the year of the so-called Watts riots, which profoundly destabilized the city and drew international attention to elements of racial segregation and

¹⁴¹ See for example Chapter 6 'Expendable Icons and Softer Hardware' in Whiteley, *Reyner Banham*, 308–61.

¹⁴² See for example Chapter 3 on 'Subsistence' in Morton's *Humankind*, where they formulate the conceptual alternative to such totalizing holism. Timothy Morton, *Humankind: Solidarity with Non-Human People* (New York: Verso Books, 2017).

discrimination embedded in its urban structure. In the book, on the one hand, there is not a single reference to these events, while the film, on the other, does open with Banham visiting the Watts neighbourhood, a scene in which he vaguely points out the area where these events happened, only to move on quickly to the local peculiarity of the Watts towers. Additionally, despite the self-proclaimed ecological approach, Banham's treatment of actual environmental problems is similarly lacking, both in the book and the film. While Banham enthusiastically embraced the machinic ecology of Autopia, the city had a well-known reputation for air pollution and smog. Not only did Banham downplay this reality – suggesting that it was no worse than London – he even celebrated its presence. In the closing scene to the BBC film, Banham takes us on a drive towards the ocean to enjoy 'one of the most famous and best-loved sights in all of Los Angeles': the sunset (Figure 9). The voice-over of the film concludes:

That view of the sunset is a like a symbol for all Romantic aspirations of our city, we have named everything from bars to boulevards after it. God gave us the sun and the ocean, but the colours come mostly from the fumes and pollution that we ourselves pump into the atmosphere every day. Enjoy it, the best of it doesn't last long.¹⁴³

To which Banham himself, driving along in his rented car, exaggerates even more:

That moment when the sun goes down beneath the Western Ocean [sic], because she's got nowhere else to go, that great moment of plastic fluorescent spectacle, the sun going down in man-made splendour, that really is, to all us lovers of Los Angeles, the greatest exit line any city could ever have.¹⁴⁴

Of course, Banham was no stranger to provocation, and these last lines of the film could easily be interpreted as a tongue-in-cheek reference to Los Angeles's bad reputation. As British architecture theorist Nigel Whiteley observed in his monograph *Reyner Banham: Historian of the Immediate Future* (2002): 'To an extent he is overstating his case in order to counter the usual criticisms, often repeated without direct evidence, that the freeway system was a polluting, frustrating, extended traffic jam which brought out aggression and fueled alienation.'¹⁴⁵ To which Whiteley adds that, despite the possibility of ironic exaggeration, Banham can nonetheless be justifiably criticized for writing about the freeway 'from the restricted point of view of relatively affluent, mobile, independent, solo, white-collar-professional, alert, fulfilled, (usually white) males.'¹⁴⁶ This leads Banham to generalizing statements, for example how Angeleno drivers 'are relaxed and well-adjusted characters without an identity problem in the world, for whom the freeway is not a limbo

¹⁴³ *Reyner Banham Loves Los Angeles*.

¹⁴⁴ *Reyner Banham Loves Los Angeles*.

¹⁴⁵ Whiteley, *Reyner Banham*, 234.

¹⁴⁶ Whiteley, 234.

of existential angst, but the place where they spend the two calmest and most rewarding hours of their daily lives.’¹⁴⁷ Which perhaps touches upon the core limitation of Banham’s ecological, systems-theoretical approach: he appeared in Los Angeles as an outsider, a visiting scholar at best, a tourist at worst. And it was only from this distanced position as an outsider that he could approach and take in the city without a priori judgements about its pollution or social injustice. Indeed, with a driver license in his pocket and the fluorescent sunshine at his back, cruising along the freeways at a leisurely speed, Banham saw Los Angeles ‘in the original’, on terms dictated by the city itself, terms he was not interested in changing.



Figure 9: *Sunset*, screencap taken from *Reyner Banham Loves Los Angeles*, dir. Julian Cooper, 1971.

¹⁴⁷ Banham, *Los Angeles: The Architecture of the Four Ecologies*, 222.

Banham's work on Los Angeles has rightly been praised for expanding the field of architecture, widening the scope of architecture history and theory while transforming its methods, and for breaking down conservative and traditional barriers between high and low culture, between architecture and its environment. I would argue, however, that Banham's appropriation of an ecological perspective without nature – and perhaps even without a Picturesque nature – loses its ability to condemn actual environmental problems, as the world is cast as a machinic assemblage in which the connections between its parts are interpreted relationally and the parts themselves become expendable as long as the whole keeps running. The vaguely-defined 'ecology for architecture' that Banham proposes in the title of the conclusion of the book is therefore perhaps the opposite of Ruskin's Picturesque: while Ruskin placed architecture (and its inhabitants) as essentialized elements within the broader natural landscape, here, by contrast, Banham situates the natural environments of Los Angeles – its beaches, its hills, its plains – as part of the city, appropriated by human society. Without any distinction between the natural and the cultural, whatever is left of nature is simply absorbed into the machine, as but another part of the ecological system as a whole.

3.4 The Return of Nature

Despite attempts to fully rationalize nature as systemic ecologies, something always seems to escape. Is this not what characterizes the environmental crisis, the observation that things are out of control, always seem to go beyond climate models and other calculations? Even Banham, with his incessant talent to analyse, would eventually admit to the fact that something is out there, not in the extra-terrestrial sense, but very terrestrial indeed.

It is perhaps one of Banham's most iconic photographs: the English professor of architecture history, aged 58, in full Western mode, with a Stetson hat, bolo tie, cowboy boots, but instead of a horse, he is riding a foldable Moulton bike across the dried-up bed of the Silurian Lake in the Mojave Desert (Figure 10). The photo was shot in 1980 by Los Angeles-based English photographer Tim Street-Porter and stages Banham's self-proclaimed persona as a 'desert freak'. But what was Banham, the neo-Futurist champion of the Modern Movement, pop-culture aficionado, and high-tech enthusiast, doing in the desert?



Figure 10: Reyner Banham cycling on the Silurian Dry Lake, California, 1981 (photography by Tim Street-Porter).

In February 1968, ‘in that high season of pop culture’, Banham drove up to Las Vegas, ‘to enjoy and photograph the lights’.¹⁴⁸ Returning to Los Angeles the next morning, Banham made an impromptu stop just south of Baker, for breakfast and fuel. Upon switching off the engine and stepping out of the car, Banham reports to have been overwhelmed by ‘silence, heat and light’.¹⁴⁹ This unexpected and unplanned bodily experience was the start of an increasing fascination with the environment of the desert, a fascination that would culminate in the publication of one of his lesser-known works, *Scenes in America Deserta*, published over a decade later in 1982.

The book is perhaps Banham’s most direct engagement with any natural environment. While most of his work largely focused on architecture and urbanism, in the desert he found himself suddenly confronted with an entire landscape. Such a confrontation inevitably carries the echoes of eighteenth-century philosophical debates on the aesthetic categories of natural beauty, which Banham had since long disregarded as old-fashioned and irrelevant in the context of the Machine Age. As he writes in the introduction of the

¹⁴⁸ Reyner Banham, *Scenes in America Deserta* (London: Thames & Hudson, 1982), 7.

¹⁴⁹ Banham, 5.

book: 'On First Setting Foot . . . [the desert] brings me hard up against my inner self, and forces me to ask what are, for me, difficult questions; like, what is the nature of natural beauty?'¹⁵⁰ The way Banham deals with these questions is, on the one hand, by falling back on the rather conventional art-historical reflex of demonstrating that such beauty is always a cultural construct, while on the other questioning if such a position is enough to truly grasp the impact the desert had on him.

Indeed, in art-historical mode, which is the mode in which most of the book operates, Banham attempts to present the desert as a cultural object, which he could then interpret. As American-British art historian Richard J. Williams summarizes in his recent Banham biography:

This was a vital theme throughout the book: that the desert was not a void, despite its etymology, the Latin *desertus*, literally meaning 'left waste'. Instead, the desert was full of life, particularly human life, and at a certain level it existed because of, rather than in spite of, human activity.¹⁵¹

In the introduction, Banham indeed admits that it would be impossible for him to see the desert as anything but a human construct – or rather, that his engagement of the desert would inevitably be distorted by the cultural frame through which he would approach it. A note in Banham's personal archives at the Getty outlines the intention of the book in its early stages:

It will be the deserts as seen – but not seen by innocent eyes; as a Briton I am heir to a powerful literary tradition, back through Doughty's *Arabia Deserta* to the rolling rhetoric of the King James Bible that colours all perceptions of deserts wherever they may be. Englishmen carry a private desert in their heads against which other deserts are measured.¹⁵²

In addition, there was also the technological mediation of encountering the desert, as he rather exaggeratedly observes in the introduction of the book:

. . . for my own affluent generation of tourists, those cultural filters are also physical facts, one in front of each of our eyes. We see sunny places by courtesy of Zeiss, Bausch & Lomb, Correna, Sundym and Polaroid, and we see just as much of the brilliant scene and its colors as their products – balanced forgotten on our noses – permit us to see.¹⁵³

This remark is made in a discussion of the quality of light in the desert, which Banham describes as being reminiscent of 'Monet's seascapes and haystacks, of open-air Van Goghs

¹⁵⁰ Banham, 18.

¹⁵¹ Williams, *Reyner Banham Revisited*, 180.

¹⁵² Williams, 179.

¹⁵³ Banham, *Scenes in America Deserta*, 6.

and middle-period Cezannes',¹⁵⁴ but it also echoes the fact that most of his sightseeing was done through the windshield, in the climate-controlled interior of a rental car, which allowed him and the photographers he brought along to travel the large distances quickly, safely and comfortably – an entirely different type of encounter with the landscape than any of its inhabitants might have. Banham fully assumed his position as an outsider: '... it is a landscape where I will always be an observer, a traveller – a *tourist* if you will because I am unlikely to live long enough in that terrain to acquire the deeply ingrained knowledge of an old desert hand.'¹⁵⁵ As such, it was an approach similar to the one he had employed in Los Angeles, and to some extent his work on the desert is indeed a continuation of the 'ecological' approach he had developed there. It was an attempt 'to capture the completeness of a scene',¹⁵⁶ to grasp an entire environment and everything it contained.

So, what did it contain?

A lot of human activity, indeed.

First of all, human inhabitation: from religious and colonialist landmarks such as San Xavier del Bac to vernacular settlements like Taos Pueblo as well as archaeological sites like Kuaua. Furthermore, there was also the inevitable presence of traffic ('An American desert may be cynically described as an arid zone with a four-lane highway slapped down in the middle of it.'¹⁵⁷) as well as military exercises ('... a double thunderclap out of the upper air as a plane from Edwards Air Force Base cracks through the sonic barrier.'¹⁵⁸), industrial activity ('Mining, assuredly, makes some mighty holes in the face of the Mojave.'¹⁵⁹), and scientific installations such as the Mayall telescope at Kitt Peak ('In that bowl of light we see the sun trapped for the purpose of modern science, much as men of earlier civilizations tried to trap the image of the sun for their no more arcane purposes and magic.'¹⁶⁰). Additionally, there is also a chapter devoted to 'The Written Word', in which Banham addresses the literary figure of the desert, most notably in travelogues such as John van Dyke's *The Desert: Further Studies in Natural Appearances* and Charles M. Doughty's *Travels in Arabia Deserta* – from which Banham borrowed the title – but also in science fiction such as Frank Herbert's *Dune*. All of this gives us an idea of Banham's approach: the desert on its own did not really attract him, instead, he focused on the way human beings inhabit and appropriate such an environment, the relation between both. As he writes towards the end of the book:

¹⁵⁴ Banham, 6.

¹⁵⁵ Williams, *Reyner Banham Revisited*, 180–81.

¹⁵⁶ Williams, 203.

¹⁵⁷ Banham, *Scenes in America Deserta*, 91.

¹⁵⁸ Banham, 191.

¹⁵⁹ Banham, 197.

¹⁶⁰ Banham, 187.

... the works of men always interest me as much as the landscape in which they are wrought. The tire tracks in the sand, the old *arastra* by the gold mine's mouth, the grove where the station used to be, the shiny power pylons marching over the horizon, the old windmill in the canyon and the new telescope repeater on the peak, the Indian pictograph and the anti-war graffiti, the trailer home parked in the middle of nothing, the fragment of Coalport china found in the sand at the bottom of the wash. One of the reasons why the Mojave is my prime desert is that there are more traces of man to be seen, traces more various in their history and their import.¹⁶¹

This interest is perhaps the most visible in the chapter titled 'Frank Lloyd Wright Country', in which he revisits some of Wright's works in the Arizona desert and their engagement with 'the landscape in which they are wrought'. After briefly revisiting Wright's failed projects – the burned down Rose Pauson House and the abandoned Ocatillo Camp – Banham then moves on to the Taliesin West project, Wright's winter home and desert laboratory he established in 1937, but that, at the time of Banham's visit two decades later, had become a museum open to tourists (Figure 11). Banham seems to find some joy in the way this project also had its failures: its architecture consisted of massive walls, a combination of desert rocks and reinforced concrete, which had been repaired beyond recognition over time, and canvas roofs, which later had been covered with plastic tiles – a material Wright abhorred – for protection from both the rain and the blazing sun. There was also the famous controversy about the electrical power lines: the complex had been designed to open up towards the view of the valley, which in the 1940s started to be filled with power lines crossing the desert. Wright reportedly wrote a letter to President Harry S. Truman demanding they would be buried, but to no success. Eventually, Wright turned his back on the valley and moved the entrance to the back of the main building. Yet beyond such anecdotes, as Williams writes, Taliesin

... addressed (even if not entirely successful) the specifics of the desert site, making use of technology to make the desert inhabitable. Partly this was electricity and fuel applied to the landscape, partly the use of thick walls, partly the allusions to camping with the canvas roof materials and the informal layout of the site.¹⁶²

Or in the more concise words of Whiteley: 'The essence of his interest was what he identified in *Scenes* as the interrelationships of "man, machine, and wilderness," which I think can be generalized as "humans, technology, and environment"'.¹⁶³ This is how the relation between architecture and the natural landscape of the desert was understood by

¹⁶¹ Banham, 199–200.

¹⁶² Williams, *Reyner Banham Revisited*, 197.

¹⁶³ Whiteley, *Reyner Banham*, 407.

Banham: as environmental conditions and climatological parameters to be regulated through architectural technologies.



Figure 11: Taliesin West, Arizona, Frank Lloyd Wright, 1937 (photograph by Julius Shulman).

Indeed, Banham made a conscious and explicit attempt to avoid engaging with ‘nature’, either by rendering the desert as a thoroughly cultural construct, or by reducing the natural to an environment to be controlled. The notion of nature, in the full Romantic sense, was impossible to avoid altogether however, and the book closes with a final chapter in which he finally faces the question of natural beauty, under the title ‘The Eye of the Beholder’.

In the opening scene to the chapter, Banham recalls how he and a photographer drove towards the Cowhole Mountains, when suddenly the view opened up and upon seeing the landscape, ‘the truck stopped almost of its own accord’, they jumped out in great haste, and both of them, ‘professional and amateur’, reached for their cameras:

... what was at stake was a scene of exquisite and evanescent beauty – the time, the temperature, and the angle of the sun at that season had together caused the early mist on the salt not to fray away in wisps and fragments, but to lift in uniform horizontal layers which now banded the face of the mountains in pale veilings of faint luminescence. The effect was like nothing I have seen on the desert or elsewhere – a delicate limpidity and perfectly layered geometrical regularity, all subtle and precise, too atmospherically to last.¹⁶⁴

It was only later, after returning and looking at the contact sheets and colour slides that had insufficiently captured the moment, that Banham could not avoid the ‘difficult question’ anymore: ‘Why is it “beautiful” to me?’¹⁶⁵

Inevitably, for Banham the art historian, such a question about the natural ‘beauty’ of a landscape becomes distorted by references to eighteenth-century aesthetic categories. And indeed, it is tempting to liken Banham’s travels through the desert to Ruskin’s Picturesque hunting of over a century earlier. Yet, he suggests, in the case of the desert, such comparisons are perhaps not enough. This last chapter is a reflection on his own visual sophistication, which gets in the way of truly seeing, experiencing, understanding and relating to nature. ‘Every piece of landscape that I might admire in my native parts of England, for instance, has a painter’s signature in the bottom right hand corner, so to speak, and sometimes a date as well.’¹⁶⁶ Or further on: ‘The colors which I had learned to regard as “naturally beautiful” came from John Sell Cotman’s watercolors.’¹⁶⁷ All of these art-historical references that are impossible to ignore at home, Banham realizes, have been developed in the face of European landscapes, which is an entirely different environment, and perhaps not applicable on the other side of the Atlantic. As such, Banham claims that the Mojave Desert is neither Picturesque, ‘because unpictured’,¹⁶⁸ not Sublime, ‘because not awesome nor terrifying’,¹⁶⁹ even ‘boring rather than daunting’,¹⁷⁰ and simply ‘calm’,¹⁷¹ nor even Beautiful in the strict sense of Burke’s or Sir Uvedale Price’s work, since it is ‘not soft, gentle, “feminine”, and all that’.¹⁷² But, then, what is it?

Seemingly liberated from his cultural baggage, Banham raises the naïve question of if he might have experienced ‘a pure aesthetic response’:

¹⁶⁴ Banham, *Scenes in America Deserta*, 209.

¹⁶⁵ Banham, 210.

¹⁶⁶ Banham, 212.

¹⁶⁷ Banham, 212.

¹⁶⁸ Banham, 218.

¹⁶⁹ Banham, 218.

¹⁷⁰ Banham, 218.

¹⁷¹ Banham, 219.

¹⁷² Banham, 17.

Deprived of the ancient categories of Picturesque and Sublime; dubious as to whether the deserts may be Beautiful in any equally ancient sense; knowing that I came into America Deserta culturally naked and ill-prepared; aware that I return to these landscapes in order to feast my eyes on visions that I am prepared to term addictive; I find myself driven closer than ever in my life to the idea that some scenes may be perceived as, simply, 'beautiful' – that the unthinking desert layabouts who say that 'it just is' may be onto something real. . . . And I think that surprising something is, after all, a matter of color and light.¹⁷³

Of course, he is quick to point that such an experience of pure colour and light had already been codified by abstract art, which is, as English critic Lawrence Alloway that Banham references has observed, 'just another iconography'.¹⁷⁴ But instead of accepting such a judgment, here Banham returns to that overwhelming sensation of 'silence, heat and light' he experienced the first time he set foot in the desert, and which seems to escape any attempt at iconographic codification.

Indeed, one might wonder if we take cover behind the sunglasses of our technological culture, not simply because the light is strong and threatens to hurt our eyes, but because the light is so extreme, and the independence of color and form so unsettling, that it somehow threatens our established psychologies as well, and evokes uninvited responses with a directness that is difficult to bear.¹⁷⁵

The chapter concludes rather open-ended: Banham proposes the possibility of a pure aesthetic response, admits that even such an experience has some established iconography in abstract art, but concludes that any attempt to codify it further, to describe it, to even use a word like 'beautiful', but also others such as 'mystical' or 'hallucinatory', are perhaps 'convenient labels with which to categorize, and thus tame, responses that were not tame. . .'.¹⁷⁶ Banham's personal conclusion was thus a rather existential one, where he concludes that he 'lost' himself in the desert, 'in the sense that I now feel I understand myself less than I did before'.¹⁷⁷ Unable to account for his experience in the desert, he turns around and contemplates himself instead – as the desert tends to invite its visitors to do. Our conclusion is perhaps a bit broader: on the one hand, Banham tries to take the natural beauty of the desert seriously on its own terms, refusing to admit to established aesthetic conventions, while entertaining the question of whether an unmediated encounter with nature is possible. On the other hand, the only way this might be possible is by reducing

¹⁷³ Banham, 221.

¹⁷⁴ Banham, 211.

¹⁷⁵ Banham, 224.

¹⁷⁶ Banham, 225.

¹⁷⁷ Banham, 225.

the desert to mere sensory inputs, again a bodily experience of the environment as climatological conditions.

This last chapter emphasizes what we already learned at Taliesin: here, in the desert seen through Banham's eyes, we find an architecture that is opposed to nature, that mediates nature to make the environment inhabitable, or rather, that mediates its effects of light and heat, since the actual desert, on its own, remains largely absent. There may be something out there, there may be something that we could call nature and that exists on its own, but if it does, it is inaccessible to human experience, since human experience always seems to distort and culturalize whatever confrontation we may have with nature.

3.5 Forgetting Nature

This chapter started with the question of what nature is. As I have tried to demonstrate, and as other authors have observed as well, this is perhaps an impossible question, as it always gets entangled with the question of what the human is, and as such, nature never appears as something on its own, but is always constructed through human frames of understanding. Architecture also seems to play a role in constructing the category of nature: the way we conceive of what nature is and transform the built environment accordingly, reinforces and projects the very artificial definition we started out from. For example, as we have seen in the case of Ruskin, architecture sometimes functions to project a Picturesque version of nature, by building a specific type of architecture that aesthetically corresponds with the natural environment it is located in, reinforcing the idea of an idealized harmony between human beings and nature, but which often seems to cover up the harsh reality that nature is not at all friendly to human beings. On the opposite side of the spectrum, in a metropolitan environment like Los Angeles, we can see how nature is completely absorbed into the human-made urban environment, as one of its many parts, without distinguishing it from the artificial, but in doing so also opening it up to its destruction. Either way, that which we generally describe as nature, inevitably entangles with the human. This does not mean there is not something out there, but it does mean that it is inaccessible. We should thus be suspicious of any reference made to the natural, as it always hides an ideological agenda that refers back to the human. Perhaps a better way of addressing the world around us – the environment – would be to try and forget about 'nature' and approach it as material processes, which allows us to move beyond the binary opposition between the natural and the human, but which opens up another set of questions.

Chapter 4 Materiality

We seem to find ourselves in the middle of a crisis of materiality.

On the one hand, there appears to be a lack of materials. The world economy is running out of resources. Over the past few years, the construction industry has faced shortages of building materials, with skyrocketing prices as a result. The agricultural industry is suffering from soil degradation, risking worldwide harvest shortages in the next few decades. The supply of rare earth materials currently does not match the projected demand of the coming years. The Amazon is disappearing due to deforestation at an alarming rate, coral reefs are dying off, glaciers are melting. We are living through the Sixth Mass Extinction, with large populations of insects, fish, mammals and all kinds of life dwindling. It seems as if the material world – in the broadest sense – around us has become fundamentally unstable and is disappearing more and more by the day.

At the same time, there is an excess of materials. Oceans are getting saturated with plastics. The atmosphere is filling up with higher and higher levels of carbon dioxide. Landfills are overflowing with all kinds of trash, consumer and industrial. Countries are struggling with safely storing nuclear waste. Every few months another oil spill occurs, covering local ecosystems without sufficient efforts to clean them up. Vast amounts of stuff are covering the planet, to the point where we need new words to describe these phenomena, such as the word ‘hyperobject’, coined by eco-philosopher Timothy Morton, referring to objects so large we can only see glimpses of them at a time, for example the total amount of Styrofoam ever produced and distributed around the world.¹⁷⁸

In other words, there seems to be both a shortage and an excess of materials, of things, of stuff. It’s not surprising therefore, that in recent years there has been a renewed interest in the notion of materiality – as we already saw briefly in the chapter on ‘An Ecological Sensibility’ – which seems to revolve around the tension between the *material* and the *immaterial*, a tension that can be traced historically but has perhaps received a new kind of urgency in light of the environmental crisis. In architecture, for example, in an attempt to reduce consumption and pollution, the construction industry has pushed the development of all kinds of energy-efficiency standards and certificates of sustainability, relying on the abstraction of numbers and data to calculate and map out the lifecycles of entire building processes. Such network-oriented approaches often try to offer a broader perspective on construction, beyond the singular building, in an attempt to include the processes of extraction, production, construction, inhabitation, adaptation, renovation, recycling and destruction. Yet, in doing so, the building as a tangible architectural object

¹⁷⁸ See Morton, *Hyperobjects: Philosophy and Ecology After the End of the World*.

often disappears in the endless flow of abstract calculations.¹⁷⁹ By contrast, there has also been a renewed interest in craftsmanship, in an attempt to get back in touch with the actual tangible materials out of which a building is constructed. Such approaches often favour the small-scale and local production of materials side by side with low-tech construction methods, in which the traces of where those materials come from and the hands of those who manipulated them remain visible. The result of such practices are buildings that foreground themselves as material entities in the world, carrying the traces of their biographies over time.¹⁸⁰

As I will argue in this chapter, the tension between the material and the immaterial is nothing new, but to a large extent has defined modern architecture history since the mid-nineteenth century. The history of modern architecture can indeed be read as an attempt to embrace the immaterial, in tune with the modern worldview that increasingly separates itself from the messiness of matter, while the material returns again and again, as the repressed often does. But first, before going into architecture history and the role played by Ruskin and Banham in this story, let us zoom out a bit more and look at what is at stake today in contemporary debates on materiality.

4.1 A Renewed Materialism

Given this contemporary situation, it is no surprise that contemporary theory has shown a renewed interest in the notion of materiality. As already mentioned in the chapter on 'An Ecological Sensibility', since at least the 1980s there has been a renewed attention for the agency of objects, of things, of matter.¹⁸¹ After decades of theorizing immaterial notions such as language, ideology and power, in which material objects were but mere passive receptacles for human meaning, the environmental crisis has provoked theorists to think about the agency of the material world beyond human intentions. This is generally framed as a 'new materialism', in which modern binaries like subject/object and human/nonhuman are problematized, while exploring different ways of conceptualizing the relationship between human beings and material objects, acknowledging, for example,

¹⁷⁹ For one of the more popular theoretical arguments on such a relational view of architecture, see Bruno Latour and Alena Yaneva, 'Give Me a Gun and I Will Make All Buildings Move: An ANT's View of Architecture', in *Architectural Theories of the Environment: Posthuman Territory*, ed. Ariane Lourie Harrison (London: Routledge, 2013), 117–24.

¹⁸⁰ For example, see Pauline Lefebvre and BC Architects & Studies, *The Act of Building* (Antwerp: Flanders Architecture Institute, 2018).

¹⁸¹ This shift in attention towards nonhuman agency is to a large extent the result of theoretical frameworks as Actor-Network Theory, developed in the 1980s by Michel Callon, Madeleine Akrich, Bruno Latour and John Law, which has been growing in popularity since then. See, for example, Bruno Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge MA: Harvard University Press, 1987).

the simple fact that human bodies are material as well, while material objects are not merely inert, but exhibit behaviours beyond human action.¹⁸²

Even within this turn towards materiality as a whole, which seems to suggest a clear focus on the material as such, the tension between the material and the immaterial nonetheless persists. This can, for example, be seen by contrasting the work of French philosopher Bruno Latour and American philosopher Jane Bennett. While Latour has dedicated a large part of his work to the development of a method of social analysis in which non-human things are taken into account as agents – or ‘actants’, in ANT’s terminology – his actor-network theory is often criticized for foregrounding the agentic relations between things, while losing the things themselves. This is symptomatic of other network-oriented approaches such as Earth systems science, or the way a lot of climate modelling works by relying on vast amounts of quantitative yet abstract data. By contrast, people like Bennett, whose work also builds on Latour, puts matter front and centre, and instead attempts to theorize the agency of things as a material presence, instead emphasizing the affective dimension between human beings and things, or among things themselves. In her celebrated 2009 book *Vibrant Matter: The Political Ecology of Things*, Bennett aimed at understanding the way in which the material world affects human beings, beyond our intentions, by foregrounding material presence as such. The key word here is perhaps ‘affect’, to which we will return later on in the context of Ruskin’s work, which generally implies a direct and immediate relation, as opposed to Latour’s focus on actions, which are not necessarily so tangible.

A different and relevant author is perhaps British anthropologist Tim Ingold, who has explicitly distanced himself from this so-called ‘new materialism’ as well as from actor-network theory, but nonetheless focuses on questions of materiality too. While Bennett as well as people like Latour can be seen to attribute a sense of agency to objects, Ingold instead argues against such apparent animism: ‘Bringing things to life, then, is a matter not of adding to them a sprinkling of agency but of restoring them to the generative fluxes of the world of materials in which they came into being and continue to subsist.’¹⁸³ Aside from such ontological disagreement, however, both Bennett and Latour as well as Ingold aim to question the dominant approach in Western thought that views the material world as fundamentally passive, and often argue that we should focus on relations rather than objects in themselves.

To understand what this means, let us briefly look at the way Ingold approaches architecture. For example, in his article ‘The Textility of Making’, he follows Deleuze and Guattari to argue that ‘the essential relation, in a world of life, is not between matter and

¹⁸² See for example the edited volume on the recent discourse on ‘new materialism’: Coole and Frost, *New Materialisms: Ontology, Agency, and Politics*.

¹⁸³ Tim Ingold, ‘Materials against Materiality’, *Archaeological Dialogues* 14, 1 (2007): 12.

form but between *materials* and *forces*'.¹⁸⁴ This stands in contrast to the dominant, so-called hylomorphic model of making, deeply embedded in Western thought, as formulated by Aristotle. For Aristotle, making something meant bringing together matter (*hyle*) and form (*morphe*), implying the presence of an active, usually human, agent who imposes a design onto passive matter. Yet, as most makers know, this is rarely the case, since matter resists certain designs while it affords others, suggesting a process of collaboration instead. When it comes to architecture, Ingold quotes Matisse Enzer, a contractor, who states:

Architects think of a building as a complete *thing*, while builders think of it and know it as a *sequence* – hole, then foundation, framing, roof, etc. The separation of design from making has resulted in a built environment that has no 'flow' to it. You simply cannot design an improvisation or an adaptation. It's dead.¹⁸⁵

In various texts, Ingold illustrates such a separation between design and making with the difference between Gothic cathedrals and Renaissance villas. In the essay 'On Building a House', for example, Ingold observes how the Italian architect Alberti, as one of the founding figures of the European Renaissance, 'can be seen in retrospect to stand at a pivotal juncture in the process that ultimately led to the professionalisation of architecture as a discipline devoted exclusively to design as opposed to implementation'.¹⁸⁶ The hylomorphic model of making and its implications for the role and the tools of the architect contrasts heavily with the preceding medieval practices of construction. In his review of the available literature on such medieval building practices, Ingold notes that there is little doubt that medieval builders drew, but 'what is doubtful is that any of their drawings can be understood as plans, in the strict sense of a full geometrical pre-specification of the intended work'.¹⁸⁷ According to the historical research of scholars such as Lon R. Shelby, medieval builders indeed employed working drawings, but he argues that 'templates, rather than drawings per se, were the primary means by which master masons transmitted architectural forms to the workmen who executed them'.¹⁸⁸ These templates were more 'descriptive than prescriptive' and their execution relied heavily on 'the intelligence of skilled craftsmanship' of the workmen, who employed specific on-site drawing practices to translate these templates into constructions. As such, Ingold concludes, 'there was no radical division here between drawing and building . . . rather both were integral to the craft itself'.¹⁸⁹ By contrast, Renaissance architects like Alberti instead conceived entire designs a priori in lines on paper, which then needed to be built accordingly. As Alberti writes in his *On the Art of Building in Ten Books* (1485): 'The

¹⁸⁴ Tim Ingold, 'The Textility of Making', *Cambridge Journal of Economics* 34, 1 (2010): 91–92.

¹⁸⁵ Ingold, 93.

¹⁸⁶ Tim Ingold, 'On Building a House', in *Making: Anthropology, Archaeology, Art and Architecture* (London: Routledge, 2013), 49.

¹⁸⁷ Ingold, 55.

¹⁸⁸ As cited in: Ingold, 55.

¹⁸⁹ Ingold, 56.

building consists of *lineamenta* and matter, the one the product of thought, the other of Nature, the one requiring the mind and the power of reason, the other dependent on preparation and selection'. What Alberti here calls *lineamenta* is the 'precise and complete specification of the form and appearance of the building, as conceived by the intellect, independently and in advance of the work of construction'.¹⁹⁰ What Ingold then argues for, is to return to some version of the medieval craftsmen, echoing Ruskin's arguments as we will see, based on the idea that such a model of making was more in tune with the ontological structure of the material world, one which the modern world denies.

Such a historical transition from the architect as a craftsman to the architect as a designer was not an isolated development, but coincided with a broader cultural shift in which the relationship between human beings and the material world changed – a change in the dominant 'regime of materiality', as French architecture historian Antoine Picon would argue.

4.2 Regimes of Materiality

No matter how you look at it, the relationship between architecture and matter has always been an intimate one. As Picon observes in his 2018 book *The Materiality of Architecture*:

The entire paradox of the architectural discipline consists in endeavoring to render matter expressive, often to the point of overlooking its stubborn resistance to language as such – even though a significant portion of its expressive power lies precisely in this resistance.¹⁹¹

In his book, Picon develops the notion of 'regimes of materiality' to examine how specific historical moments have been characterized by a specific relationship between human beings and the material world. In this, he distinguishes between 'matter' as the generic category to describe the substance of the world, 'materials' as specific manifestations of matter, for example as planks of wood, stacks of bricks or blocks of concrete, and 'materiality' as 'the way humans relate to matter and materials through the prism of their beliefs, knowledge, and practices, architecture being one of these practices – a key one, actually, because of the part played by matter in its very definition'.¹⁹² Picon's argument is built on the idea that architecture is indeed defined by the attempt to 'render matter expressive', or better, to make matter 'speak', for which various approaches have been used at different moments in history. Indeed, architects have generally been concerned with ordering various materials – wood, stone, glass – into intelligible and readable

¹⁹⁰ Ingold, 50.

¹⁹¹ Antoine Picon, *The Materiality of Architecture* (Minneapolis: University of Minnesota Press, 2020), 7.

¹⁹² Picon, 8–19.

configurations, whether ornamental, tectonic or otherwise. As such, architecture can indeed be seen as the activity to give the shapeless world of matter an intelligible form, to give it a language, and thus to transform mute materials into cultural signification.

But the way human beings – and especially architects – have engaged with the material world has changed over time and can be described, according to Picon, as a succession of different historically situated ‘regimes of materiality’. In his book, Picon gives an overview of how these changed over time. He observes how ‘the Renaissance saw the gradual superimposition of an ordered set of measurable spaces and objects onto the wondrous and suprarreal world of the Middle Ages’¹⁹³ and how Renaissance architecture was ‘the definitive expression of the simultaneous reformulation of the subject’s relation to the material world and the enshrinement of the human gaze in the perspectival mechanism that refers to the emergence of humanism.’¹⁹⁴

During the second half of the eighteenth century, something else happened. Picon here quotes the historian of architecture Erika Naginski, who observed a

. . . general shift away from seventeenth-century understandings of matter as essentially passive and subject to God’s arbitrary judgment. The presumed dependence of material bodies on external forces was a premise that sat squarely at the center of baroque theological doctrine, political philosophy, and scientific thought . . . By contrast, the Enlightenment gradually sought out a markedly less-deterministic position. It evolved toward the possibility that matter was radically active.¹⁹⁵

As a result of scientific research, ‘matter seemed on the verge not only of revealing but, more than this, rendering possible previously inaccessible natural mechanisms and procedures’.¹⁹⁶ As such, a better understanding of structural properties, and especially those at work in Gothic architecture, led to the emancipation of the notion of structure from established rules of proportion and ornament. Rather than considering a construction as a static thing, the notion of circulation became a central one to understand structural loads: ‘In addition to lightness, or rather as its enabler, Gothic was characterised by the channeling of part of the thrust exerted by the vaults toward peripheral flying buttresses, a channeling that evoked the way water can be diverted in irrigation.’¹⁹⁷ As such, and amid similar shifts in other fields, a regime of so-called ‘material truth’ developed: ‘. . . this analytical character was reflected in the demand for the architectural legibility of load paths and transfers; hence the conviction that for each material – stone, wood, or iron –

¹⁹³ Picon, 80.

¹⁹⁴ Picon, 84.

¹⁹⁵ Picon, 85.

¹⁹⁶ Picon, 85.

¹⁹⁷ Picon, 86.

there is a corresponding structural type that best utilises its mechanical properties.¹⁹⁸ However, this regime of material truth was not always that obvious and led to some fundamental contradictions within modernist architecture. On the one hand, technological advances allowed architects to mobilize matter at will, while, on the other, 'truth to materials' implied the existence of intrinsic rules embedded within matter that limited architects.

Arriving at the present, Picon then examines our contemporary situation. Tracing the development from late-nineteenth century bureaucracies to the digital world, he observes how 'computers and, more broadly, the digital realm appear as a form of technology that is overhauling our relationship with physical reality in a comprehensive way, starting with the sensory sphere'.¹⁹⁹ The devices we use daily transform our perception of the world, in which our vision intertwines with the zooming in and out of our cameras, in which our auditory experience is transformed by listening to compressed digital audio files or noise-cancelling headphones, in which the tastes of food and the smells of perfumes are more often than not the result of artificial, highly engineered production processes, and so on. Picon mentions how neuroscience is investigating how this changing multisensory world is impacting our cognition, since here, too, the digital technologies result in 'the *joint* transformation of the perception of the physical world and the interpretation of what constitutes the human'.²⁰⁰

The question of what constitutes the human echoes a lot of posthuman theory and Picon indeed refers to the figure of the cyborg (theorized by Haraway, among others), though argues for its update:

Over the past few years, the cyborg appears to have been replaced by a networked personality that resides simultaneously within and outside the body; distributed through neural networks that ensure the proper functioning of the mind, it is at the same time spread across numerous physical and electronic channels that connect it to the environment.²⁰¹

Indeed, in our contemporary regime of materiality, the human and the material, or the subject and its environment, appear as radically entangled, undermining the modern perspective of human beings in control:

For what is closely linked to our increasing sensitivity toward environmental issues is a calling into question of the modernist vision of the heroism of human will that beats the physical world into submission. What emerges to replace this antagonistic fiction is an ideal of collaboration with the forces animating matter, or, more

¹⁹⁸ Picon, 91.

¹⁹⁹ Picon, 113.

²⁰⁰ Picon, 114.

²⁰¹ Picon, 115.

precisely, with the forces that course through and animate human and nonhuman alike, newly considered as continuous entities.²⁰²

The contrast Picon evokes here, between the modern vision that ‘beats the physical world into submission’ and the more ecological approach of a ‘collaboration with the forces animating matter’, is indeed what is at stake in the tension between the material and the immaterial. A collaboration with the material world entails a recognition of its agency, understanding and accepting it on its own terms – being true to materials. Such an attitude is nothing new in architecture history, however, but a central theme in much modernist discourse. The notion of ‘truth to materials’ has a long-standing history that goes all the way back to Ruskin, which might be the best starting point to reevaluate our human relationship with the material world and the role architecture plays in it.

4.3 Material Vitalism

To fully understand what is at stake in Ruskin’s theories on material truth, and his underlying arguments on vitalism, we need to understand what he was arguing against. In the middle of the nineteenth century, industrialization was well underway to transform society, and one of the emblematic buildings that represented such a transformation was perhaps the Crystal Palace, built in Hyde Park in 1851 (Figure 12). In its very construction and functioning it fully embodied the tension between the material and the immaterial that largely marked modernity in general. On the one hand, the Crystal Palace housed the Great Exhibition of the Works of Industry of All Nations with over 100,000 objects, grouped into four categories: Raw Materials, Machinery, Manufacturers and Fine Arts. As literary historian Thomas Richards observed, the Great Exhibition established a specifically capitalist system of representation, as a ‘spectacle’ of abundance, delivered through a system of economic exchange built on colonialism and industrialization. The result was an overwhelming amount of objects, of resources, of materials. On the other hand, however, the building itself appeared to be a completely immaterial construction, made of nothing but cast iron, glass and air. It is generally understood to be the first building of that scale and size and popularity to completely dissolve the monumentality that was traditionally associated with major architectural works. As such, the building has been commented on widely since and keeps returning as a major turning point that signals the start of a process of dematerialization, as writers at the time already realized.

²⁰² Picon, 116.



Figure 12: The interior of Joseph's Paxton Crystal Palace during the Great Exhibition in 1851, London, England (coloured lithograph by J. McNeven, 1851).

For example, *The Art Journal Illustrated Catalogue* for the exhibition states: 'The effect of the interior of the building resembles that of the open air. It is perhaps the only building in the world in which *atmosphere* is perceptible.'²⁰³ Or, as a reporter of the *Wiener Allgemeine Zeitung* recorded the complaints of an artist about the lack of form:

The light, shining through the walls, finds no resistance anywhere, and so the alternation of light and shadow that is pleasant and necessary to the eye is completely missing – in a word, no masses, only a mass of glass and iron.²⁰⁴

German publicist Lothar Bucher, a friend of Marx and Semper, equally wrote that 'in it everything corporeal disappears'.²⁰⁵ Likewise, Semper himself described it as a 'vacuum'.²⁰⁶ And as Philip Ursprung observes today: 'It is obvious to read this spatiality as a function of the economic changes – as if it were an articulation of the process of evaporation

²⁰³ As quoted in Philip Ursprung, 'Phantomschmerzen Der Architektur: Verschwindende Körper Und Raumprothesen', *Kritische Berichte* 2 (2006): 23. Translation by Bart Decroos.

²⁰⁴ As quoted in Ursprung, 23. Translation by Bart Decroos.

²⁰⁵ As quoted in Ursprung, 23. Translation by Bart Decroos.

²⁰⁶ As quoted in Ursprung, 23. Translation by Bart Decroos.

described by Marx and Engels.²⁰⁷ Ursprung is of course referring to the famous phrase from the Communist Manifesto: ‘All that is solid melts into air.’²⁰⁸

I briefly mention the Crystal Palace here – on which much has already been written elsewhere – to set the stage for Ruskin’s work, whose writings on architecture at the time were indeed an attack on a material culture of dematerialization, against the material alienation he recognized in the cultural developments driven by industrialization. When the Crystal Palace opened in 1851 in Hyde Park, a widely anticipated event, Ruskin stayed home and started to write the second volume of *The Stones of Venice*. It was only when the Crystal Palace was rebuilt a few years later in 1854 at Sydenham that he went to see the building and subsequently wrote a pamphlet titled *The Opening of the Crystal Palace, considered in some of its relations to the prospects of art*.²⁰⁹ In the pamphlet, Ruskin describes the Crystal Palace as mere building, not architecture. While he acknowledged its ‘mechanical ingenuity’, ‘formed under the auspices of science which can hardly err’, he criticized the disconnection of the building from history, on which he ironically remarked that ‘the first principles of architectural sublimity, so far sought, are found all the while to have consisted merely in sparkling and space’.²¹⁰ This of course echoes other remarks, like that of Semper, describing it as a vacuum, as something completely detached from the world. Ruskin goes further, however, and the pamphlet diverts into a critique of the restoration of Gothic churches in France, where a large-scale restoration campaign had been set up, partly under the supervision of Viollet-le-Duc. For Ruskin, such restoration processes – ‘with mathematical exactitude’²¹¹ – implied the illusion that one could recreate an architectural construction in the nineteenth century exactly as it had been built in the thirteenth, which he saw as a denial of the material processes through which architecture was effectively built and experienced and, to a larger extent, as a denial of how the material world operated. Both the mechanical ingenuity of the Crystal Palace and the illusion of restoration were expressions of the ‘vacuous’ attitude of the at the time developing modern material culture – which will be addressed on its own further down.

In contrast to what Ruskin perceived as a denial of the material reality of the world, he instead argued in favour of truth. One of the recurring themes in Ruskin’s work is the classical conflation of the good, the beautiful and the true. When it comes to architecture, it can only be good architecture when it is beautiful, and only beautiful when it is truthful. His first architectural treatise, *The Seven Lamps of Architecture*, abounds with statements in that direction. For example, Ruskin writes how ‘the first duty of architecture is to support truth’, and that ‘a building is not truly a building until it is honest’, while ‘there

²⁰⁷ Ursprung, 24. Translation by Bart Decroos.

²⁰⁸ Karl Marx and Friedrich Engels, *The Communist Manifesto* (London: Penguin Classics, 2015 [1848]).

²⁰⁹ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. XII (London: George Allen, 1908), 415–32.

²¹⁰ Ruskin, XII:418–19.

²¹¹ Ruskin, XII:422.

can be no truth in architecture which is not in its materials'.²¹² Indeed, for Ruskin the notion of truth is largely connected to the material construction of building, since he believed that architecture was a reflection of the culture that built it and that, for example, the use of cheap or imitation materials was to be regarded as a sign of moral decay and a loss of cultural values. To illustrate his point, one of the examples he gives in this chapter is 'the noble entrance and general architecture of the British Museum', where 'the noble granite foundation of the staircase should be mocked at its landing by an imitation'. This was a problem for him, since 'the only effect of it is to cast suspicion upon the true stones below, and upon every bit of granite afterwards encountered'.²¹³ How can we value our monuments, the architecture of our society, when it does not even value itself, Ruskin asks, when it only pretends to be something that it is not?

And from this perspective, mechanical production was to be condemned as well. For Ruskin, the ornaments of especially Gothic architecture were the result of a dedication, even a sacrifice, made by craftsmen, giving value to the edifice. They were the material traces of the immense effort that was made to construct these churches and cathedrals. In his time, however, the mechanical production of ornaments was increasingly replacing handmade ones, and as such, according to Ruskin, they merely pretended to be the result of a painstaking process in their aesthetic appearance, while in reality they were quite cheap, deceiving the viewer about the actual value of a building – both in economic and moral terms. 'All cast and machine work is bad, as work', he writes, and thus wrong.²¹⁴ This was the result of a disconnection between the processes of construction and the appearance of a building, which was to be condemned as false, sinful even. Ruskin's arguments were of course the result of his religious convictions, often using Biblical language to condemn such practices. But more fundamentally, Ruskin was arguing against a cultural alienation from the material world human beings lived in. When things appear to us aesthetically in a different way than they were constructed, or, in other words, when the appearance of a building does not match the processes of construction that produced it, Ruskin argues, we risk losing touch with the world itself. This was thus not simply a moral condemnation of deception, but a concern for the alienation from the material environments we live in. As such, he saw the slab of imitation granite as a symptom of the modern attitude that reduces matter to static and superficial surfaces, mere appearances without living substance, denying the wealth of the world.

²¹² See 'The Lamp of Truth' in Ruskin, *The Complete Works of John Ruskin*, 1908.

²¹³ Ruskin, VIII:76.

²¹⁴ Ruskin, VIII:81.

4.3.1 Vital Beauty

This was a denial, for Ruskin, because he perceived the world, and especially the natural world, as something alive. To describe the aesthetic perception of this aliveness of the world, the way human beings might relate to it, he developed the notion of ‘vital beauty’, in contrast to ‘typical beauty’, the beauty of classical order. Vital beauty, instead, is the beauty of living things. The way Ruskin introduces his development of this notion, in the second volume of his *Modern Painters*, is with the example of a ‘slender, pensive, fragile flower’ piercing through ‘unsullied snow’, somewhere on the slopes of ‘the Lower Alps, early in May’, ‘partly wondering at its own recent grave, and partly dying of very fatigue after its hard-won victory’, which, Ruskin writes, ‘[utters] to us a call for sympathy’, one that ‘cannot be heard without affection, nor contemplated without worship’.²¹⁵

The key word here is ‘sympathy’, which is foundational to understanding Ruskin’s concept of vital beauty. While the notion of sympathy today has been reduced to meaning something like pity or compassion, in the eighteenth and nineteenth centuries it was an almost magical word that described a mixture of emotional perception, resonance and communication. According to Samuel Johnson’s *Dictionary* (1755) sympathy can be understood as ‘fellow-feeling; mutual sensibility; the quality of being affected by the affectations of another’. In Ruskin’s writings, the word sympathy would appear extensively, but it would take him until 1873, in his *Fors Clavigera*, to really define his understanding of the term as ‘the imaginative understanding of the natures of others, and the power of putting ourselves in their place’.²¹⁶ In Ruskin’s development of the concept of vital beauty, he relies on the notion of sympathy to explain the sensation of happiness one enjoys when observing the pleasure of someone else – or something else. He was well aware that this extension of sympathy towards the nonhuman was unusual and carefully weighed his words, writing that the idea of happiness in other organisms ‘is doubtful, or only seeming’.²¹⁷ Yet, he argues, referring back to the example of the flower above, ‘the pleasure afforded by every organic form is in proportion to its appearance of healthy vital energy. . . . The amount of pleasure we receive is in exact proportion to the appearance of vigour and sensibility in the plant.’²¹⁸

For Ruskin, the beauty of the natural world was the result of a sympathy with its vital energy, which could be perceived in the continuously changing growth of nonhuman beings. The beauty of these living things was to be taken as an example, not only for artists but also for architects. This can already be seen in his *Seven Lamps*, where Ruskin insists

²¹⁵ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. IV (London: George Allen, 1908), 146.

²¹⁶ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. XXVII (London: George Allen, 1908), 627.

²¹⁷ Ruskin, *The Complete Works of John Ruskin*, 1908, IV:150.

²¹⁸ Ruskin, IV:151.

that beauty depends on natural form and that the energy in structure and decoration should follow the example of the power and life of natural forms as we saw in the previous chapter. And life means movement, transition, change. Vital beauty, for Ruskin, was crucial to a material culture attuned with the natural environment around us, a material culture he saw threatened by industrialization. Today, the emergence of an ecological sensibility seems to insist again on an aesthetics of vitalism, one which should be able to forge connections between us, human beings, and the nonhuman life of the planet on which we live.

Not surprisingly, Ruskin's concept of vital beauty and its reliance on the notion of sympathy has been taken up again by contemporary theorists. A major reference here is the work of architecture theorist Lars Spuybroek and his 2011 book *The Sympathy of Things: Ruskin and the Ecology of Design*, in which he tries to redevelop these notions for the twenty-first century. While Spuybroek is largely concerned with developing a 'digital Gothic' in line with his own work as a practicing architect, which has often been described as 'blobitecture', his arguments echo a lot of contemporary new materialist discourse, though in its own specific way. In short, Spuybroek uses Ruskin as a guide to navigate debates on materiality and thing-theory, arguing in favour of an aesthetics based on the notion of sympathy to account for the relations between things. In doing so, he develops a 'Gothic ontology' to account for the material vitality of the world we live in, which, borrowing a phrase from Ruskin, he describes as a 'veil of strange intermediate being': 'The veil of strange intermediate being – simply the most beautiful term ever – ranges from grey to green, oscillating violently between the crystalline and the arabesque; green petrifies to become grey and grey comes to life, but all is fundamentally entangled.'²¹⁹

For Ruskin, this so-called 'veil' is the thin surface of the Earth that contains all life, or rather, where all things are 'more or less alive'.²²⁰ From this perspective the world appears as a realm of things that cannot be strictly separated from each other: 'Our Gothic ontology has never aspired to distinguish strictly between the two: stones act like plants, and plants act as strange and still as rocks.'²²¹ Spuybroek goes on to develop this Gothic ontology as a theory of relationality, in which all things are inevitably related to other things or, better, 'entangled' with each other.²²² Ruskin's notion of sympathy is how things are related to each other, how they entangle, which 'not only includes things and actions but also

²¹⁹ Lars Spuybroek, *The Sympathy of Things: Ruskin and the Ecology of Design* (London: Bloomsbury, 2016 [2011]), 243.

²²⁰ As Ruskin writes in *The Ethics of Dust*: 'Things are not either wholly alive, or wholly dead. They are more or less alive.' See John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. XVIII (London: George Allen, 1908), 346. This term, for example, seems to be explicitly echoed in Bruno Latour's notion of a 'critical zone': the thin crust of the Earth on which all climate politics is focused. See Bruno Latour, *Down to Earth: Politics in the New Climatic Regime* (Cambridge: Polity Press, 2018).

²²¹ Spuybroek, *The Sympathy of Things: Ruskin and the Ecology of Design*, 164.

²²² Spuybroek, 49.

feelings'.²²³ This sympathy between things is described by Spuybroek primarily as an aesthetic relation, as 'a resonance, an attunement of feelings.'²²⁴ As such, Spuybroek aims at an ontological conception that not only allows for an understanding of the world as relational, but, by emphasizing the aesthetic character of such relations, he also suggests how to design this world accordingly. Similar to Ruskin, Spuybroek's goal is not just to rethink the way we *understand* architecture, as a new kind of architecture theory, but also how to *design* architecture in such a way that it opens up a space for such sympathy with the life of things:

Because a wall as a naked, Euclidian object with four static points in its four corners presents itself as finished, stable, and at rest, in short, as something we cannot feel anything for but merely see. *Sympathy can be felt only for things that are in the making or in transition, that have a life.*²²⁵

Spuybroek, in accordance with Ruskin, emphasizes the vitality of the material existence of things themselves. And the way in which we humans relate to this vitality, and the way things relate to each other's vitality, according to both, is through the affective aesthetics of sympathy. And indeed, in the work of people such as Bennett, the 'vibrancy' of matter she defines is the result of affective relations. It is no coincidence that alongside a turn towards materiality in contemporary theory, the field of affect theory is developing as well.

4.3.2 Between Ethics and Aesthetics

Much of modern philosophy has been defined by a clear opposition between reason and emotion, between thinking and feeling. Especially when it comes to knowing the world, it seems that modern philosophy requires of us to step outside of it, leave behind our emotions and feelings and intuitions, and rely on abstract reason alone. Affect theory, on the other hand, is an attempt to reconsider the importance of all other things than detached reason to understand and navigate the world we nonetheless live in, and which it seems impossible to step out of. As Melissa Gregg and Gregory J. Seigworth write in the introduction to *The Affect Reader*, published in 2010:

Affect arises in the midst of *in-between-ness*: in the capacities to act and be acted upon. . . . Indeed, affect is persistent proof of a body's never less than ongoing immersion in and among the world's obstinacies and rhythms, its refusals as much as its invitations.²²⁶

²²³ Spuybroek, 243.

²²⁴ Spuybroek, 159.

²²⁵ Spuybroek, 95.

²²⁶ Melissa Gregg and Gregory J. Seigworth, eds., *The Affect Theory Reader* (Durham: Duke University Press, 2010), 1.

I will not go too far into contemporary affect theory, as this is beyond the scope of this manuscript, but I briefly mention it here, since it seems to echo similar concerns of Ruskin, writing almost two centuries earlier.

For Ruskin, the question of aesthetics, of perception, was impossible to separate from the question of morality, as it was current at the time. This dominant view had already been firmly established by German philosopher Alexander Gottlieb Baumgarten in the eighteenth century, when, in 1735 to be precise, he coined the very term ‘aesthetics’ and argued that ‘the study of beauty should be concerned merely with the adequacy of the object to perception, that is, that aesthetics should be a separate, independent concern dealing only with the pleasures of perception’. This was unacceptable for Ruskin, for whom beauty was not merely a matter of perception, but also a matter of ethical consideration, as its perception impacts the way we understand the world and act on it – as the concept of vital beauty demonstrates. This entanglement Ruskin proposed between aesthetics and morality was thus not only found in his work, but echoed the arguments of the Scottish school of emotionalist moral philosophy, which had been developing since the mid-eighteenth century. In short, emotionalist ethics proposed that affections or emotional responses trigger moral behaviour, instead of rational deliberation. As Adam Smith writes in his *Theory of the Moral Sentiments*:

Though reason is undoubtedly the source of the general rules of morality, and of all the moral judgments we form by means of them; it is altogether absurd and unintelligible to suppose that the first perceptions of right and wrong can be derived from reason, even in those particular cases upon the experience of which the general rules are formed. These first perceptions, as well as all other experiments upon which any general rules are founded, cannot be the object of reason, but of immediate sense and feeling.²²⁷

This position contradicts the Cartesian view in which reason sits at the top of the hierarchy, in charge of the lower faculties such as the senses. Emotionalist moral philosophy, instead, takes an empiricist approach, surprisingly building on Locke, who paved the way for questioning reason’s primacy and instead argued that reason was dependent on ‘sense-data’. Ruskin did not explicitly engage with these thinkers at length, but his aesthetic theories seem to echo similar arguments. Aesthetics and morality were impossible to separate for him, in the sense that what you perceive affects you, and what affects you shapes your judgement. Yet, at times, he would doubt himself.

²²⁷ Adam Smith, *Theory of the Moral Sentiments* (London, 1759), 320.

4.3.3 A Pathetic Fallacy?

While Ruskin developed the concept of vital beauty on the basis of an affective relation he described as sympathy, at times he did question to what extent such a feeling of sympathetic attunement with nonhuman beings was not simply a projection of the human mind onto the world, rather than actual ‘fellow-feeling’. To describe this confusion, he even coined the term of ‘the pathetic fallacy’ in the third volume of *Modern Painters*. According to the conventional definition of the term, the phrase refers to ‘any representation of inanimate natural objects that ascribes to them human capabilities, sensations and emotions’.²²⁸ Indeed, in Ruskin’s usage, the term ‘pathetic’ roughly means ‘relating to feelings’ and it is a fallacy because the feelings in question are attributed to things that we would not expect to be able to have feelings, and thus the result is an emotional falseness. Ruskin’s pathetic fallacy has generally been understood as a critique of the sentimentality that was common in the work of late eighteenth-century poets such as Blake, Wordsworth, Shelley and Keats. One of the examples Ruskin himself gives, are the following lines from the poem *Alton Locke* by Charles Kingsley:

They rowed her in across the rolling foam—
The cruel, crawling foam.

Ruskin observes that ‘the foam is not cruel, neither does it crawl’ but that ‘the state of mind which attributes to it these characters of a living creature is one in which the reason is unhinged by grief’. In other words, the grieving mind of the poem does not ‘see clearly’ and mistakenly projects its own emotional state onto the world. But what this explanation is missing is Ruskin’s underlying epistemological and ontological argument, with which he himself introduces the notion of the pathetic fallacy at first, and which seems to completely undo the fallacy he then goes on to formulate. It is indeed a strange chapter, in which he questions the confusion between mind and world, but introducing this question with introduction that argues the opposite. Ruskin’s argument opens with a discussion of the opposition between the terms ‘objective’ and ‘subjective’, which he deems to be ‘two of the most objectionable words that were ever conceived by the troublesomeness of metaphysicians’.²²⁹ While Ruskin does not mention any names, it is clear from what follows that he is mostly responding to German philosopher Immanuel Kant’s transcendental idealism, and the distinction the latter makes between things-in-themselves and how these things appear to us humans. Ruskin writes:

The word ‘Blue’, say certain philosophers, means the sensation of colour which the human eye receives in looking at the open sky, or at a bell gentian. Now, say they farther, as this sensation can only be felt when the eye is turned to the object, and

²²⁸ M. H. Abrams, *A Glossary of Literary Terms* (Boston: Heinle & Heinle, 1999), 203.

²²⁹ John Ruskin, *The Complete Works of John Ruskin*, ed. E.T. Cook and Alexander Wedderburn, vol. V (London: George Allen, 1908), 201.

as, therefore, no such sensation is produced by the object when nobody looks at it, therefore the thing, when it is not looked at, is not blue.²³⁰

From this, Ruskin says, metaphysicians construct a binary taxonomy in which the term 'objective' describes those qualities of things that are independent on human perception, while 'subjective' describes those that are dependent on human perception. As such, he writes, for those troublesome metaphysicians

... the step is very easy to a farther opinion, that it does not much matter what things are in themselves, but only what they are to us; and that the only real truth of them is their appearance to, or effect upon, us.²³¹

To which he then further concludes:

From which position, with a hearty desire for mystification, and much egotism, selfishness, shallowness, and impertinence, a philosopher may easily go so far as to believe, and say, that everything in the world depends upon his seeing or thinking of it, and that nothing, therefore, exists, but what he sees or thinks of.²³²

For contemporary readers, the description of such an extreme version of Kantian idealism resonates heavily with what in recent years has become known as 'correlationism'. Coined by French philosopher Quentin Meillassoux, this term is used to describe the shift from Kant's epistemological argument to the ontological claim that the human mind actively structures reality. As Meillassoux writes in his *After Finitude* (2006): 'By "correlation" we mean the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from each other.'²³³ Meillassoux argues that most post-Kantian philosophy has operated within such a correlationist view, and more precisely, the strong version of it: that the qualities of the world exist in the mind of the perceiving subject, which thus locates the perceptive agency in the mental domain and attributes an inherent inertia to the material world.

What philosophers like Meillassoux instead argue for is a weaker version of correlationism, by returning to the Kantian thing-in-itself and developing a different argument from it. For example, American philosopher Graham Harman's so-called 'object-oriented ontology' proposes that the world is primarily made up of individual entities, which are not fully reducible to their relations with other entities (as in the work of Latour or Whitehead), nor to the parts they are made up of (objects are the fundamental 'stuff' of the cosmos, yet not in the reductionist sense of some 'smallest particle'). By returning to

²³⁰ Ruskin, V:201.

²³¹ Ruskin, V:202.

²³² Ruskin, V:202.

²³³ Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency* (London: Bloomsbury, 2006), 5.

the Kantian thing-in-itself, Harman is able to argue that objects are ‘withdrawn’ and therefore never completely exhausted by any human (or non-human) modes of access (such as thinking, measuring, calculating, feeling, licking or brushing).²³⁴ Drawing from Harman’s object-oriented ontology, Morton instead defines this as a ‘weird essentialism’, as a gap between the ‘being’ and ‘appearance’ of things: ‘On the view of weird essentialism, things are inconsistent rather than constantly present: to be a thing is to have a gap between what you are and how you appear.’²³⁵ Morton demonstrates this by paraphrasing Kant’s discussion of raindrops:

There are raindrops. You can feel them touching your skin coldly, wet and small. Though these phenomena are not the raindrop, they are inseparable from the raindrop. . . . Raindrops are raindropy: their phenomena are measurably so. But I can’t access the actual raindrops. Their phenomena are *not raindrops*. There is a fundamental, irreducible gap between the raindrop phenomenon and the raindrop thing. Moreover, I can’t locate this haunting gap anywhere in experiential space or even in scientific space.²³⁶

As such, Morton argues that things have a gap in their ontological structure as such: ‘The human-world gap is not the only one. Everything has a gap like that. Correlationism is not false in itself; it is simply the anthropocentrism [that reduces things to passive objects].’²³⁷ By introducing a difference between a thing and its appearance, Morton is able to find the necessary wiggle room, which does not require things ‘to exist is to be constantly present’ in the perception of human beings.²³⁸

A lot of these contemporary philosophical debates seem to echo Ruskin’s further development of his critique of Kantian philosophy. For Ruskin, the question of where perception is produced and where it is finally perceived are two different things. Returning to the example of the colour blue, he writes:

Now, to get rid of all these ambiguities and troublesome words at once, be it observed that the word ‘Blue’ does not mean the sensation caused by a gentian on the human eye; but it means the power of producing that sensation: and this power is always there, in the thing, whether we are to experience it or not, and would remain there though there were not left a man on the face of the earth.²³⁹

To which Ruskin concludes his argument with a remarkably contemporary position:

²³⁴ See, for example, Graham Harman, *The Quadruple Object* (London: Zer0 Books, 2011).

²³⁵ Morton, *Dark Ecology: For a Logic of Future Coexistence*, 70.

²³⁶ Morton, 93.

²³⁷ Morton, 103.

²³⁸ Morton, 48.

²³⁹ Ruskin, *The Complete Works of John Ruskin*, 1908, V:202.

Hence I would say to these philosophers: If, instead of using the sonorous phrase, 'It is objectively so,' you will use the plain old phrase, 'It is so,' and if instead of the sonorous phrase, 'It is subjectively so,' you will say, in plain old English, 'It does so,' . . . you will, on the whole, be more intelligible to your fellow-creatures.²⁴⁰

What Ruskin describes here in 'plain old phrases' – 'it is so' and 'it does so' – might be understood as a definition of agency in the Latourian sense, as a flat ontology in which the conventional distinction between active human subjects and passive non-human objects is replaced with an understanding of agency as merely the ability to have an effect on something else. Or, in the words of literary theorist Branka Arsić: the Ruskinian ontology that merely divides the world into doers and nondoers, 'not only renders porous the divide between persons and things but also, more radically, challenges the distinction between inanimate and animate'.²⁴¹ Things that would count as inert objects according to a post-Kantian Western metaphysics (such as the sky or a gentian), become in Ruskin's world active: 'A gentian does not produce the sensation of blueness if you don't look at it. But it has always the power of doing so.'²⁴² Conversely, as Arsić observes, Ruskin turns the Kantian correlation on its head: the sensation perceived in the human mind becomes the passive outcome of an object's action on the perceiving subject. More fundamentally, however, this Ruskinian ontology defies the anthropocentrism that post-Kantian philosophy has propagated. Whereas the former divides the world into an active human mind on one side and passive inert matter on the other, Ruskin's division between doers and nondoers, or activity and passivity, suggests that 'the same dynamic of affecting and being affected applies equally to strictly human interactions and interactions among nonhuman beings and phenomena'.²⁴³ As such, Ruskin can now be understood as confirming to a weak version of correlationism: the way we get to know the world is indeed structured by an affective relation between thinking and being, but instead of locating the structuring of the world firmly and only in the human mind, Ruskin seems to propose a more even distribution of agency.

4.4 Modern Material Truth

While Ruskin's development of the notion of 'truth to materials' – with all of its implications about vital beauty – was a response to the material culture developing out of industrialization, the notion in general was adopted and transformed by the modernists in the early twentieth century, as Picon also observed. As Adolf Loos wrote in 1898: 'Every

²⁴⁰ Ruskin, V:203.

²⁴¹ Branka Arsić, 'Materialist Vitalism or Pathetic Fallacy: The Case of the House of Usher', *Representations* 140 (2017): 125.

²⁴² Ruskin, *The Complete Works of John Ruskin*, 1908, V:202.

²⁴³ Arsić, 'Materialist Vitalism or Pathetic Fallacy: The Case of the House of Usher', 126.

material has its own formal language, and no material can lay claim to the form of another material for itself.²⁴⁴ A similar argument can be found in the work of sculptor Henry Moore, who wrote in 1934: 'Each material has its own individual qualities . . . Stone, for example, is hard and concentrated and should not be falsified to look like soft flesh . . . It should keep its hard tense stoniness.'²⁴⁵ The sentiment would persist even into the mid-twentieth century, for example in the American architect Louis Kahn's famous phrase: 'When you are designing in brick, you must ask brick what it wants or what it can do.'²⁴⁶

And indeed, while Banham's later work explicitly focused on the question of technology, in his early writings he briefly but explicitly addressed the subject of materiality, too. Despite his insistence on the need to reject the Ruskinian legacy of the nineteenth century, his writings on the New Brutalism in the 1950s show a striking resemblance to Ruskin's thought. This is perhaps Banham at his most Ruskinian, explicitly so on two points: on the one hand, his arguments on the New Brutalism are presented in the tension between aesthetics and morality – as the title of the book he published on the topic states: *The New Brutalism: Ethics or Aesthetics* – while on the other the argument itself relies on an explicit notion of material truth, similar to how Ruskin wrote on Gothic architecture a century earlier.

It is one of Banham's more well-known essays, titled 'The New Brutalism' and published in December 1955 in the *Architectural Review*, that he would develop into a book with the same title by 1966, but with the additional revealing subtitle 'Ethic or Aesthetic'. In the essay, Banham continues his search for an *architecture autre*, an architecture that corresponds to the conditions of the Machine Ages modern society is going through. And he presents the work of British architects Alison and Peter Smithson as a possible answer. The core of his argument is that the 'brutalist' character he recognizes in their work is an ethic, an attitude, a sensibility, even, rather than an aesthetic, as was the case in earlier, also described as 'brutalist' examples, such as the 'béton brut' architecture of Le Corbusier or the 'Brutalist' style of Asplund. The reason why it is an attitude is that the Smithsons were more concerned with the conditions in which they designed and built, than the aesthetic resulting from it. While for someone like le Corbusier, brutalism was perhaps about developing an aesthetic suited for modern materials such as concrete, according to Banham, the Smithsons instead focused on the 'valuation of materials for their inherent

²⁴⁴ Adolf Loos, 'The Principle of Cladding', in *Ornament and Crime: Selected Essays* (London: Penguin, 2019), 60–65: 61

²⁴⁵ Henry Moore, 'Statement for Unit One', in *Unit One: The Modern Movement in English Architecture*, ed. Herbert Read (London, 1934), 29.

²⁴⁶ Oliver Wainwright, 'Louis Kahn: The Brick Whisperer', *The Guardian*, 26 February 2013, accessed 8 November 2023, <https://www.theguardian.com/artanddesign/2013/feb/26/louis-kahn-brick-whisperer-architect>.

qualities “as found””.²⁴⁷ Or, in the words of Peter Smithson himself, reflecting back on their work of that time:

In a society that had nothing, you reached for what there was, previously unthought things . . . We were concerned with the seeing of materials for what they were: the woodness of wood, the sandiness of sand. With this came a distaste of the simulated.²⁴⁸

As such, the New Brutalism is not even necessarily linked with the use of concrete – though in the circumstances of the post-war period that was a logical material choice – since Banham considers their design for a brick house in Soho as one of the prime examples. Alongside the Soho house, Banham also discusses the realized Hunstanton School as an example of the New Brutalism, in terms similar to those Peter Smithson used above (Figure 13):

Hunstanton *appears* to be made of glass, brick, steel and concrete, and is in fact made of glass, brick, steel and concrete. Water and electricity do not come out of unexplained holes in the wall, but are delivered to the point of use by visible pipes and manifest conduits. One can see what Hunstanton is made of, and how it works, and there is not another thing to see except the play of spaces.²⁴⁹

As becomes obvious, Banham’s argument here relies on showing the world for what it is, not denying or hiding it. The difference with Ruskin, however, is that the world had fundamentally changed over the century that had passed. While Ruskin still lived in a world where nature was the main point of reference, even though industry was accelerating, in Banham’s case, the world appeared as thoroughly technological, which is why he described it as a ‘Machine Age’. The aesthetic-ethical argument he is developing in the case of the New Brutalism is to represent the world as found, to use the materials and technologies of the time they were living in and embrace them – to be truly modern.

²⁴⁷ Reyner Banham, ‘The New Brutalism’, *October* 136 (2011): 23.

²⁴⁸ Alison Smithson and Peter Smithson, ‘The “As Found” and the “Found”’, in *As Found: The Discovery of the Ordinary*, ed. Claude Lichtenstein and Thomas Schregener (Baden: Lars Müller Publishers, 2001), 40.

²⁴⁹ Banham, ‘The New Brutalism’, 22.



Figure 13: Hunstanton School, Norfolk, England, Alison and Peter Smithson, completed in 1954 (photograph by de Burgh Galwey).

Yet, as Picon noted, ‘truth to materials’ in modernist architecture was rather paradoxical, indeed torn between the material and the immaterial. The modernist position entailed that one needed to employ specific materials in the way they themselves afforded – ‘Every material possesses its own language of forms’,²⁵⁰ as Loos stated in 1898 – while, at the same time, scientific knowledge into the properties of certain materials and especially the invention of new, industrialized materials also implied a human mastery over the material world. When it comes to a quintessential modern material, the choice for concrete seems obvious. Not only were numerous canonical projects built in concrete – from the Villa Savoye to Hunstanton – but even the most banal of projects realized in the twentieth century up until today make use of concrete. It seems impossible to imagine the construction industry today without it. And while concrete needs a very specific process of production and has its own material properties, at the same time it is also one of the most flexible materials, which can be poured in almost any shape imaginable. As such,

²⁵⁰ Adolf Loos, ‘The Principle of Cladding (1898)’.

concrete seems to have come to embody the modern dream of mastery over an inert, physical world – a dream shattering today.

4.5 Hairy Materials

When tracing the notion of a ‘truth to materials’ throughout modern architecture history, we can observe how it functioned in the nineteenth century in the work of people such as Ruskin, in response to the sterility of modern materials like cast iron and glass. For Ruskin, being true to the material world largely meant recognizing the historical as well as natural dimensions of the material construction of architecture. As such, at the time, it was largely a conservative, even nostalgic argument, since it emphasized what Ruskin perceived as being at risk of being lost: a connection with history, with traditions and conventions, and a connection with the vitality of the natural world, being destroyed by industry. By the twentieth century, however, the notion of a truth to materials was redeveloped in modernist discourses as being true to the conditions of modern society, embracing new materials that had become possible through technological innovation, especially concrete. In the 1950s, for example, in Banham’s arguments on the New Brutalism, being true to materials received an explicit ethical dimension, emphasizing the importance of an as found quality in architecture, expressing the conditions of post-war Europe. By then, it had become a rather progressive argument, one that did not look back at what had been lost, but embraced the present and even looked forward, to what was still to come, as a result of technological innovation.

Today, things seem to be shifting again, reversing the terms once more it seems, but not quite.

Materials that once appeared to be innovative and contemporary products have now lost their appeal and instead are seen as representative of a bygone world. Especially concrete has become problematic in this sense. From an ecological point of view, concrete has become the exemplary material involved in the environmental crisis. It is estimated that concrete is the third largest emitter of greenhouse gasses worldwide, since the production of cement accounts for at least seven percent of global carbon dioxide emissions, three times the amount produced by aviation.²⁵¹ As a result, the material seems to have lost its reputation as a material of the future – it is, instead, jeopardizing it.

²⁵¹ Isabel Malsang, ‘Concrete: The World’s 3rd Largest CO2 Emitter’, accessed 19 July 2023, <https://phys.org/news/2021-10-concrete-world-3rd-largest-co2.html>.



Figure 14: On 17 February 2020, as part of their 'End of Building Sites' campaign, activists of Extinction Rebellion blocked cement factories of the Lafarge-Holcim group and Cemex in Paris, France (photography by Extinction Rebellion).

Recently, architecture criticism has started to focus on the role of materials like concrete in the environmental crisis, and the implications of its cultural signification. For example, in her article “‘Le bâti ment’ (The Built Lies)? A Story of Antagonist Aesthetics in French Eco-Neighbourhoods’, architecture theorist Eliza Culea-Hong traces the increasing public backlash against the presence of concrete in new construction projects in France, even in so-called eco-neighbourhoods.²⁵² While architecture historian H  l  ne Janni  re once observed how, at the turn of the twenty-first century, public engagement with contemporary architecture was at an all-time low, Culea-Hong now argues, from an ecological point of view, that this trend seems to be reversing. Increasingly, activist organisations such as Extinction Rebellion organize protests against large development

²⁵² Eliza Culea-Hong, “‘Le B  ti Ment’ (The Built Lies)? A Story of Antagonist Aesthetics in French Eco-Neighbourhoods’, *OASE Journal for Architecture* 112 (2022): 74–93.

projects as well as against the construction industry itself.²⁵³ The French collective SuperLocal counted over 343 such conflicts in France in 2021 and Culea-Hong herself gives the examples of XR's 'End of Building Sites' campaign, including recent protests at the site of the future Vauban eco-neighbourhood in the city of Besançon as well as several blockades at cement factories around Paris, such as at Lafarge Mirabeau or Cemex (Figure 14). But it is not only the mere statistic that provokes such responses – although knowledge of such statistics does indeed drive the resistance – by now, already the mere aesthetic presence of concrete in a newly constructed building is enough to provoke negative reactions. For example, in 2021 the Swiss newspaper *24 heures* published an article by journalists Camille Kraft and Erwan Le Bec titled 'À quand la fin de la monoculture du béton?' [When will the monoculture of concrete end?]. In it, the journalists question what they perceive as the dominant 'style' of Swiss architecture, which they describe as a concrete monoculture. They especially criticize two recent projects in Lausanne: the Cantonal Museum of Fine Arts built with 740,000 German clinker bricks by Spanish architects Barozzi Veiga and the adjacent double museum MUDAC and Photo Elysée by renowned Portuguese architects Aires Mateus, who used 15,000 m³ of concrete and was celebrated as a 'jewel' of 'white concrete, as white as concrete can be, both inside and out'.²⁵⁴ This statement serves as an illustration of a certain type of cognitive dissonance between contemporary architecture culture, which still seems to celebrate materials such as concrete in a seemingly outdated modernist fashion, and what is happening in the world at large, namely an environmental crisis exacerbated by the fetishizing use of this material (Figures 15 and 16).

²⁵³ Hélène Jannière, *Critique et Architecture: Un État Des Lieux Contemporain* (Paris: Éditions de la Vilette, 2018).

²⁵⁴ Culea-Hong, "Le Bâti Ment" (The Built Lies)? A Story of Antagonist Aesthetics in French Eco-Neighbourhoods', 85.



Figure 15: Musée cantonal des Beaux-Arts Lausanne, Lausanne, Switzerland, Barozzi Veiga, completed in 2020 (photography by Matthieu Gafsou).

While, in modernist discourses, concrete was long celebrated as the material of ahistorical abstraction *par excellence*, in hindsight, it was also the material of capitalism *par excellence*, as German philosopher Anselm Jappe argued in his recent book *Béton, arme de construction massive du capitalisme* [Concrete: capitalism's weapon of mass construction].²⁵⁵ For example, Jappe writes how

. . . capitalist value has abolished all local particularities, all traditions, and has imposed itself as the only law into the furthest corners of the planet . . . in the same way, concrete has stretched its monotone dominion to the entire globe homogenizing everything by its presence.²⁵⁶

Indeed, while the modernist dream of universality through a homogenizing abstraction seems to have fit well with the capitalist project in this way, from the current ecological perspective such abstraction seems incredibly outdated, lethal even.

²⁵⁵ Anselm Jappe, *Béton Arme de Construction Massive Du Capitalisme* (Paris: L'échapée, 2020).

²⁵⁶ Jappe, 186.



Figure 16: Mudac and Musée de l'Elysée, Lausanne, Switzerland, Aires Mateus, completed in 2022 (photography by Matthieu Gafsou and Itten+Brechbühl SA).

In recent years, to address the environmental impact of the construction industry, architects and engineers have sought to develop new kinds of materials, both low-tech and high-tech. Wood has again become a fashionable material, stripped of its nostalgic associations with local craft traditions, but employed to even construct skyscrapers. More experimentally, architects like Neri Oxman have experimented with silkworms to construct pavilions and more and more research is going into fungal biomaterials, both as crossovers between finding new kinds of materials and developing human-nonhuman collaborations. Other examples are experiments with hemp, adobe, rammed earth, recycled plastic and so on, in which both traditional and innovative technologies are (re)developed. In contrast to the smoothness of concrete and steel, such ecological materials are often described as 'hairy'. The term literally refers to the fibrous textures such materials often have, but figuratively it also captures the sometimes messy and risky situations that ecological questions provoke. As such, it is also a term Latour proposes for alternative, so-called nonmodern ways of describing objects. He writes: 'Modernist objects

were bald aesthetically, morally, epistemologically – but the ones produced by the nonmoderns have always been hairy, network, rhizomelike.²⁵⁷

The use of such new materials, framed in light of the environmental crisis, therefore raises the question of how we should understand the notion of being true to materials. Materials like concrete are not contemporary anymore, but specifically modern, in the now conservative sense. The world is being smothered by concrete, and already the aesthetic appearance of the material evokes resistance in an increasingly growing group of citizens. What has come in its place is again a reference to nature, but not the Picturesque nature Ruskin often relies on, but the carefully engineered and innovative nature of human-grown fungi, chemically treated wood, composite materials like hempcrete. Our contemporary truth to materials refers now to an artificial nature: hybrid materials that are not really natural, nor fully synthetic. They are hairy. The simple opposition between nature and technology, into which materials used to be divided – wood is natural, steel is technological – does not suffice anymore. Both are hopelessly outdated: natural wood is nostalgic, but concrete and steel are nostalgic too, reminiscent of a bygone modern age. In an ecological sensibility, the dominant regime of materiality increasingly appears to be hybrid: human production is intertwined with natural resources, allowing both space for agency, for collaboration, as Picon observed.

²⁵⁷ Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge MA: Harvard University Press, 1999), 287.

Chapter 5 Technology

Let's start with an etymological reminder.

As Welsh cultural critic Raymond Williams notes in his *Keywords*, the word 'technology' came into use in the English language in the seventeenth century, derived from the Greek *tekhnologia*, to describe the systematic (*logos*) study of an art or craft (*tekhne*). By the second half of the eighteenth century, against the background of industrialization, the word became increasingly defined as the 'description of the arts, especially the Mechanical'.²⁵⁸ As the processes of industrialization developed, by the mid-nineteenth century technology referred specifically to the so-called practical arts, as a result of the specialization of scientific research, which introduced the modern distinction between science as the pursuit of knowledge and technology as the practical application of such knowledge in a specific field. This definition persists to this day, although there is a recurring conflation of the terms technological and technical in common language, which have distinct meanings in the precise sense, but are often used interchangeably in the general sense. On the one hand, in the etymological sense, it is possible to make a distinction between the technical as concrete matters of practical construction and the technological as its more general and systematic treatment. On the other hand, from a historical perspective, the technical came first (tools existed long before any systematic knowledge about, for example, the laws of physics that make them work), and technology is considered to be a more specific form of the technical, closely related to the systematization underlying the historical processes of scientific research and industrial production. This confusion is indicative of the current situation in which technology is often understood: while historically the term technics seems to cover a broader set of practices related to art and to crafts, against which technology can be seen as a specific type of making, in the contemporary situation technology has largely subsumed these varied practices within a single, monocultural and systematic approach to making things – an approach closely associated with efficiency, as we will see below.

One of the key texts in twentieth century philosophy that more fundamentally interrogates the relationship between technology and techne is the German philosopher Martin Heidegger's treatment of the subject in his famous essay *The Question Concerning Technology* (1954). For Heidegger, technology does not only refer to an intensified and more systematic development of techne, but marks a fundamental breaking point. In the essay, Heidegger argues that beyond the instrumentality of technology, as the means with which we achieve particular ends in the broadest sense, from hammers to windmills,

²⁵⁸ Williams, *Keywords: A Vocabulary of Culture and Society*, 249.

technology is also a way of knowing, which Heidegger describes as a 'revealing' or *Entbergen* of the truth: 'Instrumentality is considered to be the fundamental characteristic of technology. If we inquire into what technology, represented as means, actually is, then we shall arrive at revealing. . . . It is the realm of revealing, i.e., of truth.'²⁵⁹

But there is a difference between older forms of technology (what we might call *techne*) and newer ones (technology in the modern sense), and more precisely in the ways *how* this uncovering of the truth takes place. According to him, older technologies operated according to a logic of *Hervorbringen*, meaning both 'to make' and 'to bring to the fore'. Yet, while newer technologies are still about making something, they are not about bringing the truth to the fore anymore, but about challenging it, or, in German, *Herausfordern*, and more precisely challenging both nature and humankind. While older technologies had to follow the principles of nature, such as a windmill adjusting itself to the uncontrollable forces of the wind, newer technologies follow their own principles, such as a steam engine running on a human-generated supply of coal. As philosopher of technology Peter-Paul Verbeek writes: 'Heidegger understands technology as a particular manner of approaching reality, a dominated and controlling one in which reality can only appear as raw material to be manipulated.'²⁶⁰ And perhaps more importantly, newer technologies challenge humankind to challenge nature: the structure of technology in the modern sense demands of us that we constantly realize and exploit an as yet unrealized potential of nature, by devising new technologies that force nature in different ways to follow the principles of technology rather than vice versa. From this perspective, following Heidegger, the modern period can be seen to rely on the creation of a dichotomy between the classical *techne* operating within the limits nature and technology dominating over nature. As such, the technological is often seen as opposed to the organic: technology as a way of knowing assumes a different kind of nature: not one in which humankind is embedded, but one that it can exploit, shape and mould to its own needs.

In the face of the environmental crisis today, such an interpretation of technology, as a dominating and controlling force over nature, no longer seems credible. On the contrary, what the crisis tells us is how the world cannot be fully controlled, a situation that is becoming clearer every day. At the same time, as the environment destabilizes further, we might need technology more than before. This paradox in which technology finds itself today requires us to rethink the role of technology, to rethink what kind of technology we need. But to do so, we need to go back in time and figure out what seems to have gone wrong.

²⁵⁹ Martin Heidegger, *The Question Concerning Technology, and Other Essays* (New York: Garland Pub, 1977 [1954]), 12.

²⁶⁰ Peter-Paul Verbeek, *What Things Do: Philosophical Reflections on Technology, Agency, and Design* (Pennsylvania: Pennsylvania State University Press, 2005), 10.

5.1 Between Thinking and Making

One of the clues about what happened can be found in the writings of Ruskin, who fiercely opposed the processes of industrialization and the coming of machines. In perhaps his most famous text, the chapter ‘The Nature of Gothic’ from the second volume of his *The Stones of Venice*, which was reprinted by William Morris as a separate pamphlet, Ruskin describes how industrialization, and thus the use of technology in the process of construction, disrupted processes of making and divided the workers involved.

Ruskin presents the essay as an attempt, not to define a specific version of the Gothic, such as the Venetian one, but to define Gothic as such, the ‘universal Gothic’.²⁶¹ To do so, he lists six characteristics that produce the ‘gothicness’ of a building, which are both part of the material form of the architecture and of the mental power of the builders that constructed this or that Gothic building. It is important to note this conflation, as Ruskin assumed that the builders identified themselves with the building they were making, and the characteristics he defined are therefore not just architectural, but social and cultural as well. In order of importance, Ruskin proposes and discusses the following characteristics: savageness, changefulness, naturalism, grotesqueness, rigidity and redundance.

The list might seem to describe formal qualities, but in the discussion of each it becomes clear that what matters most are the processes of making that result in such qualities. In discussing the first of these, savageness, Ruskin already takes aim at the streamlined processes of industrial production, which dehumanize the workers in their attempt to achieve an aesthetics of perfection. To do so, Ruskin argues, industrial processes rely on a disconnection between thinking and making:

... we want one man to be always thinking, and another to be always working, and we call one a gentleman, and the other an operative; whereas the workman ought often to be thinking, and the thinker often to be working, and both should be gentlemen, in the best sense.²⁶²

Separating making from thinking meant for Ruskin that artisans were turned into operatives, who lost their humanity as they became mere extensions of the machines they operated. While he knew nothing of Marx, whose first major economic works would only be published ten years after *The Stones of Venice*, they were both addressing the same social and economic changes of the time, as well as the alienation that they produced:

It is verily this degradation of the operative into a machine, which more than any other evil of the times, is leading the mass of nations everywhere into vain,

²⁶¹ Ruskin, *The Complete Works of John Ruskin*, 1908, X:181.

²⁶² Ruskin, X:201.

incoherent, destructive struggling for a freedom which they cannot explain the nature to themselves.²⁶³

Yet, unlike Marx, for Ruskin such alienation was not of an economic nature, but primarily an aesthetic one. The transformation of man into machine was the result of a so-called 'perfection' aimed at by industrial production, in which artisans were not allowed to exercise their own freedom of thought. Instead, the artisan – now operative – had to mechanically execute a fixed set of instructions, preconceived on the drawing board of the 'thinking gentleman'. The division of labour, for Ruskin, thus meant that 'it is not, truly speaking, the labour that is divided; but the men'.²⁶⁴ While those who conceive of cultural products are distanced from its actual production, those who make them are required to stop thinking:

You can teach a man to draw a straight line, and to cut one; to strike a curved line, and to carve it; and to copy and carve any number of given lines or forms, with admirable speed and perfect precision; and you find his work perfect of its kind: but if you ask him to think about any of those forms, to consider if he cannot find any better in his own head, he stops; his execution becomes hesitating; he thinks, and ten to one he thinks wrong; ten to one he makes a mistake in the first touch he gives to his work as a thinking being. But you have made a man of him for all that. He was only a machine before, an animated tool.²⁶⁵

Beyond his arguments against the production processes of industry and its aesthetics of perfection lies a more fundamental argument on material culture as a whole. For Ruskin, the measure of beauty was of course nature, which is anything but perfect, but instead always incomplete – imperfect. Even stronger, Ruskin argues, 'imperfection is in some sort essential to all that we know of life'.²⁶⁶

It is the sign of life in a mortal body, that is to say, of a state of progress and change. Nothing that lives is, or can be, rigidly perfect; part of it is decaying, part nascent. The foxglove blossom, – a third part bud, a third part past, a third part in full bloom, – is a type of the life of this world. And in all things that live there are certain irregularities and deficiencies which are not only signs of life, but sources of beauty. No human face is exactly the same in its lines on each side, no leaf perfect in its lobes, no branch in its symmetry. All admit irregularity as they imply change; and to banish imperfection is to destroy expression, to check exertion, to paralyze vitality.²⁶⁷

²⁶³ Ruskin, X:194.

²⁶⁴ Ruskin, X:196.

²⁶⁵ Ruskin, X:191–92.

²⁶⁶ Ruskin, X:203.

²⁶⁷ Ruskin, X:203–4.

As such, Ruskin's critique of industry as well as his defence of the Gothic is explicitly an aesthetic argument, and he demonstrates how such an aesthetics of imperfection allows for both humanity in its making as well as for the expression of the material life of the world we inhabit as human beings. By contrast, what industrialization achieves, according to Ruskin, is to deny both, by its insistence on an aesthetics of perfection, thus not only estranging men from their labour and from each other, but also estranging society from the material processes on which an industrialized society was being built.

To make this argument, Ruskin of course relies on an idealization of the Gothic builders, which he portrays as intimately and enthusiastically connected to the construction of Gothic buildings all over Europe, conveniently forgetting the hard labour and poor circumstances in which many of them lived. Nonetheless, the reception of his text struck a point with many of his contemporaries, not in the least those who were involved in manual labour, as the wide circulation in mostly socialist circles demonstrates. Aside from such an idealization, Ruskin also invoked the organic, as opposed to the mechanical figure of the machine. The organic has associations with integrated wholes, in which thinking and making, but also humankind and the world around them, were still one – something that was ruptured by industry, and which would indeed mark the further development of modern societies.

5.2 The Two Cultures

Ruskin's critique of a division of men, and of the world as a whole, would echo into the next century, where it would be formulated in different terms. As a quick reminder, this divide can also be formulated as a split between *techne* and modernity. While *techne* can be understood as being embedded in nature, it is also more closely associated with cultural production, such as artistic activity, indeed embodied in the figure of the craftsman manipulating and collaborating with the material world. Technology, on the other hand, is closely associated with science and industry, embodied in the figure of the machine, which extracts, consumes and transforms the material world, and which seems to have been at odds with cultural production from the beginning. As such, the very notion of technology has been haunted by a spectre of violence since the rise of industrialization in the late eighteenth century. Remember the Luddites, a group of English textile workers in the nineteenth century that destroyed machinery in factories as a campaign of resistance against the increased economic exploitation of their labour as well as the social disruption in general as a result of the use of machinery. People like Ruskin argued at length against the effects of industry, economic and social as well as political and cultural, and instead advocated for a more human-centred approach based on pre-modern, medieval ways of doing. But despite this violent resistance, workers and artisans had to give way to the machine, and a deep divide between industry and the arts, between technology and culture, developed. In the field of architecture, this divide became primarily apparent in the split

between the architectural establishment and the newly developing profession of engineers in the nineteenth century, the latter of which was preoccupied with the development of constructions that no longer had much to do with conventional architectural values, as the work of Paxton or French engineer and industrialist Gustave Eiffel demonstrated. This divide persisted into the twentieth century, which British scientist and novelist Charles Percy Snow described as ‘the two cultures’.

In 1956, Snow first published his influential essay with the title ‘The Two Cultures’ in *The New Statesman*, on which he then expanded in his 1959 Rede Lecture at the University of Cambridge, under the same title. In his analysis, Snow observed how the intellectual life in industrialized societies at the time had been split in two, represented by scientists on the one hand and what he called ‘literary intellectuals’ on the other. Snow especially emphasized the apparent disdain these literary intellectuals had for science, as the following, often quoted statement describes:

A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is the scientific equivalent of: *Have you read a work of Shakespeare’s?* . . . So the great edifice of modern physics goes up, and the majority of the cleverest people in the western world have about as much insight into it as their neolithic ancestors would have had.²⁶⁸

Snow seemed to have touched on a sensitive point, as his analysis of the two cultures was picked up widely, often reformulated in different terms to expand on the problem. As contemporary British philosopher Simon Critchley, for example, writes:

[Snow] diagnosed the loss of a common culture and the emergence of two distinct cultures: those represented by scientists on the one hand and those Snow termed ‘literary intellectuals’ on the other. If the former are in favour of social reform and progress through science, technology and industry, then intellectuals are what Snow terms ‘natural Luddites’ in their understanding of and sympathy for advanced industrial society. In Mill’s terms, the division is between Benthamites and Coleridgeans.²⁶⁹

It is the last sentence that is revealing, as Critchley suggests how the tension between these two cultures is a resurfacing of certain debates of the mid-nineteenth century, embodied in the figures of philosopher Jeremy Bentham and poet Samuel Taylor Coleridge. In short,

²⁶⁸ C. P. Snow, ‘The Two Cultures’, *Leonardo* 23, 2/3 (1990): 172.

²⁶⁹ Simon Critchley, *Continental Philosophy: A Very Short Introduction* (Oxford: Oxford University Press, 2001), 49.

the former, Bentham, in developing his philosophy of utilitarianism, was seen at the time as a radically progressive figure, questioning inherited assumptions and traditions and criticizing them from the viewpoint of utility. On the other hand, Coleridge embodied conservative values, accepting and working within such inherited traditions. As John Stuart Mill observed about these two contrasting figures:

Bentham judged a proposition true or false as it accorded or not with the result of his own inquiries; and did not search very curiously into what might be meant by the proposition, when it obviously did not mean what he thought true. With Coleridge, on the contrary, the very fact that any doctrine had been believed by thoughtful men, and received by whole nations or generations of mankind was part of the problem to be solved, was one of the phenomena to be accounted for.²⁷⁰

Or, put more simply, while Bentham asked if something was true or false, Coleridge instead asked what the meaning or significance of something was. What is important here, however, is how the figure of Bentham indeed embodied the logic of scientific and technological progress: not only was it a matter of ‘revealing’ truth, but, as his philosophy of utilitarianism demonstrated, it was also a matter of utility, if things were useful, and as such any superfluity obstruction had to be rendered more efficient. This was a radically progressive position at the time, in tune with the speed of technological progress, which quickly outpaced the arts, stuck in their conventions and traditions. Not surprisingly, then, by the twentieth century, at the time Snow observed the appearance of two cultures in society, attempts were made to bridge the gap.

It is indeed a conventional historiographical approach to interpret the history of modern architecture as the attempt to bridge the gap between architecture and technology. From the influential Deutscher Werkbund at the beginning of the century, which had the explicit mission to integrate traditional crafts with industrial mass production techniques, to the opening of the Centre Pompidou in 1977, perhaps the quintessential monument to High-Tech architecture as Banham argued, the architectural avant-garde seemed committed to catch up with the fast pace of technology and take it seriously, on its own terms and in cultural ones. It was already by 1980, a mere three years after the Pompidou opened, that the architectural forerunners seemed to have given up the race. That year, the very first International Exhibition of Architecture opened at the Venice Biennale, curated by architect and historian Paolo Portoghesi, titled ‘The Presence of the Past’. As the title indicates, the biennale was symptomatic of a wider reorientation in the architecture culture of the West: while there had been a significant interest in history since at least the 1960s, with, for example, Aldo Rossi’s publication of *The Architecture of the City* in 1966 as major point of reference, it was not until the 1980s that such a preoccupation with the

²⁷⁰ John Stuart Mill, ‘Coleridge’, in *The Collected Works of John Stuart Mill: Essays on Ethics, Religion and Society*, ed. John M. Robson (Toronto: University of Toronto Press, 1969 [1840]), X:119.

past went mainstream in the form of postmodern historicism. At that point, major architects seemed to largely turn away from explicit societal problems and to lay claim to an autonomy for the architectural project, as the work of, for example, Peter Eisenman or Bernard Tschumi demonstrated. The general sentiment in the search for an autonomous architecture was summed up by Oswald Mathias Ungers, who, reflecting on his own work from the period, stated in an interview in 2009: 'I think social problems cannot be resolved by architecture . . . you can only solve architectural problems.'²⁷¹

While a trace of the modernist project persisted in the rather corporate projects of people like Norman Foster, Renzo Piano and Richard Rogers, the architecture culture of the late twentieth century seemed to be dominated by postmodern formalism above all else. Today, however, the question of how architecture and technology might relate is resurfacing again with full force in the face of the environmental crisis. Driven by industry-wide standards for sustainability, there seems to be a kind of watered down High-Tech revival, usually backed by corporate interests and focused on technological solutions for questions about energy and material use, while, on the other hand, there is again a Luddite-like aversion to technology, found in a return to traditional building methods, favouring local materials and the reappraisal of some kind of craftsmanship, often emphasizing durability over sustainability and longevity over innovation. Yet, while the former is often appropriated by business-as-usual, the latter so far seems to rarely transcend the smaller scale, falling short in providing structural solutions. But what is it that puts technology at odds with culture, with society and perhaps the natural world in general?

5.3 Purification

One of the answers to the above question was formulated – and defended – by one of the early modernists: German architect Walter Gropius. In his essay *The New Architecture and the Bauhaus* published in 1935, Gropius describes how the 'new architecture' is an 'organic' outcome of 'the technical civilization of the age we live in'. Its two main characteristics, Gropius argues, are standardization and rationalization. On the one hand, standardization relies on simplification and elimination:

A standard may be defined as that simplified practical exemplar of anything in general use which embodies a fusion of the best of its anterior forms – a fusion preceded by the elimination of the personal content of their designers and all otherwise ungeneric or non-essential features.²⁷²

²⁷¹ Rem Koolhaas and Hans Ulrich Obrist, 'An Interview with O.M. Ungers', *Log* 16 (2009): 50–95.

²⁷² Walter Gropius, *The New Architecture and the Bauhaus* (Cambridge: The MIT Press, 1965 [1935]), 34.

On the other, rationalization is the result of industrially organized production and construction processes, which reduces complexity into such standardized parts:

And just as fabricated materials have been evolved which are superior to natural ones in accuracy and uniformity, so modern practice in house construction is increasingly approximating to the successive stages of a manufacturing process. We are approaching a state of technical proficiency when it will become possible to rationalize buildings and mass-produce them in factories by resolving their structure into component parts.²⁷³

All of this has become possible through technological progress, but they are not its goals, Gropius states:

For instance, rationalization, which many people imagine to be its cardinal principle, is really only its purifying agency. The liberation of architecture from a welter of ornament, the emphasis on its structural functions, and the concentration on concise and economical solutions, represent the purely material side of that formalizing process on which the *practical* value of the New Architecture depends.²⁷⁴

Instead, the ‘new architecture’, made possible through technology and relying on processes of standardization and rationalization, nonetheless has a spiritual goal: ‘The other, aesthetic satisfaction of the human soul, is just as important as the material.’²⁷⁵

There is a kind of millenarian rhetoric at work here, which is characteristic of modernist discourse, and which can still be found today in debates on technology in general. As Gropius also writes, the Bauhaus was originally founded with ‘the idea of the fundamental unity underlying all branches of design’, and more precisely, of unifying craftsmanship with industry, to heal the rupture introduced by technology. For Gropius, this does not mean getting rid of technology, but rather the opposite: more technology. What he ultimately argues here for, is the idea that through technology we might ‘purify’ architecture, get rid of everything that is superfluous and arrive what is essentially an immaterial world of ideas:

What is far more important than this structural economy and its functional emphasis is the intellectual achievement which has made possible a new spatial vision. For whereas building is merely a matter of methods and materials, architecture implies the mastery of space.²⁷⁶

What is important here is the idea that the modern idea of technology, and its associations with efficiency and utility, are guided by a logic of purification. While Gropius was

²⁷³ Gropius, 39.

²⁷⁴ Gropius, 23-24.

²⁷⁵ Gropius, 24.

²⁷⁶ Gropius, 24.

defending this in the early twentieth century, it is exactly this terminology that Latour also uses to critique such a modern view. In his classic *We Have Never Been Modern*, Latour indeed describes the modern worldview as a denial of hybrids: as the scientific domination over material reality – nature – out of which the emancipation of humanity arises – culture – and which needs a continuous maintenance – purification – of a strict division between both domains.

5.4 The Mechanical Sensibility

Instead of affirming such a binary opposition, modern architecture made attempts to reconcile the divide, something Banham also argued for and tried to further theorize in his work. Around the time Snow gave his lecture on the two cultures, Banham published his first book, in 1960, titled *Theory and Design in the First Machine Age*, in which he attempted to trace the relation between architecture and technology in modern architecture. As the title indicates, one of the major ideas in the book was the notion of a succession of ‘machine ages’, the development of historical periods in which ‘literary intellectuals’ could no longer ignore the effects of technology on culture. As he writes: ‘Men whose means of moving ideas from place to place had been revolutionised at their writing desks by the typewriter and the telephone, could no longer treat the world of technology with hostility or indifference.’²⁷⁷ For Banham, the ‘Machine Ages’ he introduces were a subdivision of the industrial society in general, suggesting that ‘we have lived in an Industrial Age for nearly a century and a half now – the “Industrial Age” is no less than the industrial revolution’.²⁷⁸ The varying character of the relationship between technology and society over time constitutes these different Machine Ages, and according to his analysis, at the time of his writing, society had already moved into a second phase:

We have already entered the Second Machine Age, the age of domestic electronics and synthetic chemistry, and can look back on the First, the age of power from the mains and the reduction of machines to human scale, as a period of the past.²⁷⁹

Or, as architecture theorist Nigel Whiteley summarizes in his monograph on Banham: ‘If the First Machine Age had been about technology that was transforming life at the basic level of reducing drudgery and making tasks less labor-some, technology in the Second Machine Age was often about the dreams that money could buy.’²⁸⁰ Indeed, while Banham often styled himself as a radical contrarian, his belief in technological progress included a naïve enthusiasm for the – largely American – capitalist consumer society of the mid-

²⁷⁷ Banham, *Theory and Design in the First Machine Age*, 11-12.

²⁷⁸ Banham, 10.

²⁷⁹ Banham, 10.

²⁸⁰ Whiteley, *Reyner Banham*, 391.

twentieth century. Because of this enthusiasm, Whitely argues, when the socioeconomic model on which much of the technological progress of the twentieth century had been built was questioned after the events of 1968, Banham seemed unable to understand why. At that point, Whiteley suggests, a Third Machine Age was being born, in which the role of technology as imagery changed: 'Although technology remained the basis of Western society, it was no longer necessary to respect its imagery (as the First Machine Age had done), let alone celebrate it (as Second Machine Age designers from Detroit to Archigram had done).'²⁸¹

While there may be valid criticisms of Banham's all too enthusiastic embrace of the various Machine Ages, and it might be a worthwhile historiographical exercise to more clearly define these, the main point here is that Banham was trying to articulate the changing relationship between society and technology and to urge the architectural establishment to catch up with the speed of technology, inventing a vocabulary to describe the burgeoning technological culture. To do so, Banham developed the notion of a 'mechanical sensibility', which might seem like an oxymoron, contrasting the rationality of a mechanized universe with the sensual experience of it, but that was exactly what Banham was interested in. In his *Theory and Design*, Banham makes a crucial argument to develop this notion more clearly in relation to architecture history, since he thought architecture at the time was failing to catch up with the speed of technology, something it desperately needed to do:

The architect who proposes to run with technology knows now that he will be in fast company, and that, in order to keep up, he may have to emulate the Futurists and discard his whole cultural load, including the professional garments by which he is recognized as an architect. If, on the other hand, he decides not to do this, he may find that a technological culture has decided to go on without him.²⁸²

Indeed, an important part of his argument was focused on the rehabilitation of the Italian Futurists, who he presents as the pioneers of the Modern Movement, but who had been largely ignored by people like Pevsner. According to Banham, however, the Futurists were perhaps the only ones thus far who had attempted to take technology seriously, and had recognized its impact on the cultural production of the twentieth century. For Banham, Futurism was a sensibility, the origins of what he would call a mechanical sensibility, or in others words, an attitude of mind:

The qualities which made Futurism a turning-point in the development of Modern theories of design were primarily ideological, and concerned with attitudes of mind, rather than formal or technical methods – though these attitudes of mind were often

²⁸¹ Whiteley, 392.

²⁸² Whiteley, 329-330.

influential as vehicles in the transmission of formal and technical methods which were not, in the first place, of Futurist invention.²⁸³

Banham was heavily influenced by his experiences during the Second World War, which, though made possible through technological progress and rational planning, was anything but rational. Instead, it was an explosion of irrational violence. As Williams observes in *Reyner Banham Revisited*, during the war, Banham took an apprenticeship with the Bristol Aeroplane Company, where he trained and worked as an engineer.²⁸⁴ There, he was confronted with shot-through planes returning from the continent, often with wounded or dead soldiers inside of them. The experience must have made an impression on Banham, revealing the violent forces embedded in technology as such. As Virilio once put it:

When you invent the ship, you also invent the shipwreck; when you invent the plane you also invent the plane crash; and when you invent electricity, you invent electrocution . . . Every technology carries its own negativity, which is invented at the same time as technical progress.²⁸⁵

What Banham perhaps experienced during those years as an aeroplane engineer was not so much the presumed rationality of technology, but the visceral experience of its violence, its speed and power, an experience that he would eventually write about, and which would draw him towards the work of the Italian Futurists. However, in an interview with Scottish architect, historian and critic John Maule McKean, Banham recounted how it was not just reading the writings of the Futurists that confronted him with what he would eventually call 'mechanical sensibility', but an experience one night at a suburban London railway station.

Standing on the platform, one night a week, and at a certain point . . . the Flying Scot or something used to hurtle through underneath, and the whole building would shake and steam would come up through the platform. And at the same time an electric would come through at the high level, bursting through the steam . . . And suddenly I got the message . . . about the actual kind of experience that Futurism was all about, and it suddenly began to hang together from then on.²⁸⁶

In the late 1950s, Banham published a number of articles and gave a number of lectures on the Futurists, primarily on the role of Antonio Sant'Elia within the movement, in an attempt to rehabilitate him as one of the founders of modernism. Indeed, while Futurism dates back to 1909, writers such as Pevsner, Giedion and Mumford largely ignored the role Futurists had played in the development of modernism, and Banham was there to set the

²⁸³ Whiteley, 99.

²⁸⁴ Williams, *Reyner Banham Revisited*, 14.

²⁸⁵ Paul Virilio, *Politics of the Very Worst* (New York: Semiotext(e), 1999), 89.

²⁸⁶ Quoted in Whiteley, *Reyner Banham*, 10.

record straight. His first article on the work of Antonio Sant'Elia was published in 1955 and discusses the 'Manifesto of Futurist Architecture', connecting it with Sant'Elia's drawings (Figure 17). As Banham observes, Sant'Elia

. . . goes on to create forms which are exciting in virtue of their mechanistic interpretation. In fact, putting the total corpus of drawings against the text of his manifesto, we see that he was among the very first to combine a complete acceptance of the machine-world with an ability to realise and symbolise that acceptance in terms of powerful and simple geometrical form. The acceptance is more complete than Le Corbusier's, the forms more powerful than those of Gropius.²⁸⁷

As such, Banham argues that Sant'Elia was 'the first to conceive planning of cities as fully three-dimensional structures, and his position in the family tree of the Modern Movement is thus assured'.²⁸⁸

Here, a strange blend of technology and Romanticism appears. Technology does not appear as a neutral instrument, but as something to be lived. It echoes the writings of the Futurists in the sense that, as Whiteley observes, they 'believed they were witnessing the dawning of a new age of power, dynamism, and excitement', in which 'technology was central and should not be observed with the detached air of the academic, but experienced for all its compulsive sensations'.²⁸⁹ In other words, technology was not there to be understood rationally, but to be lived irrationally, and Banham wanted to understand what this meant.

²⁸⁷ Reyner Banham, 'Sant'Elia', in *Architectural Review* (May 1955), 300.

²⁸⁸ Banham, 300.

²⁸⁹ Whiteley, 47.

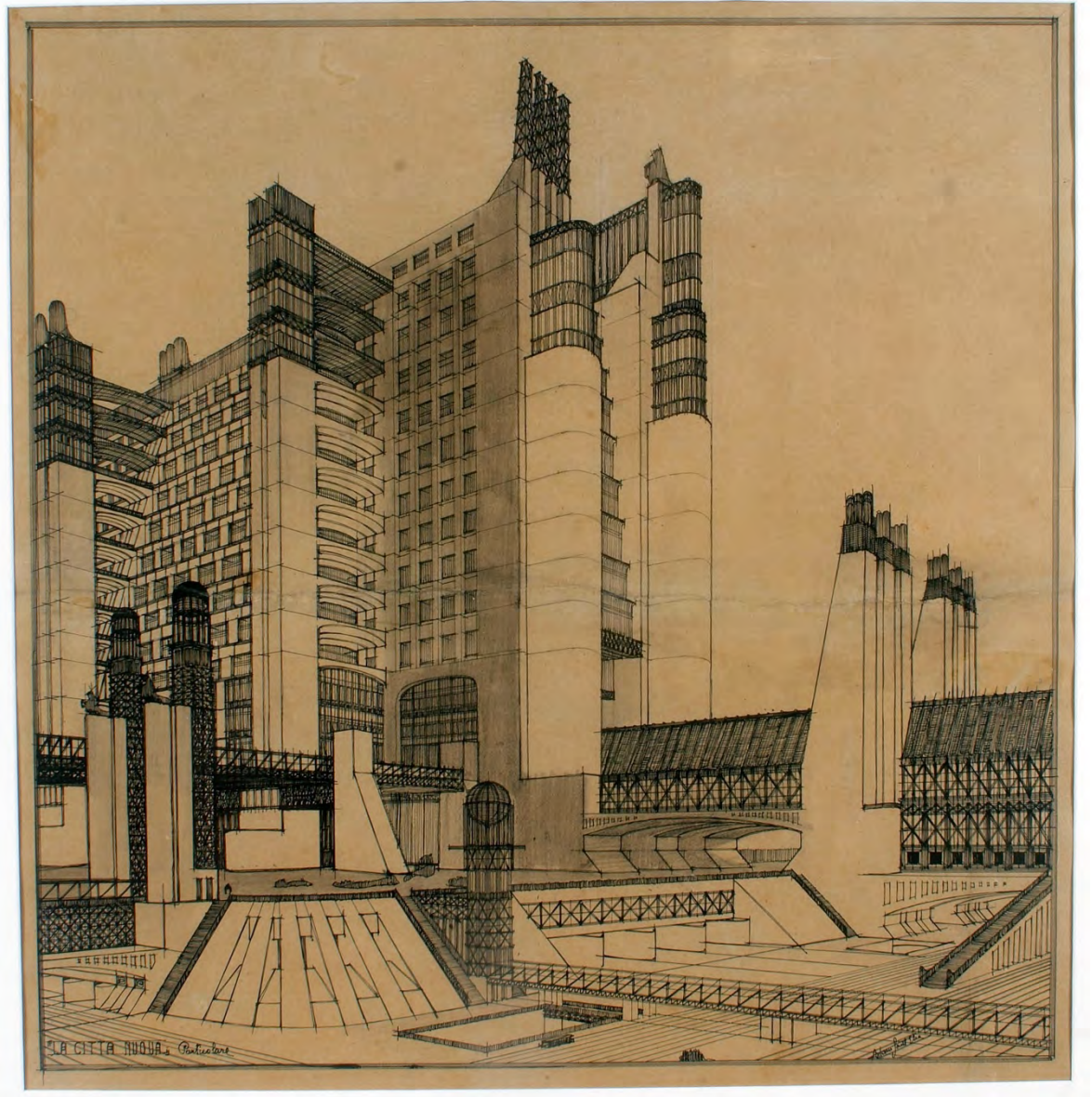


Figure 17: La Città Nuova, Antonio Sant'Elia, 1914.

5.5 Architecture as Technology

Over time, Banham would end up reproducing and reinforcing the logic of purification according to which technology operates, as formulated by Gropius. In his later work he would start to focus on the relationship between architectural form and mechanical services, which resulted in an architecture as ‘fit environments for human activities’.²⁹⁰ This fascination would result in the radical book *The Architecture of the Well-tempered Environment* in 1969, in which he traces the historical development of certain key mechanical services, such as air-conditioning, heating and electric light, and assesses them in terms of architectural value. Much has been written on Banham’s arguments on architecture as a ‘well-tempered environment’, but what is important here is the tension he perceives between the mechanical innovations and the conservatism of architectural design, which, in the context of Europe, still adhered to some idea of monumentality and massing. By contrast, Banham would argue in favour of a reduction of architectural form, as a ‘purification’ of it down to the strictly necessary, echoing earlier modernist ideas about rationalization. In 1965, a few years before the publication of *The Architecture of the Well-tempered Environment*, Banham already developed some of its core ideas in his well-known essay ‘A Home Is Not a House’, illustrated with drawings by François Dallegret (Figure 18).

In the essay, Banham takes aim at the monumental architecture of European history, which still served as a frame of reference for much of the architecture culture at the time, especially in England. Instead, in the United States, he found its antithesis: the caravan. In its most prosaic form, the caravan is a car to live in. In its most radical form, as envisioned by Banham, the caravan embodies a capsular architecture of pure utilitarian technologies, light-weight and moveable, designed to transform almost any uninhabitable space into a place for dwelling. Its main feature was the omission of anything superfluous, a requirement to make it as mobile as possible, to the point that everything we might call architecture in the Ruskinian sense had disappeared. As such, the essay opens with the following famous provocation:

When your house contains such a complex of piping, flues, ducts, wires, lights, inlets, outlets, ovens, sinks, refuse disposers, hi-fi reverberators, antennae, conduits, freezers, heaters – when it contains so many services that the hardware could stand up by itself without any assistance from the house, why have a house to hold it up?²⁹¹

²⁹⁰ Reyner Banham, *The Architecture of the Well-Tempered Environment* (London: The Architectural Press, 1969), 21.

²⁹¹ Reyner Banham, ‘A Home Is Not A House’, *Art in America* 2 (1965): 70.

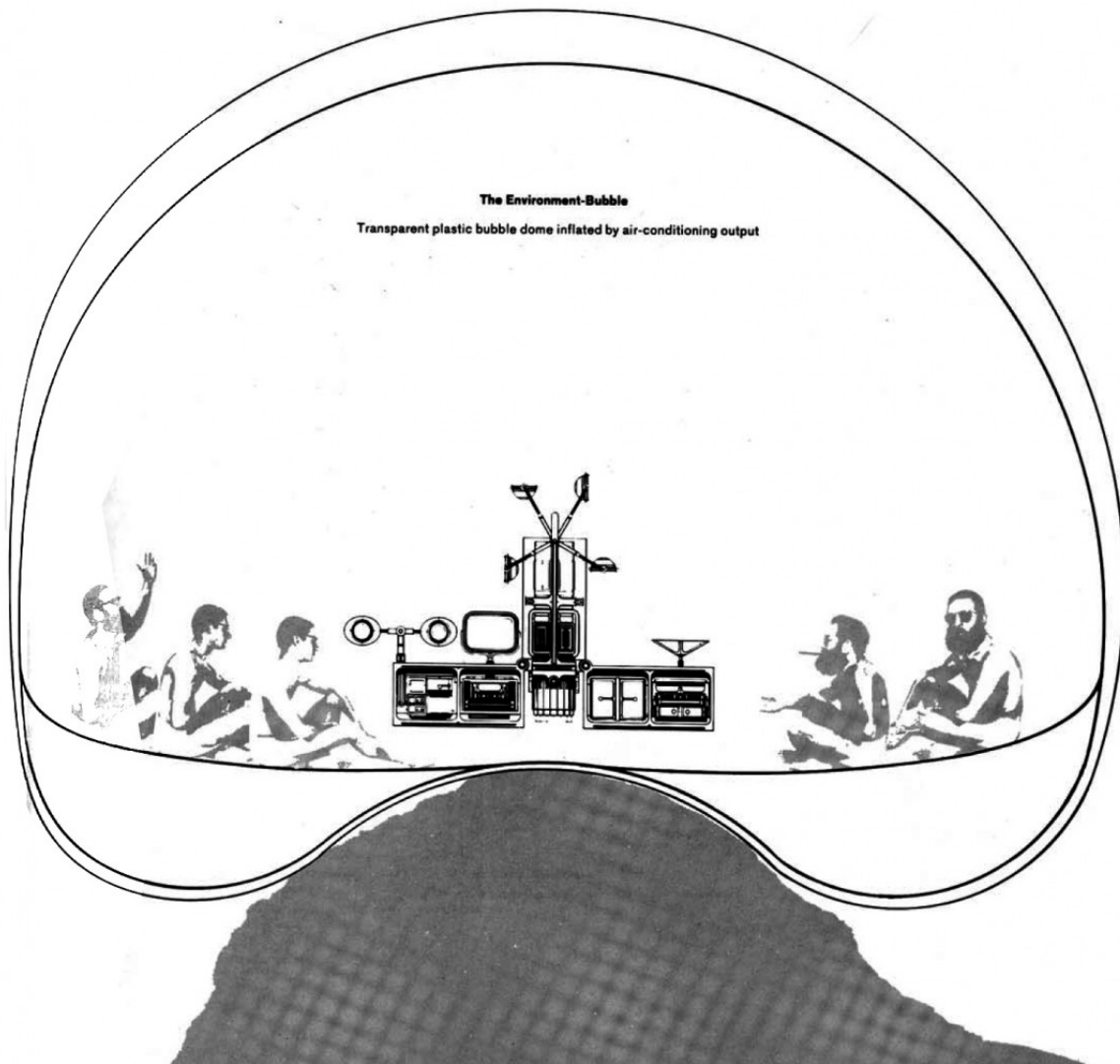


Figure 18: Illustration for Banham's article 'A Home Is Not a House', François Dallegret, 1965.

This phrase seems to sum up much of what was happening to modern architecture at the time, namely the increased presence of service technologies – machines – in buildings, which undermined the classical tectonic and massive constructions of the most part of the architectural canon up until then. Taken to its extreme, in Banham's view, one might just as well skip a few steps ahead and move into a caravan, or at least into its more sophisticated and radical variation, a 'standard-of-living-package', as he phrases it, borrowing the term from Buckminster Fuller. Yet, underneath this technological argument, there is another, quite opposite argument. The caravan is not merely appreciated for its radical embrace of a technological architecture, it also embodies the possibility to leave the city and inhabit the countryside again, the wilderness, the desert,

even. It is a highly technological device that offers the possibility of returning to nature, as Banham writes:

A standard-of-living package (the phrase and the concept are both Bucky Fuller's) that really worked might, like so many sophisticated inventions, return Man nearer to a natural state in spite of his complex culture (much as the supersession of the Morse telegraph by the Bell Telephone restored his power of speech nationwide).²⁹²

What then follows is Banham's famous characterization of two types of architecture, which he would further develop in *The Architecture of the Well-tempered Environment*: the campfire and the cave. In his words:

Man started with two basic ways of controlling the environment: one by avoiding the issue and hiding under a rock, tree, tent or roof (this led ultimately to architecture as we know it) and the other by actually interfering with the local meteorology, usually by means of a campfire, which, in a more polished form, might lead to the kind of situation now under discussion.²⁹³

This basic metaphor serves as a rhetorical device to oppose the American mobile architecture of the caravan to the dusty brick buildings of Europe. It relies on the assumption that architecture is fundamentally there to control the environment and make it inhabitable, either by mechanical means (the campfire) or by massing (the cave). However, the suggestion is also that the highly technological architecture that Banham envisions here and that he sees developing at the time in general as a result of an industrialized society, is not one that becomes further removed from some kind of state of nature, but rather one that holds the promise to bring human beings back closer to the natural environment via technology. Exemplary of this ideological frame are the drawings included with the article, by Dallegret, which show a high-tech capsular architecture, but in which Banham and Dallegret themselves are inserted, nude, as cavemen rediscovering a more primal mode of being. This is some kind of high-tech-Heideggerian dwelling, not despite technology, but because of it.

5.6 Technological Textility

A different and more generous reading of Banham's arguments is possible, however. Banham's suggestion to reject monumentality and massing in favour of embracing a technological aesthetics can also be interpreted as an argument to render the thoroughly technological nature of twentieth-century dwelling perceptible to its inhabitants – an argument that still exists today. For example, in a paper titled 'Designing Environmental

²⁹² Banham, 75.

²⁹³ Banham, 75.

Relations: From Opacity to Textility' (2013), British anthropologist Tim Ingold and design theorist Mike Anusas seem to formulate a similar argument to that of Banham, albeit in different terms. The authors start with a critique of the dominant logic of form that understands the worlds as a collection of objects, which, they argue, results in an increasing environmental alienation.²⁹⁴ More specifically, they identify Western industrialized design as a system that produces singular and discrete objects that conceal their interiority – all of the parts, structures and conduits; all electrical, chemical and mechanical workings; and all of the energies, gases and fluids they carry – behind opaque surfaces, which are only perforated by interfaces that allow the object to be used and connected to other objects. They argue that this design logic obfuscates the entangled nature of the world:

In constituting the world as a set of apparently independent and discrete objects, the interdependent and entangled nature of the world becomes more difficult to perceive. Flows of materials, which are of critical environmental significance, are infrastitally hidden and accorded low perceptual value.²⁹⁵

Instead, they propose to reimagine form as 'textilic', to bring out 'the energetic lines of the material world' and to conceptualize 'design as a practice of enriching the weaves that bind people and their environments'.²⁹⁶ To do so, they propose to 'think of the inhabited world not as a layout of interconnected *objects* but as a tapestry of interwoven *lines*'.²⁹⁷ In the second half of the paper, they make an attempt to outline what this would mean in the context of product design, architectural design and public space design, in which they suggest for architecture that this means rethinking the aesthetic appearance of a building, not as an enclosed and objectified form, but as one that allows for a 'haptic engagement with the materials and forces that are bound together in the building'.²⁹⁸ While they acknowledge that the late modern high-tech style of, for example, Richard Rogers's Lloyd's building seemingly makes an attempt to render its interior workings visible, they argue that the division between surface and interiority remains intact but is merely inverted (Figure 19). To imagine form as textilic, they conclude, would mean to forget about any division between surface and interiority, or in more architectural terms, between construction and finishing:

Thus, instead of the division between surface and depth, or between the superficial and the infrastital, the surfaces of things are at one with their workings. These

²⁹⁴ Mike Anusas and Tim Ingold, 'Designing Environmental Relations: From Opactiy to Textility', *Design Issues* 29, 4 (2013): 58–69.

²⁹⁵ Anusas and Ingold, 59.

²⁹⁶ Anusas and Ingold, 58.

²⁹⁷ Anusas and Ingold, 66.

²⁹⁸ Anusas and Ingold, 68.

surfaces are no longer superficial, nor are the workings infrastitial; rather both surfaces and workings are interstitial 'in the midst of things'.²⁹⁹

Such an argument seems to echo Banham's writings to a certain extent, especially the previously discussed article 'A Home Is Not a House', where he tried to conceive of an architecture that would reveal the thoroughly technological nature of contemporary living. Doing so would confront us with the technological flows and networks out of which our world is built, and might result in a greater awareness of our ties with the environment.



Figure 19: Detail of Lloyd's building, London, England, Richard Rogers & Partners, completed in 1986 (photography by Timothy Soar).

5.7 Against Efficiency

What I have tried to demonstrate in all of the above is how the notion of technology in modern society has often become tightly associated with a narrative of purification or, in

²⁹⁹ Anusas and Ingold, 67.

other words, of efficiency. The purification described by Gropius is about reducing things to the essential, to filter out the noise – to arrive at pure space, according to him. From a more general perspective, this is how technological efficiency is indeed often understood: as a way of making things more straightforward, less wasteful. Especially in light of the environmental crisis, the discourse on sustainability largely relies on technological solutions to reduce our impact on the natural world through an increased efficiency of the way we consume materials and energy, by doing the same with less, and by even doing less in general. There is a narrative that we, human beings, should do less, produce less, use less, consume less, pollute less. And while this may be true to some extent, something seems off about this narrative.

The reason we find ourselves in the middle of an environmental crisis is not because technology has made things more efficient since industrialization, on the contrary. Technological progress has rather resulted in more of everything – more extraction, more production, more consumption and more pollution. One of the reasons is of course technology's embedment within a capitalist world economy that strives for infinite growth, in which efficiency is not aimed at reducing things, but at intensifying growth, primarily economic growth. This was already observed in 1865 by English economist William Stanley Jones in his work 'The Coal Question', an observation that is often referred to as Jevons' Paradox.³⁰⁰ At the time, new technologies made it possible to burn coal more efficiently, but as Jevons noted this did not lead to less burning of coal. Instead, it resulted in more coal being burned, precisely because newer technologies were available to do so more efficiently. Something similar is happening with the roll-out of wind and solar power today, in which these newer technologies are not necessarily replacing older and more polluting forms of energy production, but have become additional sources of energy with which to extract, produce and consume even more.³⁰¹ And while this could rightly be attributed to the dominant economic system of capitalism in which technology is embedded, and which economic theories such as degrowth criticize, it might also tell us something about the way technology functions as such – the way we think technology should function. But perhaps we need to think about it in different terms, not as purification and efficiency, but rather the opposite, according to a logic of sacrifice and abundance.

Indeed, part of Ruskin's critiques of industrialization was the observation that something of importance was getting lost, namely sacrifice, which he not only found crucial for architecture, but saw as a fundamental feature of the world. The notion is of course loaded with religious connotations in Ruskin's work, but might also be understood in more

³⁰⁰ William Stanley Jevons, *The Coal Question: An Inquiry Concerning the Progress of the Nation, and the Probable Exhaustion of Our Coal Mines* (London: Macmillan and Co., 1865).

³⁰¹ 'World Energy Consumption Statistics | Enerdata', accessed 8 August 2023, <https://yearbook.enerdata.net/total-energy/world-consumption-statistics.html>.

secular terms, in terms of abundance or excess, as it appears in the work of French writer and philosopher Georges Bataille. There is a surprising connection to make between Ruskin and Bataille, between the religious conservative and the – eventually – atheist radical, but I will return to that at the end. For now, let us first look at Ruskin and how the notion of sacrifice figures in his writings: first in its importance for architecture and second as an economic logic.

5.7.1 Sacrifice

The first lamp in *The Seven Lamps of Architecture* is already dedicated to the notion of sacrifice. For Ruskin, it is one of the fundamental features of what makes architecture truly architecture, as opposed to mere utilitarian construction. He writes:

Let us, therefore, at once confine the name [Architecture] to that art which, taking up and admitting, as conditions of its working, the necessities and common uses of the building, impresses on its form certain characters venerable or beautiful, but otherwise unnecessary. Thus, I suppose, no one would call the laws architectural which determine the height of a breastwork or the position of a bastion. But if to the stone facing of that bastion be added an unnecessary feature, as a cable moulding, *that* is Architecture.³⁰²

In other words, what makes architecture ‘Architecture’ is sacrifice. Something of value must be added to the construction, simply because it is valuable, without any ulterior motive. This may take the form of the extra work required to make something more refined, elaborate or detailed than necessary, or the use of a certain material that is more expensive than it needs to be:

Now, first, to define this Lamp, or Spirit of Sacrifice, clearly. I have said that it prompts us to the offering of precious things merely because they are precious, not because they are useful or necessary. It is a spirit, for instance, which of two marbles, equally beautiful, applicable and durable, would choose the more costly because it was so, and of two kinds of decoration, equally effective, would choose the more elaborate because it was so, in order that it might in the same compass present more cost and more thought.³⁰³

Of course, as Ruskin adds, this ‘spirit’ is the complete opposite of the logic of the market: ‘It is therefore most unreasoning and enthusiastic, and perhaps best negatively defined, as the opposite of the prevalent feeling of modern times, which desires to produce the largest

³⁰² Ruskin, *The Complete Works of John Ruskin*, 1908, VIII:28–29.

³⁰³ Ruskin, VIII:30–31.

results at the least cost.³⁰⁴ The main difference lies in the fact that, while the market prioritizes the final product, to be sold and consumed, Ruskin instead prioritizes the process of production, the work required to make something: 'It is not the church we want, but the sacrifice; not the emotion of admiration, but the act of adoration; not the gift, but the giving.'³⁰⁵ As such, this argument is not only a plea for architectural sacrifice, but more fundamentally, a plea for sacrifice in the making of architecture itself. Or, more radically, the making of architecture, and especially the making of Gothic architecture, as an enterprise that requires materials, labour and energy, is to be understood, according to Ruskin, as a gesture of sacrifice entirely. Ruskin will rarely mention the 'function' of Gothic architecture, since its function did not really matter. What mattered was the work that was required to build these edifices, which in itself was already ennobling – ennobling the community, the citizen and especially the artisans themselves. It is no surprise therefore that, in 'The Nature of Gothic', where he again attempts to define Gothic architecture through a number of different notions, one of them is the notion of 'redundancy'. Echoing the above-described contrast with the logic of the market, Ruskin writes:

There are, however, far nobler interests mingling, in the Gothic heart, with the rude love of decorative accumulation: a magnificent enthusiasm, which feels as if it never could do enough to reach the fulness of its ideal; an unselfishness of sacrifice, which would rather cast fruitless labour before the altar than stand idle in the market.³⁰⁶

The suggestion here is that Ruskin considers work as something valuable in itself, beyond its mere value defined by the market – as already discussed above in contrast to Marxist interpretations of labour. As usual, Ruskin employs religious references in his arguments, which can here be seen in his paraphrasing of the Parable of the Workers in the Vineyard as found in the Gospel of Matthew. As the title indicates, the parable tells the story of workers in a vineyard, who all get paid the same at the end of the day, no matter the varying amounts of work each has done. This parable has multiple interpretations, but what Ruskin takes from it is that, while the work should be compensated, it cannot be reduced to the value of compensation, which would be a restricted perspective to understand the importance of work, of making something.

It is the same logic Ruskin later develops in his work on political economy, titled *Unto This Last*, again a reference to the same parable, in which the workers should be paid the same 'unto this last'. The economic logic Ruskin develops borders on the naïve and was indeed not taken seriously at the time. As Ballantyne summarizes:

Ruskin believed that craftsmen should be paid enough to live on, but that the wage should not be dependent on the quality of their work. He did not want to see their

³⁰⁴ Ruskin, VIII:31.

³⁰⁵ Ruskin, VIII:39–40.

³⁰⁶ Ruskin, *The Complete Works of John Ruskin*, 1908, X:244.

employers competing on price, undercutting one another, as that could only lead to the lowering of standards. The market should deal with bad workmanship by declining to employ the bad workmen, not by persuading them to work for less.³⁰⁷

In contrast to the developing economy of industrial capitalism which strives for maximized profit, Ruskin instead was concerned with the conditions of labour for the workmen. Yet, beyond that, he was also concerned with the way in which modern society was developing, according to a logic that, in his opinion, contradicted how the world in general, the natural world, operated. While superficial interpretations of Darwin's work at the time seemed to suggest how nature functions according to a logic of utility – as a survival of the fittest – Ruskin instead believed the opposite: the natural world appeared to him as one of abundance, of excess, of sacrifice. His drawings and paintings of natural scenes testify to his fascination for the growth of plants, which always exceed merely utilitarian principles. A plant does not stop growing once it has reached its goal of procreation, it keeps on adding branches and leaves, flowers and fruits, as long as it receives sunlight. And the sun is indeed abundant, it overflows the Earth with amounts of energy that all life on the planet struggles to consume fully. There is an overflowing excess in nature everywhere you might look, it seems from Ruskin's drawings, a continuous process of spending energy beyond utility, in other words: sacrifice.

5.7.2 Excess

An unexpected turn in contemporary discourses on ecology is the reference to the work of Georges Bataille. While Bataille never explicitly addressed questions of ecology, his work does seem to lend itself to a certain ecological interpretation that runs counter to dominant narratives of sustainable efficiency, and which might be useful to briefly address here. Moreover, it might also be counterintuitive to connect Ruskin to Bataille. While Ruskin was conventionally seen as the exemplary Victorian prude, idealizing the religious cultural heritage of feudal Europe to formulate his critiques of the modern world, Bataille's work instead revolved around states of extremity, of transgression. Nonetheless, as British historian Jessica Maynard observed:

Bataille and Ruskin are united in the distinction they draw between one kind of consumption – the consumerist acquisition and hoarding integral to the conservation of life and 'the continuation of individuals' productive activity in a given society' – and a second order of consumption that for both is sacrificial, resolutely non-utile in its effects.³⁰⁸

³⁰⁷ Ballantyne, *John Ruskin*, 172.

³⁰⁸ Jessica Maynard, 'Architectures of Sacrifice: Ruskin, Bataille, and the Resistance to Utility', *Mosaic: An Interdisciplinary Critical Journal* 39, 1 (2006): 116.

Bataille was indeed critical of the assumption that human societies merely develop according to a logic of pure rational calculation, an economic attitude according to which the ideology of industrial capitalism operates, for example. Instead, he emphasized the importance of unproductive expenditure, which is the destruction of wealth and resources beyond any instrumental logic of utility, but crucial to the formation of community, and thus of culture: 'Violence is its [sacrifice's] principle, but the works limit it in time and space; it is subordinated to the concern for uniting and preserving the commonality.'³⁰⁹

This quote is taken from Bataille's work on political economy, titled *La Part maudite*, or *The Accursed Share* in English, first published in 1949 and, similar to Ruskin's work on political economy, received with widespread confusion and largely ignored by economists, as they regarded Bataille's approach to the field unorthodox, at best, and uninformed, at worst. However, the terms 'restricted economy' and 'general economy' around which the work revolves, as well as this idea of a 'non-productive expenditure' that manifests itself in various ways throughout his whole oeuvre, have recently been reinterpreted as 'restrictive ecology' and 'general ecology', for example in the work of Morton.³¹⁰

The reason why Bataille's work on economy was not taken seriously is because he advanced the position that the fundamental question of economics is not how to best allocate scarce resources – a question of efficiency – but how to best destroy wealth – a question of excess.³¹¹ To argue this position, Bataille makes a distinction between the conventional approach to economics, which he describes as 'restrictive economy', and a more fundamental approach, which he describes as a 'general economy'.³¹² What Bataille calls the restrictive economy is indeed how the economy is usually understood, as a system of production and consumption that revolves around scarcity and utility. In short, scarcity of a certain good, for example energy to heat our houses, drives demand, which requires organized labour to produce the required energy in order to meet the demand. In contrast to such an economy based on scarcity and needs, Bataille argues that this is only part of the story, and that such a restricted economy is embedded in a much broader, more general economy, which goes beyond human societies. From the perspective of a general economy, energy is not simply a good that exists within a dynamic of need, but is what constitutes and sets in motion all processes of life on earth, including the particular processes of a restricted economy. Indeed, to define such a general economy, Bataille starts from an 'ecological' understanding of the world: the idea that the Earth is flooded by energy coming from the sun, more than any organism or community of organisms can handle, and as a

³⁰⁹ Georges Bataille, *The Accursed Share: An Essay on General Economy* (New York: Zone Books, 1988 [1949]), 59.

³¹⁰ Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*, 109.

³¹¹ Ray Huling, 'Bataillean Ecology: An Introduction to the Theory of Sustainable Excess', *Moveable Type* 11 (2019): 25–37.

³¹² See Jochem Zwier and Vincent Blok, 'Energetic Ethics: Georges Bataille in the Anthropocene', *Global Changes* 46 (2020): 174–75.

result, all life in the thin layer covering the Earth – the ‘critical zone’ in Latourian terms, or the ‘veil of strange intermediate being’ in Ruskinian ones – cannot help but grow, multiply and produce excessively, to the point where the excess energy has to be spent, wasted. Bataille takes this not only as a biological fact of nature, but as a social fact of history. What else is this so-called civilization but an excess of life, a surplus that goes far beyond mere survival, as a result of too much energy?

Zooming out from the restricted economy of human societies to a general economy – or better, general ecology – of the biosphere that operates according to a logic of abundance and sacrifice, undermines the discourse of technological sustainability that argues for purification and efficiency. As Morton asks:

Since it looks like capitalism is about to use an ecological rhetoric of scarcity to justify future developments, it is vital that we recognize that there are serious problems with imagining an ecological view based on limits, even at the level of abstraction we have been exploring. And we need to notice that scarcity and limitation are not the only ecological concepts on the block. What if the problem were in fact one of a badly distributed and reified surplus?³¹³

As such, both Ruskin and Bataille remind us that we should not all too quickly approach ecological questions from a perspective of efficiency, as economic systems like capitalism as well as dominant discourses on technology seem to ask of us.

5.8 A Technological Sacrifice?

In this sense we can perhaps better understand Heidegger’s distinction between the technological and the natural: what Ruskin as well as Bataille remind us of, is how, in the modern world, the technological operates according to a different logic than the natural one opposed to it. While the natural is the result of sacrifice and excess, of an unproductive expenditure of energy, the technological instead tends to strive for purification and efficiency. If technology is then a way of knowing the world, it casts the natural in terms of utility, to the point where certain ecological discourses describe the natural in terms of ‘ecosystem services’.³¹⁴ Such a view, however, misses the point, and only ends up making things worse, as it denies a fundamental feature of how the natural works. Can we think technology differently? Might we conceive of the technological as sacrifice, rather than instrumentality? And is this not what the environmental crisis asks of us, to engage with the world, not by reducing it, but by contributing to it, by spending human energy that

³¹³ Morton, *Ecology without Nature: Rethinking Environmental Aesthetics*, 109.

³¹⁴ See, for example, Carlos Corvalan, Simon Hales, and Anthony McMichael, *Ecosystems and Human Well-Being: Health Synthesis: A Report of the Millennium Ecosystem Assessment* (Geneva: World Health Organization, 2005).

contributes to more than mere human ends? These questions might lead us towards a 'politics of vitality', which I will discuss in the conclusion, but for which we need one more piece of the puzzle: the question of time.

Chapter 6 Time

Something is happening to our sense of time.

The environmental crisis is not only a disruption of the material world we live in, but also of the temporal one. This can already be seen in the way we talk about the environmental crisis: depending on what report or article you read, catastrophe is just around the corner, has already happened a long time ago, and is also happening right now, already all around us.

Let me unpack this a little by looking at what is happening to the world at large.

For example, on 8 October 2018, the United Nations Intergovernmental Panel on Climate Change (IPCC) released a special report on the effects of global warming above 1.5°C, out of which the most quoted headline was the estimated twelve years left to realize ‘rapid and far-reaching transitions’ in order to keep warming below this 1.5°C.³¹⁵ In other words, global warming, and especially its worst effects, were still in the future, although not an abstract and a faraway future, but an immediate future, defined by a time horizon of a mere twelve years, of which, at the time of writing this text, five years have already passed, bringing down the counter to seven, with little sign of such rapid and far-reaching transitions. In the past few years, this prediction has already been revised and most indicators suggest things will develop even faster. The outdated but optimistic slogan ‘the future is now’, which once expressed the sentiment that everything had become possible, now carries a more sinister implication: the future is running out of time.

On the other hand, much of the environmental disaster to come will be the effect of already so-called ‘locked in’ emissions and pollution that happened in the past. As ecological theorist Timothy Morton writes in his *Hyperobjects* (2013):

The end of the world has already occurred. We can be uncannily precise about the date on which the world ended. Convenience is not readily associated with historiography, nor indeed with geological time. But in this case, it is uncannily clear. It was April 1784, when James Watt patented the steam engine, an act that

³¹⁵ IPCC, ‘Summary for Policy-Makers’, in *Global Warming of 1.5 °C. An IPCC Special Report on the Impacts of Global Warming of 1.5 °C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, ed. Valérie Masson-Delmotte et al. (Geneva: World Meteorological Organization, 2018), 17.

commenced the depositing of carbon in Earth's crust – namely, the inception of humanity as a geophysical force on a planetary scale.³¹⁶

Such an observation inverts much of the ecological debate about what we should do: rather than focusing on the possibility of future disaster, we apparently need to change what has already happened in the past, which is a temporal logic that, for example, much wildlife conservation and rehabilitation projects are based on.

And while the catastrophe is coming in twelve, no, seven, no, merely a few years, and although 'the end of the world has already occurred' as well, we are currently also living through, as another example, the so-called Sixth Mass Extinction Event, which comes 65 million years after the last one in which the dinosaurs became extinct.³¹⁷ It is estimated that in the current situation at least 1 million different species are at risk of disappearing entirely, a conservative estimate according to many scientists.³¹⁸ The main reason for such a mass extinction event is a series of interconnected environmental disasters, largely driven by human activity, such as increased carbon emissions that lead to an acidification of the oceans, or the global deterioration of soil fertility through industrialized agriculture that causes insect populations to plummet.

What these examples demonstrate is how the environmental crisis operates at different speeds and different scales. And as scientific knowledge of the crisis and its different but connected events, of what is happening to the world we are living in, spreads through society, our temporal experience of the world starts to change as well. An ecological sensibility is indeed defined by such a paradoxical looping of time, in which the past, the present and the future get mixed up and are difficult to discern from each other. This stands in contrast with the conventional and rather simplistic conception of linear time within which a large part of modernity operated – the arrow of progress from an increasingly outdated past towards a faraway utopian future – and which now seems completely insufficient to account for the world we live in.

6.1 Temporal Collapse

In the previous chapters, I have tried to demonstrate how an ecological sensibility seems to largely revolve around hybrid conceptions of nature, materiality and technology. These categories, however, are all three subject to temporal dimensions as well. In short, from a modern perspective, the notion of nature often seems to be associated with nostalgic

³¹⁶ Morton, *Hyperobjects: Philosophy and Ecology After the End of the World*, 7.

³¹⁷ See, for example, Kolbert, *The Sixth Extinction: An Unnatural History*.

³¹⁸ IPBES, *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, ed. Eduardo S. Brondizio et al. (Bonn: IPBES secretariat, 2019).

sentiments. At best, it is that which humanity transcends and takes care of, at worst, it is that which gets destroyed in the process of modernization. Either way, nature seems to be that which is left behind by modernity, and to which Romantic conservatism wants to return. Yet, in different terms, nature can also be understood as a material reservoir, already here, lying, waiting to be extracted and transformed by human activity, without which it is static, merely present. And while the natural world of plants and animals may continuously change and evolve, the material world conceived as molecules seems ultimately permanent, and any change is merely a reshuffling of its elements. Finally, the notion of technology is heavily entangled with ideas of progress, oriented towards the near and distant future. It is through technology that we supposedly can transcend nature, learn to fully control and stabilize the material world according to human-made designs, and solve any problems we might meet on our way to the futuristic but undefined utopia that all technology seems to strive for. As such, the modern mind seems to position the notions of nature, materiality and technology on a linear timescale, which, from an ecological perspective, completely unravels and starts to loop around, tying itself in knots and getting stuck, and in which clear-cut categories such as past, present and future, tradition and progress, nostalgia and futurism all get mixed up.

This is something Latour also touches upon in his widely popular *Down to Earth: Politics in the New Climatic Regime* (2018), but from a spatial perspective.³¹⁹ In this essay, Latour problematizes the modern opposition between the local and the global, which, he argues, long defined the terms of conservative and progressive politics. Yet, in the 'New Climatic Regime', he argues, these categories seem to have lost their ability to function as clear political signifiers. While the global long functioned as a political signifier for progressive politics – the promise of world-wide democracy, of equality, of universality, even – and the local long seemed to be the concern of conservatism – the importance of traditions, of national identity, of isolationism, even – today, such a clear political division between the two has become impossible in the face of the environmental crisis. Globalization has not only failed to deliver on the promises of a united world, even worse, it has expanded systems of oppression and extraction, in part causing the large-scale breakdown we are facing. On the other hand, while we are witnessing a resurgence of xenophobic nationalism in the West, the local has also become a signifier for progressives to rally around, especially when it comes to new forms of collective organization in the face of global neoliberalism. As such, as the binary between the local and the global as well as between the conventionally associated political agendas crumbles, ideas on what political progress or conservatism means equally shift.

In what follows, I will argue that the environmental crisis is not merely a collapse of the physical world around us, it is also a collapse of the temporal categories through which we understand that world. To do so, I will first trace out a general idea of how modernity

³¹⁹ Latour, *Down to Earth: Politics in the New Climatic Regime*.

relied on the temporal categories of nostalgia and futurism to function, followed by a demonstration of how Ruskin and Banham indeed occupied these respective positions as exemplary products of modernity, after which I will problematize such positions within contemporary ecological debates. Finally, as a conclusion, I will propose to think of our contemporary temporal experience as a ‘deep present’, in which the conventional categories of past, present and future collapse, making room to think differently about nature, materiality and technology, beyond the modern binaries in which these categories were defined.

6.2 Between Nostalgia and Futurism

A major study examining the temporal conditions of modernity is *The Future of Nostalgia* by Russian-American literary theorist Svetlana Boym, published in 2001, right at the beginning of the new century. In it, she analyses the temporal struggle of the modern world in twentieth-century Russia, Europe and the United States, drawing from both her own biography as well as the work of Russian émigré writers. Her point of departure is the observation that modernity, with its emphasis on progress and the future, is not the antithesis to nostalgia, but rather that nostalgia is the necessary by-product of striving for the future. ‘Nostalgia inevitably reappears as a defense-mechanism in a time of accelerated rhythms of life and historical upheavals,’ she writes in the introduction.³²⁰ And a few pages further: ‘[Nostalgia] is not necessarily opposed to modernity and individual responsibility. Rather it is coeval with modernity itself. Nostalgia and progress are like Jekyll and Hyde: alter egos.’³²¹ Indeed, while a desire for the future is usually seen as a modern tendency and a nostalgic longing for the past as anti-modern, or at least conservative, it is the interplay between both that constitutes the temporal sensibility of modernity itself. As such, Boym traces the development of nostalgia – initially as a medically diagnosed disease – back to the end of the seventeenth century, not coincidentally the moment in Europe when the conception of time was undergoing a radical change: from a religious temporality to a modern one.

It is a historiographical commonplace to contrast the linear time of the medieval world with the pagan, cyclical understanding of time as an eternal return. While pagan conceptions of time are usually understood to have been built around the ritualized repetition of events that had already occurred before, the medieval view of time is conventionally understood as being focused on the linear unfolding of a divine plan. As Polish anthropologist Johannes Fabian notes in his classic *Time and the Other* (1983): ‘In the Judeo-Christian tradition Time has been conceived as the medium of a sacred history.

³²⁰ Svetlana Boym, *The Future of Nostalgia* (New York: Basic Books, 2001).

³²¹ Boym.

Time was thought, but more often celebrated, as a sequence of specific events that befalls a chosen people.³²² Human history was largely irrelevant to the progress of time, since the salvation or damnation at the end was dependent on divine intervention. 'Faith in a covenant between Divinity and one people, trust in divine providence as it unfolds in a history of salvation centered on one Savior, make for sacred conceptions of Time.'³²³ As such, time was perceived as a rather static thing, where one was locked up in a continuous present without much freedom to control the future. Similar views of time persisted until the late Renaissance, not only as religious dogma, but also in more rationalist perspectives such as, for example, philosophical determinism. In the words of Leibniz: 'The whole of the coming world is present and prefigured in that of the present.'³²⁴

It wasn't until the end of the seventeenth century, when the religious wars of Europe came to an end, that a more secularized version of linear time became possible. In his *Futures Past*, German historian Reinhart Koselleck observes: 'It was only when Christian eschatology shed its constant expectation of the imminent arrival of doomsday that a temporality could be revealed that would be open for the new and without limit.'³²⁵ And while the French Revolution caused a major shift in the European experience of time, as a human intervention that fundamentally transformed the social order, it was the Industrial Revolution that decisively changed the conception of time, from then on as an abstract but measurable language of numbers, with the train schedules of the developing railroads across Europe as the primary equalizer.³²⁶

This shift from a linear yet predefined unfolding of inevitable events to a linear but measurable and thus controllable proceeding of time open to change, Boym argues, resulted in 'a new theology of "objective" time': 'Progress became a new global narrative as a secular counterpart to the universal aspirations of the Christian eschatology. In the past two centuries the idea of Progress applied to everything – from time to space, from the nation to the individual.'³²⁷ The idea of progress as a defining characteristic of time was derived from a feeling of acceleration: time had suddenly shifted gear and started to speed up, while society had to follow suit. In the words of Prussian historian Friedrich Ancillon, writing in 1828:

Everything has begun to move, or has been set in motion, and with the intention or under the pretence of fulfilling and completing everything, everything is placed in question, doubted, and approaches a general transformation. The love of

³²² Johannes Fabian, *Time and the Other: How Anthropology Makes Its Object* (New York: Columbia University Press, 1983), 2.

³²³ Fabian, 2.

³²⁴ Quoted in: Reinhart Koselleck, *Futures Past* (Cambridge, Massachusetts: The MIT Press, 1985), 15.

³²⁵ Koselleck, 232.

³²⁶ Boym, *The Future of Nostalgia*.

³²⁷ Boym, 35.

movement in itself, without purpose and without specific end, has emerged and developed out of the movement of the time. In it, and in it alone, one seeks and sets real life.³²⁸

The idea of progress was then born from the perceived acceleration of time as well as the open-ended otherness of the future: a feeling that things were in transition, that the past was different from the present, and that the future would be different again. As the German Romantic philosopher and scientist Alexander von Humboldt wrote in *Das achtzehnte Jahrhundert*: 'Our epoch appears to lead out of one period, which is passing, into another, which is no less different.'³²⁹ As such, the temporal experience of modern time became defined as increasingly shorter intervals, always in transition, increasingly speeding up, into an unknown future.

In response, as a historical emotion, nostalgia became a widespread cultural phenomenon, compensating for the insistence on progress by turning back and looking towards a past that now seemed irretrievably lost. And again, rather than being the mere antithesis to progress, nostalgia was its twin, dependent on the very same temporal shift: 'Nostalgia, like progress, is dependent on the modern conception of unrepeatable and irreversible time.'³³⁰ By the end of the eighteenth century, such a nostalgia became closely associated with Romanticism, which celebrated the particularism of the sentiment in contrast to the universality of reason. Parallel to the progress of science and technology, nostalgia became eventually institutionalized in national and provincial museums as well as in urban memorials. The past was no longer simply gone, but became heritage, with projects of restoration as a result. As such, both progress and nostalgia became fundamental characteristics of modern European societies, and it is along these lines that the work of Ruskin and Banham can be read, both in the intentions of these respective authors as in the way in which they have been received and interpreted, and are still reproduced today. If nostalgia and progress can be described as modernity's Jekyll and Hyde, then perhaps Ruskin and Banham can be seen as their architectural counterparts. Indeed, during the industrialization of England, Ruskin dutifully fulfilled his role as the nostalgic conservative, challenging this so-called progress on the basis of an idealized, medieval past. On the other hand, Banham, in the post-war England of the 1950s and 1960s, fully embraced modernity's narrative of progress, explicitly rejecting the Ruskinian tendencies that the architectural establishment had inherited. Yet, if the current environmental crisis prompts us to reevaluate the binary opposition between nostalgia and progress, we might as well begin with reevaluating such an oppositional reading of the work of these two figures as well.

³²⁸ Quoted in: Koselleck, *Futures Past*, 241.

³²⁹ Quoted in: Koselleck, 241.

³³⁰ Boym, *The Future of Nostalgia*.

6.3 The Golden Stain of Time

Ruskin's work is largely pervaded by that typical Romanticist nostalgia of the turn of the nineteenth century: from his love of Picturesque ruins to his idealization of the medieval craftsman, from his religiously inspired conservative politics to his resistance of industrialization. Similarly, his writings on Gothic architecture are inspired by an aversion of the modern material culture that was developing among his contemporaries, and most of what he finds important in Gothic architecture is in response to what he finds lacking in the architecture and culture of the modern age. As British architecture historian Andrew Ballantyne writes in his 'critical biography' of Ruskin:

Ruskin's conception of architecture is of form that is steeped in culture that resonates with earlier forms. The genuineness of the production is part of the goodness in a built form, but there is also the question of whether or not it feels appropriate and right. This aspect of buildings is related to tradition and habit, and does not easily change, so Ruskin is wary of anything like conscious novelty.³³¹

Of course, unfortunately for Ruskin, nineteenth-century England was perhaps first and foremost an age of novelty. The emblematic building of such novelty in architecture was the Crystal Palace, embodying the quintessential modern values of progress and innovation. Yet, what was lacking for Ruskin was the connection with the past, with where things came from – for him, the Crystal Palace was the symbol of a collective amnesia, stumbling blindly into the future without recollection of the past.

Not coincidentally, in his first architectural treatise, published in 1849, a mere two years before the opening of the Crystal Palace, we find a completely opposite vision of what architecture can and should be. In what is perhaps its most referenced chapter, titled 'The Lamp of Memory', Ruskin emphasizes the mnemonic role of buildings, by bearing the traces of those who built and inhabited them before. As he writes:

We may live without her, and worship without her, but we cannot remember without her. How cold is all history, how lifeless all imagery, compared to that which the living nation writes, and the uncorrupted marble bears! – how many pages of doubtful record might we not often spare, for a few stones left one upon another!³³²

And while this might now seem obvious in the case of monuments or public buildings, Ruskin makes it clear that this also counts for the smallest of houses, as, for example, a small house 'at the head of the Grand Canal, consisting of a ground floor with two storeys above, three windows in the first, and two in the second', which he considers to be 'the

³³¹ Ballantyne, *John Ruskin*, 127.

³³² Ruskin, *The Complete Works of John Ruskin*, 1908, VIII:224.

most elaborate piece of architecture in Venice'.³³³ For Ruskin, architecture was to be constructed over long periods of time, and any building that could be erected in a mere few months was not worthy of being called architecture. In short, while the material culture of an industrialized society seems to emphasize newness, Ruskin instead makes a plea for age, for longevity, eternity, even:

Therefore, when we build, let us think that we build for ever. Let it not be for present delight, nor for present use alone; let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say as they look upon the labour and wrought substance of them, "See! this our fathers did for us".³³⁴

Not only does Ruskin emphasize the past, the previous generations that came before us and built this world we inhabit, he urges us to think of ourselves as if we are already living in the past too, and to see us through the eyes of future generations, as we look at previous ones today. Ruskin wrote this almost two centuries ago, but it is a sentiment that, after these two centuries of industrialization and modernization, is increasingly resurfacing, usually as part of a broader critique of consumerism and pleas for more ecological ways of living, as I will discuss below. Yet while such critiques and pleas are usually aimed at the modes of production on which our society is built, for Ruskin this is also, and perhaps primarily, an aesthetic argument. For him, the modern aesthetics of newness forms a stumbling block for such a long-term, inter-generational use of buildings, and while much of his contemporaries might have been seduced by the blinding light of a brand-new world, Ruskin instead foregrounds age as an aesthetic category, as the traces that the passing of time leaves in the material construction of architecture, which he sums up with the magnificent phrase 'the golden stain of time':

For, indeed, the greatest glory of a building is not in its stones, nor in its gold. Its glory is in its Age, and in that deep sense of voicefulness, of stern watching, of mysterious sympathy, nay, even of approval or condemnation, which we feel in walls that have long been washed by the passing waves of humanity. . . . it is in that *golden stain of time*, that we are to look for the real light, and colour, and preciousness of architecture [emphasis added].³³⁵

It is perhaps paradoxical, but is from this appreciation of such a golden stain of time, which regards the wear and tear and even the outright damage that a building suffers as signs of beauty and of life, that Ruskin also goes on to critique the notion of restoration: '[Restoration] means the most total destruction which a building can suffer: a destruction

³³³ Ruskin, VIII:228.

³³⁴ Ruskin, VIII:233.

³³⁵ Ruskin, VIII:233–34.

out of which no remnants can be gathered: a destruction accompanied with false description of the thing destroyed.³³⁶ Such a critique of restoration might indeed seem surprising, since restoration seems to go hand in hand with a nostalgia for the past, a return to how things were rather than moving onwards to new things, but for Ruskin it is not history as such that is important, but a conscious confrontation with the passing of time, with what has been and what will come, that is crucial. Instead of restoration, Ruskin says, we need care, we need to care for the buildings we live in in order to prevent ourselves from ever ending up in a situation where restoration would even be necessary. And by extension, by caring for the buildings in which we live, we also care for the buildings in which future generations will live, as there will be little need to renew them, to restore them. Taking the argument to its logical end, Ruskin then concludes that the buildings we live in are not merely our own, but that they belong to all who live in them – past, present and future:

I must not leave the truth unstated, that it is again no question of expediency or feeling whether we shall preserve the buildings of past times or not. *We have no right whatever to touch them.* They are not ours. They belong partly to those who built them, and partly to all the generations of mankind who are to follow us.³³⁷

Ruskin's nostalgia was not simply a longing for the past, although that was also part of it, but more fundamentally it was about an expanded view of historical time, in which past generations cared for the present one, and in which the present one needed to care for future ones. As such, and this might sound counterintuitive, Ruskin's nostalgia was perhaps more future-oriented, at least in intention, than the focus on novelty and innovation in the name of progress, which, as I will argue in the case of Banham, leads one to a much more narrow frame of time.

6.4 The Immediate Future

Ruskin's nostalgic arguments on the golden stain of time came in response to a developing industrial culture that emphasized an almost sterile newness, in which objects and buildings were denied material lives of their own, extending beyond human generations, but were rather treated as passive and static objects, easily replaceable. A century later, this development reached its epitome, in the 1950s and 1960s, the moment a fully developed and widespread consumer culture was established, defined by throwaway products and seasonal trends. The fundamental driver of this consumer culture was a combination of an industrialized mode of production and a capitalist market economy based on growth, which resulted in a culture of consumption focused on perpetual renewal: it had become

³³⁶ Ruskin, VIII:242.

³³⁷ Ruskin, VIII:245.

functionally possible to bring new products on the market every season, it had become economically imperative to do so in order to grow, and it had become culturally desirable to buy into these seasonal renewals in order to attain or uphold a certain social status. For example, as Priscilla Chapman wrote in the *Sunday Times Literary Supplement* in an article on contemporary furniture in 1964:

Technological change is going to move so fast that people won't tolerate machines or furniture or even rooms which are more than a few years old . . . Responsible design will be throwaway design . . . [People] throw away their paper bags, their television sets and their cars. The public just don't realise how close they are to throwing away their furniture too.³³⁸

Indeed, while seasonal trends and changes in fashion might be seen as mere marketing tricks to stimulate production and consumption, at the same time they are also inherent to the logic of technology to strive for continuous change. While we might be critical of a statement such as the one above today, at the time the idea of throwaway design was instead celebrated, as it not only exemplified progress and improvement, but it also meant democratization: throwability meant cheapness, and cheap prices meant more and more people could enjoy the luxuries and comfort of a technologically advanced society. As Banham also observed in his *Theory and Design in the First Machine Age* in 1960:

Even a man who does not possess an electric razor is likely – in the Westernised world at least – to dispense some previously inconceivable product, such as an aerosol shaving cream, from an equally unprecedented pressurised container, and accept with equanimity the fact that he can afford to throw away, regularly, cutting edges that previous generations would have nursed for years.³³⁹

In contrast to Ruskin's golden stain of time, Banham sought to develop an aesthetics of a different kind of temporal change, namely an aesthetic of expendability, which, rather than expressing the passing of human time across generations, would express the almost instant obsolescence of consumer products in the face of an unstoppable progress without bounds. The problem for Banham, however, was to think of what this might mean for architecture. If technological progress meant continual change and renewal, how could buildings, those heavy and slow constructions, ever keep up?

He found the theoretical foundations for such an aesthetics of expendability based on obsolescence in the writings of the Futurists, who, in his eyes, were the ones who had taken technology seriously on its own terms, something that the modernists of the 1920s and later had failed to do. The Futurists had celebrated the advent of a technological culture, or, in Banham's terminology, had embraced the 'mechanical sensibility' of the First

³³⁸ As quoted in: Whiteley, *Reyner Banham*, 179.

³³⁹ Banham, *Theory and Design in the First Machine Age*, 9.

Machine Age. The temporal experience of such a mechanical sensibility was characterized by an insistence on speed, of which the automobile was its exemplary symbol, but which had to be extended to all other realms of design, even architecture. As Antonio Sant'Elia wrote in the *Manifesto dell'architettura futurista* (1914): 'The fundamental characteristics of Futurist architecture will be obsolescence and transience. Houses will last less long than we. Each generation will have to build its own city.'³⁴⁰

While the modernists of the 1920s had been fascinated by the presence of machines in industrialized society, it wasn't until the 1950s and 1960s that an architecture developed that truly tried to answer this call of the Futurists, and Banham was there to connect the dots. One of the prime examples for him was the House of the Future designed by the Smithsons in 1956 (Figure 20). For the Futurists as well as the modernists and later on the Smithsons, the car was a main point of reference. Yet, as Banham observed, while Le Corbusier, in his *Vers une architecture*, had famously compared the Parthenon with an automobile, the cars used in this comparison were still highly customized and unique one-offs. For the Smithsons, and especially for Banham himself, the cars that were being produced and marketed in the 1950s and onwards were instead largely standardized and mass-produced vehicles, which became increasingly affordable, and were both subject to market trends and amateur customization. In contrast to the valuable cars referred to by Le Corbusier, these cheap and more popular cars were intended to become obsolete and to lend themselves to quick replacement. The House of the Future was designed around similar ideas, as a mass-produced consumer product, not even intended to last a lifetime. As such, it was a radically new way of conceiving architecture, which had until then largely been about longevity rather than transience. As Banham observed about the Smithsons' project:

... there is no ambition to imitate automobile form, the only exception to this rule appears to be the 'styling' of the Smithsons' House of the Future on the assumption that mass-produced houses would need as high a rate of obsolescence as any other class of mass-produced goods. Such a sentiment is rare, however, because the operational lore of architecture seems not to include the idea of expendability.³⁴¹

³⁴⁰ Antonio Sant'Elia, 'Manifesto of Futurist Architecture', in *Programs and Manifestos on 20th Century Architecture*, ed. Ulrich Conrads (Cambridge, Massachusetts: The MIT Press, 1970 [1914]), 36.

³⁴¹ Reyner Banham, 'Stocktaking', *Architectural Review* 127, 756 (February 1960): 96.

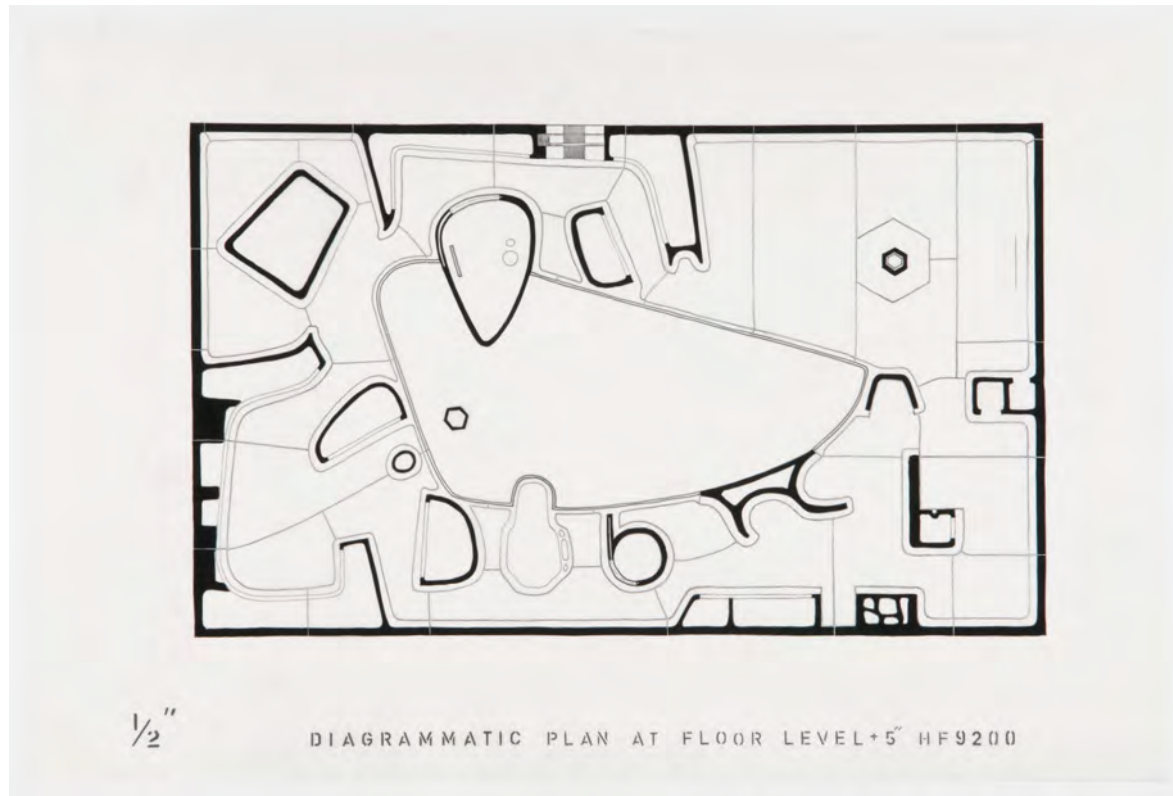


Figure 20: Plan of the House of the Future, shown at the 'Daily Mail Ideal Home Exhibition', London, England, Alison and Peter Smithson, 1955-1956.

For Banham, the idea of expendability became a central tenet around which architecture had to be organized, especially during the Pop years. Already in 1955, in his well-known essay 'Vehicles of Desire', he emphasized the gap between the throwaway economy that was developing and the lack of an appropriate aesthetics to reflect this condition:

We are still making do with Plato because in aesthetics, as in most other things, we still have no formulated intellectual attitudes for living in a throwaway economy. We eagerly consume noisy ephemerae, here with a bang today, gone without a whimper tomorrow – movies, beach-wear, pulp magazines, this morning's headlines and tomorrow's TV programmes – yet we insist on aesthetic and moral standards hitched to permanency, durability and perennity.³⁴²

It was only in the next decade, in the work of Archigram, that he found an architecture that indeed fully embraced the values of obsolescence and expendability, not merely as an economic condition, but as a cultural one as well. The third issue of *Archigram* magazine, published in 1963, was explicitly devoted to these values, appropriately titled

³⁴² Reyner Banham, 'Vehicles of Desire', in *A Critic Writes*, 4–5.

‘Expendability towards Throwaway Architecture’. As Peter Cook wrote in the introduction:

Why is there an indefinable resistance to planned obsolescence for a kitchen, which in twelve years will be highly inefficient (by the standards of the day) and in twenty years will be intolerable, yet there are no qualms about four years obsolescence for cars.³⁴³

While such a statement might seem outrageous today, it made perfect sense in the face of the optimistic mood of Pop. What is important to note here, however, is the temporal paradox that arises when highly technological societies find themselves in a state of continual change. On the one hand, there is the promise of progress, of striving towards an open-ended future, while on the other there is the reality in which things are invented today and thrown away tomorrow. In other words, the emphasis on progress results in an abolition of the future, since nothing is allowed to survive that long. Instead, despite all the Futurist rhetoric, Banham has often been described as a ‘historian of the immediate future’, a term that seems to aptly describe modernity’s temporal horizon as well. While the past is considered to be outdated, the future is already obsolete as soon as it arrives, leaving only the immediate present as the temporal horizon of experience. Indeed, the slogan ‘the future is now’ not only expressed the idea that everything becomes possible, but more paradoxically perhaps, the abolition of the future itself.

To remedy such a paradoxical balancing act between promising the future and abolishing it as soon as it arrives, it was necessary to turn this promise of the future into a promise of the faraway future. While the technological progress of today will be hopelessly outdated by tomorrow and need another round of innovation, we nonetheless need to believe that in a faraway future things will be definitively solved nonetheless. As such, the following oft-quoted statement by Banham is emblematic of such naïve wishful thinking:

Our accession to almost unlimited supplies of energy is balanced against the possibility of making our planet uninhabitable, but this again is balanced, as we stand at the threshold of space, by the growing possibility of quitting our island earth and letting down roots elsewhere.³⁴⁴

Indeed, while the embrace of obsolescence and expendability was presented as a radical affirmation of the progress of the modern world, the idea that this might have adverse effects on our planet was present as well. To counter this, it was necessary to relegate such a concern to a faraway future in which technology would eventually solve the problems of waste and pollution too, which, in a worst-case scenario, would even mean leaving behind this planet Earth. Banham’s futurism, in its most naïve sense, then, is the way techno-

³⁴³ As quoted in Whiteley, *Reyner Banham*, 169.

³⁴⁴ Banham, *Theory and Design in the First Machine Age*, 9.

optimists usually seem to operate, as I will argue below, namely by presenting a faraway future so they can ignore the problems in the present, often as an excuse not to disrupt the status quo.

6.5 Returning to the Future

Returning to Boym's observation of how nostalgia and progress are both constitutive of modernity, Ruskin and Banham indeed appear as each other's counterpart. More fundamentally, they are both symptomatic of modernity. Both rely on a temporal shift that was constitutive of modernity: the transition towards a temporality in which the past becomes unrepeatable and irretrievable, and in which the future becomes unknown and open-ended. However, in our contemporary situation, their respective positions seem to shift into what seems like a complete reversal. While Banham celebrated the rapid obsolescence and expendability of consumer goods, now, half a century later, it is mostly those consumer goods that persist, in toxic landfills, in oceanic plastic soups, as 'forever chemicals' in the soil and drinking water. A throwaway plastic bag from a 1960s supermarket might today resurface in the stomach of a beached whale. On the other hand, the very things Ruskin tried to defend in the face of industry – traditional craftsmanship, cultural resilience, community-based production – have become the things we are desperately looking back to, or rather, forward to, as possibly more ecological practices than mere techno-fixes.

The shift in these historically defined, antagonistic, binary categories – nostalgia and progress, Ruskin and Banham – becomes all the more visible in late-twentieth-century ecological debates. Since the Brundtland report in 1987, ecological debates have largely been framed through the lens of sustainability. At first sight, the term 'sustainable development' evokes a Ruskinian sentiment, as it was indeed introduced with the intention to meet 'the needs of the present without compromising the ability of future generations to meet their own needs'.³⁴⁵ To achieve this, the report emphasized three pillars on which such sustainable development should be based: human, environmental and economic. Yet, while a lot of literature and manuals on sustainability acknowledge cultural wellbeing, in practice sustainability is generally understood to be focused on technical solutions, which suffer from the same phenomenon of Banhamian obsolescence as technology has done for the past two centuries. More fundamentally, however, the Ruskinian ambition to think of future generations translates itself rather quickly into sustaining the current status quo, the very same system that got us into this mess in the first place, indeed reducing the open-ended future to the immediate present. As Morton, for example, describes it in rather stark terms: 'What exactly are we sustaining when we talk about sustainability? An intrinsically

³⁴⁵ World Commission on Environment and Development, *Our Common Future*, 37.

out-of-control system that sucks in grey goo at one end and pushes out grey value at the other.³⁴⁶

This attitude is perhaps best illustrated by one of the ways the European Union has translated its Green Deal into a large-scale design initiative. In 2020, the EU launched its ‘New European Bauhaus’ project, which ‘brings citizens, experts, businesses, and institutions together to reimagine sustainable living in Europe and beyond’.³⁴⁷ While this is an admirable initiative, its title already betrays the ideological drive behind the project: in order to imagine a sustainable future – which means a future in which sustainable development through technological solutionism is possible – the EU refers back to the first half of the twentieth century, when modernist dreams of completely making the world anew were still credible. In other words, to still believe in the future, we seem to need to return to outdated visions of the past.

The temporal struggle, however, continues even today, further intertwining Ruskinian and Banhamian perspectives, especially in popular non-fiction that deals with the environmental crisis. I would like to offer two examples here, two bestsellers that clearly seem to express what is at stake in contemporary culture. In 2020, Australian-born philosopher Roman Krznaric, published *The Good Ancestor: How to Think Long Term in a Short-Term World*, with recommendations of pop figures such as U2 guitarist The Edge and ecologists such as George Monbiot.³⁴⁸ The book argues that humankind, and especially the societies of ‘the Global North’, have ‘colonised the future’, by treating it as a dumping ground for ecological disaster and technological risk. In contrast, Krznaric proposes the concept of ‘cathedral thinking’, which is not coincidentally introduced with reference to Ruskin. He argues, as the term suggests, that we should look back to the construction of cathedrals, among other things, which were built over the course of generations and remind us of what it means to build a world in collaboration with future generations. As such, the term echoes the so-called ‘seventh-generation principle’, which borrows the idea from Indigenous thought to always consider the next seven generations in whatever you do. While the book refers to numerous examples from history, it also makes clear that even those are not enough in the face of what we are dealing with today. Falling short in relevant solutions, Krznaric ultimately argues for is what the title says: to observe our own behaviour through the eyes of future generations, as if we are already living in the past, hoping that we might find a different way of doing things.

³⁴⁶ Morton, *Hyperobjects: Philosophy and Ecology After the End of the World*, 113.

³⁴⁷ European Union, ‘About the Initiative’, New European Bauhaus, accessed 7 July 2023, https://new-european-bauhaus.europa.eu/about/about-initiative_en.

³⁴⁸ Roman Krznaric, *The Good Ancestor: How to Think Long Term in a Short-Term World* (New York: The Experiment, 2020).

On the flipside of this coin, we find other popular authors such as William MacAskill, a Scottish philosopher who published the book *What We Owe the Future* in 2022.³⁴⁹ In it he argues for a concept called ‘longtermism’, based on the idea that our moral priority is to influence the distant future positively, so that regardless of what happens today, a future humankind will have it better, at least. On the one hand, this implies a refreshing acknowledgment of the inevitability of the crisis to come, but countered by an optimism that we might still ‘win’ in the long run. On the other hand, however, the key word is ‘distant future’, not seven generations, but some abstract and unknown point in time. It is the same attitude that Banham demonstrated at his worst: a naïve faith in the faraway future, where all things will be magically solved, releasing us from our responsibilities in the here and now. It does exactly what Krznaric warns us about: colonizing the future and leaving the clean-up for later. As such, it is no surprise that business leaders have embraced the ‘daring’ thinking of MacAskill, with people like Elon Musk praising the book on Twitter even before its release. Fundamentally, longtermism shifts the focus away from pressing issues in the now and supports even further expansion and economic growth today, convinced that despite its current negative effects, they will net positive at some later point in time.

The reason I briefly refer to these two popular writers here is to demonstrate how the temporal struggle underlying our contemporary ecological sensibility is not merely an academic exercise, but plays out in public debates, in business decisions and in economic agendas. At the same time, however, they can be seen as merely updated versions of the temporal struggle that has been at the basis of modernity since the end of the seventeenth century, contrasting conservatism with futurism, localism with globalism.

6.6 Time Is (Not) a Circle

When the pre-modern past becomes a reference for a possible future and when the technological future becomes a relic of the past, the modern temporal categories we have long relied on seem to become untenable. One way out of the binary opposition of slowing down and going back, or speeding up even more to go further, seems to bring back the concept of circular time, in which past and future coincide. And indeed, in recent years, the temporal figure of the circle instead of the arrow has become increasingly popular, not in the least in one of the latest developments to address the environmental crisis: the idea of the circular economy.

In contrast to the throwaway economy of the late twentieth century, as championed by Banham among others, in recent decades the idea of a circular economy has gained

³⁴⁹ William MacAskill, *What We Owe the Future* (London: OneWorld Publications, 2022).

widespread approval, from small-scale business practices to supranational political institutions such as the European Union. The latter defines a circular economy as ‘a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible’ in order to extend the lifecycle of a product and reduce waste to a minimum.³⁵⁰ This in contrast to the so-called linear economy, which is based on a ‘take-make-consume-throw away pattern’.³⁵¹ There are numerous variations on this basic definition and various ways to bring this into practice, with perhaps one of the most popular ones being the ‘cradle-to-cradle design’ model as developed by German chemist Michael Braungart and American architect William McDonough. In 2002, they published a manifesto titled ‘Cradle to Cradle: Remaking the Way We Make Things’, in which they go into detail on how to achieve the model.³⁵² Rather than embracing the conventional idea of downcycling, they instead argue for a model of upcycling, in which waste does not exist, following a biological logic: ‘Waste equals food. This cyclical, cradle-to-cradle biological system has nourished a planet of thriving, diverse abundance for millions of years.’³⁵³ They argue that we should apply the same logic to our technical systems of production and consumption by comparing the ‘biosphere’ with the ‘technosphere’ and thinking of ‘technical nutrients’ in parallel to ‘biological nutrients’.

One could formulate an ideological critique of such a line of thinking, arguing that it relies on a naïve vision of the natural world as a totalizing and balanced system in which all things live in harmony with everything else – which, as Morton argues, is a misinterpretation of Darwin’s theory of evolution, which instead emphasizes mutation and monstrosity.³⁵⁴ However, the problem is perhaps even worse. Such circular thinking, in which materials and products are no longer conceived as having one lifetime but multiple ones, extending beyond their current use, has become widely accepted as a valid way of addressing the impact of our production and consumption patterns. One might wonder, what is the goal? The idealist goal seems obvious: to reduce and eliminate waste. However, the enthusiasm with which multinational companies that have long been responsible for environmental disasters worldwide, such as DuPont and DOW Chemical, have embraced the model is perhaps rather alarming. As Dutch philosopher Lisa Doeland asks: ‘We should wonder, therefore, if the CE [Circular Economy] is so very different from the linear economy that it aspires to break with.’ Perhaps not, Doeland suggests, as there

³⁵⁰ ‘Circular Economy: Definition, Importance and Benefits | News | European Parliament’, European Parliament, 24 May 2023, accessed 8 November 2023, <https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits>.

³⁵¹ ‘Circular Economy’.

³⁵² Michael Braungart and William McDonough, *Cradle to Cradle: Remaking the Way We Make Things* (New York: North Point Press, 2002).

³⁵³ Braungart and McDonough, 92.

³⁵⁴ Morton, *The Ecological Thought*.

seems to be an inherent contradiction between what the environmental crisis asks of us – to limit overproduction and overconsumption – and the ‘final, pivotal fantasy of the CE: that of trying to realize recycling without remainders.’ Because, as Doeland observes, ‘the result is the loss of society’s power to curb ever-increasing consumption and growth in a global-capitalist system.’³⁵⁵ Indeed, what most ideas of a circular economy seem to promise is the fantasy to keep things going as they are: all we have to do is change the way we design, so that waste becomes food, and then we can keep on producing and consuming as we are doing now, and keep on growing our economies, without the need for actual, structural change. In other words, the circular economy, with its theoretical logic of circularity, seems to result in sustaining the linear model of economic growth. The circular economy is not here to save the world, it is here to save capitalism.

Moreover, another problem with the idea of a circular economy is indeed this illusion of ‘recycling without remainders’. Even if it would be possible to eliminate all waste and reuse everything that is now being discarded – which is something that has not been proven possible yet – the very model of economic growth nonetheless requires externalities to extract, contradicting the premise of circularity. As Eswati economist Jason Hickel writes in his widely popular *Less Is More: How Degrowth Will Save the World*:

Growth tends to require an ‘outside’: an external source from which to extract value for free, or as close to free as possible. In a circular economy, the cost of materials is internalised. That’s good from the perspective of ecology, but bad from the perspective of capital accumulation. Recycling costs money, and the cost of paying for recycled materials makes it more difficult to generate ever-rising surplus. And the pinch gets tighter over time: materials degrade each time you recycle them, so you need ever-rising energy inputs – and ever-rising cost – in order to maintain their quality.³⁵⁶

While Hickel argues that circularity is something worth striving for, it is impossible to achieve this within a growth economy, since the CE here becomes something through which to sustain growth. Moreover, as the last sentence suggests, the necessity for increasingly efficient recycling requires energy, which comes from outside of the circular process, always resulting in an external supply from outside the system. There seems to be no production without extraction, no consumption without waste, no recycling without remainder – neither energy-wise nor materially. And while a growth economy requires external sources to extract value from, the question is whether this is not the case for any type of economy. The idea of closing the loop and establishing an economy without surplus, without remainder, without waste, and thus without limits, is the quintessential capitalist dream of unlimited growth. And even while striving for circularity as much as

³⁵⁵ Lisa Doeland, ‘The Circular Economy Should Finally Demand the Impossible’, in *The Impossibilities of the Circular Economy*, ed. Harry Lehmann et al. (London: Routledge, 2022), 154.

³⁵⁶ Jason Hickel, *Less Is More: How Degrowth Will Save the World* (London: Heinemann, 2020).

possible, preferably within post- or degrowth economies even, it sounds like waste will nonetheless remain inevitable. So, then what?

Referring to the documentary *Examined Life* (2008), in which Slovenian philosopher Slavoj Žižek walks around a garbage dump and remarks that ‘this is where we should start feeling at home’, Doeland argues that we should indeed accept the presence of waste in the world, as the limits to our economic growth. The image of an ideal and harmonious, circular nature, which people like Braungart and McDonough as well as others invoke, is an ideological mystification, based on a flawed concept of nature, as the Greek-British philosopher Yannis Stavrakakis also argues. A lot of such ‘green ideology’, he writes,

... is built on the dislocation of the previously dominant view of our right to nature with no hazard and no limits. What is shown by the current environmental crisis is that there are in fact some limits, limits to growth and economic expansion, limits imposed by the Real of nature.³⁵⁷

This, then, is the simple fact of the environmental crisis: there is no way out. We seem to have reached a limit, and neither the linear temporality of a nostalgic return or a flight forward to faraway techno-optimist futures nor the circular temporality of wasteless recycling can really get us beyond it. The crisis is here to stay, and we need to stay with it. Rather than linear or circular temporalities, this means embracing a more static temporality, an enduring present of sorts perhaps, at least for now, which is a temporal experience I would propose to describe as a ‘deep present’.

6.7 A Deep Present

In much recent ecological discourse, the figure of geology appears, along with its implication of ‘deep time’. In 1981, American writer John McPhee coined the term ‘deep time’ to refer to what eighteenth-century Scottish geologist James Hutton had already described as ‘geological time’. Hutton argued that the geological features of the Earth had been formed by cycles of sedimentation and erosion, of lifting up rocks and grinding them down, on a timescale much larger than what human history was capable of conceiving. The implication of such a deep time perspective was that the Earth operates on a timescale in which human beings are but a mere blip, here today, gone tomorrow, and thus irrelevant to the Earth’s much slower development. Despite its many problems, as mentioned in the chapter on ‘An Ecological Sensibility’, the notion of the Anthropocene does suggest that this has changed: human time and deep time have become intertwined, as the development of the Earth over billions of years has been impacted by a human history of merely a few

³⁵⁷ Yannis Stavrakakis, ‘Green Fantasy and the Real of Nature: Elements of a Lacanian Critique of Green Ideological Discourse’, *JPCS: Journal for Psychoanalysis of Culture & Society* 2, 1 (1997): 123–32.

hundred years, or perhaps a few thousand, depending on one's perspective – but almost nothing either way. In other words, the deep time of geology has collided with the fleeting present of humans, resulting in what we could describe as a 'deep present', which I want to suggest as a term here to describe the temporal feeling of living through the environmental crisis today.

To some extent, the idea of a deep present echoes what Haraway has described as 'staying with the trouble'. In her 2016 book with the same title, she writes:

In fact, staying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of place, times, matters, and meanings.³⁵⁸

Indeed, in disturbing times such as these, Haraway urges us 'to make kin in lines of inventive connection as a practice of learning to live and die well with each other in a thick present'.³⁵⁹ In the book, Haraway explores what kinship means in terms of a multispecies relationality, which is an idea that has been picked up in contemporary architecture discourse as well, where calls are made to conceive of more-than-human architectures, which not only construct human worlds but non-human ones as well.³⁶⁰

One of the challenges in such a vision of multispecies relationality is perhaps the idea that the dominant approach to architecture so far has been a thoroughly anthropocentric one, understood as a practice of making 'environments fit for human activities', as Banham would say. If architecture as cultural production not only expresses cultural values but also has the potential to foster new ones, the question becomes how architecture might be reconceived as environments fit for human as well as non-human activities, contributing to the environments in and out of which they are built, rather than disrupting them.

In this sense, an architecture that would embody and foster an ecological sensibility is an architecture that confronts all kinds of layers, beyond the anthropocentric one. It is about constructing a world that is not simply striving towards the future or tries to recover the past, but one that needs to consider artificial and natural environments, human and non-human agencies, and employs technological as well as organic technics. It needs to deal with events that have happened in the past as well as those that will happen in the future, on timescales beyond those predictable by human understanding. An ecological sensibility

³⁵⁸ Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 1.

³⁵⁹ Haraway, 1.

³⁶⁰ See, for example, Andrés Jaque, Marina Otero Verzier, and Lucia Pietroiusti, eds., *More-than-Human* (Rotterdam: Het Nieuwe Instituut, 2020).

recognizes that these are not different questions, but questions that coincide in our current moment, in the thickness of our deep present.

So, what does all of this mean?

This manuscript started from the observation that something is changing in contemporary culture as a result of the environmental crisis we are living through – a change in the direction of what can broadly be described as ‘ecology’. In the field of architecture, we can observe how both in discourse and in practice architects are increasingly orienting themselves towards ecological questions, although in varying directions, with varying agendas, and with varying outcomes. As I have tried to demonstrate, these ecological questions largely revolve around the notions of *nature*, *materiality* and *technology*, which are not new, but run deep in modern architecture history. However, the way we understand these notions seems to be changing. Throughout much of modernity, these notions have been understood within strict binary oppositions: in short, nature has often been conceived as that which is outside of the human, the material has often been framed as passive and inert in contrast to the immaterial agency of human beings, and the technological has often been understood as a way of dominating and controlling the organic world. But today these binary oppositions are actively being questioned and approached from more hybrid perspectives. Tracing these notions throughout modern architecture history, especially in the work of Ruskin and Banham, it also becomes clear that the modern binaries through which they were framed were perhaps always already untenable, and that things have always been entangled with each other, despite attempts to separate them.

In the case of Ruskin’s arguments on nature, we can find both the Romantic mindset that projects the natural outside of the human, industrialized world, as something that has been lost and needs to be returned to. However, when writing on the kind of architectural practices that do indeed attempt to recover a harmonious balance with nature, as in the case of a Picturesque aesthetic, Ruskin himself eventually discovers such harmony to be largely artificial, and that there is a rather mundane and often brutal reality underneath such aestheticization of nature. At the same time, his arguments also at times tend towards organicist approaches to art and architecture, in which the natural becomes a human-made construction, distancing the human even further away from this thing called nature on its own. Banham, by contrast, fully embraced the artificial construction of the environment, in which the natural becomes a mere ‘ecological’ part of a larger system. Even in the desert, a place supposedly uninhabitable for human beings, Banham demonstrates how difficult it is to consider the natural on its own terms, how difficult it is to abandon preconceived cultural constructions of nature. Yet, something does escape such constructions, something that we might not have the language to name, but which does not mean it is not present. As such, the natural appears as a slippery category and can

be defined in various ways, depending on whatever agenda is pursued. Ruskin and Banham here remind us that we should always be suspicious of the category of nature, although we should perhaps be equally suspicious of those who claim there is no such thing.

In the case of materiality, Ruskin's writings eerily echo contemporary debates on a so-called new materialism: in contrast to the modern view that regards the material as passive, Ruskin's arguments on art and architecture are pervaded by a certain vitalism, a sense that all things are 'less or more alive'. His arguments can be read as an attempt to recognize the vitality of the world around us, as a way of theorizing a material culture in tune with the ontological reality of the material world. Yet, as Ruskin also recognizes, the affective sympathy we might feel for the material world is difficult to discern from mental projections onto the world, from committing what he described as a 'pathetic fallacy'. Nonetheless, while running the risk of committing such a fallacy, Ruskin firmly commits to the vital powers of the material world, something that the material culture of the modern world seemed to deny. Ruskin's arguments are a thoroughly developed example of what in architecture theory is known as the concept of a 'truth to materials', which surprisingly also became a feature of twentieth-century modernism, although on different terms. Where Ruskin referred to the vitalism of the natural world, the moderns, as in the case of Banham, instead referred to the industrialized character of modern societies, emphasizing materials such as steel and concrete, suggesting such vitality is not merely reserved for the natural.

Finally, in the case of technology, we can trace a split between the technics of craft and the technology of industrialized processes. In Ruskin's writings we find how this split revolves around a division of men, between thinking and making, between control and collaboration. Yet the moderns chased technology not only for its promise of progress, but also for its promise of purification, of efficiency. In Banham's writings we find the conviction that an architecture culture built on technology would deliver a more essential architecture, one purely aimed at rendering the environment habitable for human beings. But as Ruskin reminds us, later confirmed in the writings of Bataille, the logic of technological efficiency fundamentally contradicts the logic of sacrifice in the natural world. If we are to take the challenge of the environmental crisis seriously, we might thus need to abandon such a logic of efficiency according to which technology has often been developed and think of ways in which it can instead produce excess, abundance – life.

The questions with which Ruskin and Banham, as well as many of their peers, struggled now remind us of the impossibility of holding on to the modern insistence on the strict binaries through which the notions of nature, materiality and technology have been conceived. Instead, the ecological sensibility that is emerging today revolves around hybridizing these binaries. In contemporary ecological practices in architecture, we can observe attempts at such hybridization, but they often run the risk of repeating these modern binaries, which are still ingrained deeply in our minds. Looking back to the

examples with which this manuscript also began, we can now understand better what is going on.

7.1 Nature, Materiality, Technology (Reprise)

Again, first, the Bosco Verticale project in Milan, Italy, by Italian architect Stefano Boeri. On a superficial level, as the architect claims, the project is about reconnecting human beings with nature, by literally incorporating trees into the construction of a building. Although a thoroughly industrially produced building, it does seem to echo certain Ruskinian sentiments and even repeats the same mistakes. On the one hand, the building can be seen to stage a Picturesque nature. As a result of a lack of a natural environment to which it can relate, the nature is imported: trees grown elsewhere are placed within the structure, evoking a Picturesque image of natural scenery, as if architecture and nature belong to each other. But this is an aestheticized version of nature, cleaned up, without the higher levels of biodiversity usually found in actual forests. Nature is allowed to be where the architect's design allow it to be, limiting its growth to the extent the structure can support it. As such, it can also be viewed as a kind of organicism, as the natural elements are there as external decoration, metaphorically evoking a forest. Despite such shortcomings, as a cultural artefact the project does stage the urge to hybridize human society and nature again, and thus testifies to a resurfacing of Romantic sentiments in the face of the environmental crisis. At a time when the natural world is dying off, it is no coincidence that such projects are appearing.

Second, the Fort V project in Edegem, Belgium, by Belgian-based BC Architects & Studies. The project explicitly centres on questions of materiality and technology, in which pre-industrial materials of construction such as rammed earth are redeveloped within systems of industrialized production, by producing prefabricated and standardized blocks. As such, a hybrid of the technics of craft and the technologies of industry appears. At the same time, the finishing with hempcrete can indeed be described as a 'hairy material', since it avoids the sterility of white plaster, instead foregrounding the fibrous presence of the material, which changes over time.³⁶¹ In addition, the process of construction is organized by means of workshops, bringing together all kinds of people, professional as well as amateur, fostering both the production of knowledge and a sense of community. The resulting material construction is a hybrid of modern and ecological aesthetics: a simple, rectangular box, organized on the basis of a grid plan, yet materialized in rammed earth and hempcrete, examples of what we earlier described as hairy materials. The project itself as well as its representation in architecture media and at biennales testifies to a resurfacing

³⁶¹ Pauline Lefebvre, 'Hairy Materials: On Holding Together Aesthetic and Ecological Concerns', *OASE Journal for Architecture* 112 (2022): 113–26.

interest in rethinking the material processes through which we build architecture today, with all of the implications it brings along.

Finally, the CopenHills Energy Plant and Urban Recreation Center in Copenhagen, Denmark, by the Danish Bjarke Ingels Group (BIG). The project is presented by the architects as an example of so-called hedonistic sustainability, which relies on technological solutions to mitigate its environmental impact without requiring structural changes in the way people lead their lives. This claim refers to the additional programmatic functions of a ski slope, a climbing wall and a scenic hiking path on the 'mountain' roof, in addition to the waste incinerator within. But what these programmatic functions demonstrate is exactly the 'way of knowing' the natural world produced through technological control: as a system of 'ecosystem services', both in utilitarian (energy production) and recreative terms (mountains are for human fun). While such 'greener' energy installations might be absolutely necessary to reduce environmental impacts, the building as a cultural artefact still seems to embody a very modern perspective of the natural world, which can be appropriated and re-created for purely anthropocentric goals.

7.2 A Politics of Vitality?

As these projects demonstrate, the debates Ruskin and Banham engaged in are again becoming central in our contemporary ecological sensibility. They are attempts to hybridize the binaries underneath the themes of nature, materiality and technology. But perhaps a more fundamental perspective is needed, that goes beyond these three categories. Maybe what is fundamentally at stake in the 'ecologization' of society, after its modernization, is the recognition of a certain vitalism beyond human intentionality. At a historical moment where the environment seems to be dying off, we are once more reminded of how alive it really is, and how crucial it is for both human and non-human life to contribute to and foster this aliveness. Here we might return to Ruskin again, as this was indeed one of his major concerns, both in his writings on art and architecture, which might be described as a 'vitalist aesthetics', and in his writings on political economy, which could be understood as driven by a 'politics of vitality'. Indeed, in the case of the latter, Ruskin was explicitly concerned with developing a value system based on the notion of life. As he writes in *Unto This Last*:

Valor, from valere, to be well or strong (ὕψιστος);—strong, in life (if a man), or valiant; strong, for life (if a thing), or valuable. To be 'valuable,' therefore, is to 'avail towards life.' A truly valuable or availing thing is that which leads to life with its whole strength. In proportion as it does not lead to life, or as its strength is broken,

it is less valuable; in proportion as it leads away from life, it is unvaluable or malignant.³⁶²

From this perspective, it makes no sense to cling to the modern binaries that define the themes of nature, materiality and technology. The natural is not opposed to the human, the material not to the immaterial, and the technological not to the organic, as long as all things, in the entanglement of humans and non-humans, strive towards life and away from death, which is not simply an engineering problem, but also a matter of care and beauty – an intersection from which an ecological sensibility emerges. Spuybroek draws a similar conclusion at the end of *The Sympathy of Things*, when he writes that ‘in vitalism, life is larger than technology, culture, or nature, separately or together’.³⁶³ He illustrates this statement with the following examples, suggesting the possibility of a politics of vitality, a way of acting in the world:

All we have to concentrate on is what the hybrid contributes to life. So, for example, when Monsanto promotes the spread of monocultures, it should be fought relentlessly. But when a state environmental department decides to remove all the fir trees from a forest because they are not indigenous, it should be fought just as hard.³⁶⁴

Other contemporary authors seem to argue in favour of such a politics of vitality as well, although often in different terms. For example, Indian novelist and writer Amitav Ghosh concludes his book *The Nutmeg’s Curse* with a call for a ‘vitalist politics’: ‘The idea of a vitalist politics may seem improbable at first, but it takes only a moment’s reflection to realize that some of the most effective political movements of modern times have derived their energy from vitalist sources.’³⁶⁵

As examples, Ghosh mentions not only the struggles led by people such as Mahatma Ghandi in India or the Davi Kopenawa in South America, but also the struggles ‘in the very heartlands of European modernity, manifesting itself in anti-enclosure movements, peasant revolts, and sometimes even more stridently vitalist forms of protest such as those associated with the Diggers, Ranters, and Levellers of the seventeenth century.’³⁶⁶

As Ghosh notes, while many of these struggles target the colonialist and imperialist structures of extractivist capitalism, they are also driven by a different cultural narrative, which requires ‘a seismic shift in consciousness for those who remain wedded to the conception that humans are the only ensouled beings and the Earth is an inert entity that

³⁶² Ruskin, *The Complete Works of John Ruskin*, 1908, XXVII:84.

³⁶³ Spuybroek, *The Sympathy of Things: Ruskin and the Ecology of Design*, 253.

³⁶⁴ Spuybroek, 254.

³⁶⁵ Amitav Ghosh, *The Nutmeg’s Curse: Parables for a Planet in Crisis* (Chicago: University of Chicago Press, 2021), 235.

³⁶⁶ Ghosh, 235.

exists in order to provide its rulers with resources.’³⁶⁷ One way to describe this ‘shift in consciousness’ would indeed be to describe it as the emergence of an ecological sensibility that, beyond the categories of nature, materiality and technology, strives towards life. As such, the distinction is not a modern one between the natural or the human, the material or the immaterial, the technological or the organic, but rather a vitalist one, between life and death. Or, as Ruskin already wrote in *Unto This Last*, using full caps: ‘THERE IS NO WEALTH BUT LIFE.’³⁶⁸

³⁶⁷ Ghosh, 242–43.

³⁶⁸ Ruskin, *The Complete Works of John Ruskin*, 1908, XXVII:105.

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Biography

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