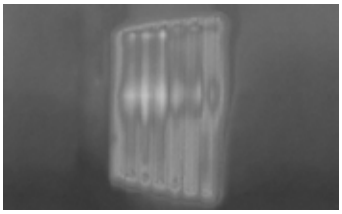
# Reviews

## *Power,* CIVA, Centre International de la Ville et de l'Architecture, Brussels (October 13, 2023 - March 17, 2024)



All of this won't give us back Congo. Perched atop a hill, overlooking a reservoir supplying potable water to Brussels, the CIVA (Centre International de la Ville et de l'Architecture) has positioned itself at the forefront of architectural discourse for three years now. This shift coincided with the appointment of Nikolaus Hirsch, a renowned architect and curator, as new artistic director. Previously regarded primarily as an archive center for the contentious modern architectural archives curated by conservative architects during the fervor of the 1960s, CIVA embarked on a series of exhibitions aimed at redefining its critical stance in the lead-up to relocating from its hilltop perch to the former Citroen garage in central Brussels.

The inaugural exhibition, held over the course of 3 months in late 2021, was titled *Institution Building.* It was conceived as an evolving showcase, inviting architects worldwide to engage with the institution from various perspectives. Situated somewhere between Harald Szeeman's seminal *When Attitudes Become Form* and the iconic *This is Tomorrow* exhibition at the Whitechapel Gallery in 1956, the genesis of this initiative traces back to the temporary occupation of the abandoned Citroen garage by the CIVA team, offering a glimpse into the potential future of museums in the 21st century.

Reflecting on this evolution, it becomes evident that everything following *Institution Building* could be interpreted as a transient occupation of the institution's traditional confines. The exhibition concluded with an intervention by architect Jan de Vylder and the technical team, dismantling a circular opening between the exhibition space and the protected archives. A physical and metaphysical connection between the archives and the exhibition areas. Thus, the tone was set: CIVA will be punk or it will not be.

My own studio Traumnovelle was invited to contribute to an exhibition showcasing images from the archives. Our aim was to explore the architectural projects that emphasize the profound nexus between architecture and politics in Brussels. Sorting through thousands of images, we affixed them to the walls, only to peel them away, revealing a palimpsest of concealed horrors. Initially, we contemplated removing the originals, but soon realized such a gesture was premature. At the exhibition's opening, we underscored that if we had encountered these archives before embarking on our architectural journey, we might have recoiled from the discipline. Yet, CIVA proved otherwise; its archives serve not merely as dormant repositories of horror but also as potent tools for confronting the past to shape the future.

In 2023, *Style Congo* opened to the public, prompted by a simple yet profound question: while Belgian presence in Congo is well-documented, what about the Congolese presence in Belgium? The exhibition curated by the CIVA team including Nikolaus Hirsch and Silvia Francescini, alongside studio Twenty Nine, represented by contemporary artist Sammy Baloji and researcher-curator Estelle Lecaille drew inspiration from Deborah Silverman's decade-old research highlighting the profound connections between Belgian Art Nouveau and Congo. Another cornerstone was our contribution, *Congolisation*, which unearthed from the CIVA archives Belgian pavilions from Universal, International, and Colonial Exhibitions featuring a Congolese presence. Through contributions from contemporary artists addressing similar themes, the exhibition transcended disciplinary boundaries, coalescing around the transformative potential of a transdisciplinary approach. Archives, by their nature, are not relics of the present but beacons for the future.

One of the Belgian pavilions at the 1958 exhibition, titled *Towards a More Human World*, showcased the Pavilion of Uranium, spotlighting the potential of this newfound energy source extracted from Congolese mines.

The phrase "All of this won't give us back Congo" resonates deeply in Belgium, serving as both a common expression and the title of a renowned Belgian TV show documenting reality. Embedded with Belgian irony, it underscores the futility of reclaiming lost treasures, regardless of efforts expended. Its application from a Congolese perspective adds another layer of poignancy: all endeavors, no matter how earnest, cannot restore what has been lost.

In 2023, against the backdrop of geopolitical upheavals like the Russian-Ukrainian conflict and the omnipresent specter of climate change, a striking visual installation marks the commencement of the exhibition *Power*. An infrared heating system by a TU Delft architecture studio, coupled with a live display of the building's energy consumption, made tangible the exhibition's central theme: the imperative of retrospection to comprehend the present.

The uranium that fueled the nuclear devastation of Hiroshima and Nagasaki was sourced from the Shinkolobwe mine in the DRC, reopened in 1937 to satisfy American demands for the Manhattan Project. Reciprocating this generous gift, Belgium was among the first in Europe to receive civil nuclear power technology. Architectural plans and drawings from the CIVA archive unveil the Pavilion of Uranium's layout, a centerpiece of the 1958 Universal Exhibition showcasing a piece of raw Uranium in its center. The exhibition's research team also

unearthed an alternate proposal for showcasing this Promethean energy source: a nuclear power plant along the Brussels Canal, scuttled due to objections from one particular citizen over its proximity to his abode. Laid out on a table made from an insulating panel is a letter issued by the king Albert II stating "Not in my backyard."

The exhibition delves into the broader geopolitical implications of such endeavors, shedding light on the European Economic Community's formation in 1957, juxtaposed against the colonial control exerted over member states' territories—a narrative conveniently overlooked in contemporary Europe's official discourse. On some tables, pages of magazines showcasing the architectural potential of the other important European industry: the Steel industry, father of the Euratom project.

Navigating through the exhibition's immersive landscape, visitors encounter Claude Parent's provocative architectural renderings for a French Power Plant, challenging conventional notions of space and catastrophe. One drawing shows in the background a new concrete aesthetic of the power plant and in the foreground, people picnicking on a green lawn. Claude Parent and Paul Virilio, pioneers of the movement known as *The Function of Oblique*, championed a society capable of confronting its own turbulent history without flinching, and dancing on the slope left by modernity.

Another exploration unveils archives from the CIVA collection by Paul Duvigneaud, a figure with an enigmatic presence. Duvigneaud's work initially focused on studying Congolese lichens in the Congo, eventually establishing himself as a pioneering Belgian advocate for a systemic and ecologically informed approach to understanding the landscape of Brussels. Through his sketches, Duvigneaud prompts us to contemplate how we portray the climate. This sentiment resonates with the director and curator of CIVA, who emphasizes that climate transcends mere weather patterns. From what we once viewed as old promises, we have now ventured into the realm of new pledges with an installation crafted by the Collective On-Trade-Off. This installation delves into the extraction necessary for constructing what we perceive as the future of mobility, epitomized by a copper Tesla Car. However, this vision is intertwined with another contemporary saga: the cobalt, coltan, and lithium mines, crucial resources for a promised green future, but also the sources of fresh wounds and aspirations in the Congo Territory. Yet, despite these endeavors, none of this can give us back Congo. It appears that whenever our modern societies require a new miracle material in abundance, they conveniently *discover* it in the heart of darkness.

A supplementary segment of the exhibition focuses on lithium, featuring a discussion between researcher Marina Otero, who actively investigates lithium mines in Chile, Sammy Baloji, and two members of the Off Trade Collective. Baloji, in his intervention, chooses not to dwell on distant events, instead, he poses questions to the audience about the here and now, spurred by Belgium's refusal to publish the commissioned report on the decolonization of Belgium.

Adorning one wall is a small poster by architect Luc Schuiten for Belgium's youthful green party, portraying a wind turbine emerging from the ruins of a nuclear wind tower. Ironically, the painted turbine is intersected by a flock of jubilant birds, now known to be on the frontline of ecological disasters stemming from this new green technology.

In the main exhibition space, juxtaposed are two contrasting installations: a Dutch proposal for constructing leisure offshore wind farm islands and an installation by architect Liam Young named *The Great Endeavor*. The latter features a contemplative 3D video showcasing an offshore world dominated by machines fueling our envisioned green future, while adjacent to the entrance wall, uniforms from Shell and Halliburton serve as a stark reminder of the relentless exploitation of the planet's dwindling resources. These exhibits prompt us to ponder what lies beneath the favored images of the Anthropocene. At the heart of the main exhibition room lies *Photography* by Armin Linke, capturing ecological tragedies intertwined with global empowerment. This portrayal, ranging from aerial shots to close-ups of bureaucratic offices, challenges the aestheticization of ongoing catastrophes. Reflecting on TJ Demos's essay *Against the Anthropocene*, we are urged to reject these sanitized images and acknowledge the direct human impact on a global scale, underscoring the need to confront and contest future projects as archives of impending crises. I couldn't shake the belief that the *Power* exhibition was highlighting this sense of hopelessness, while daring us to derive some enjoyment from this final show.

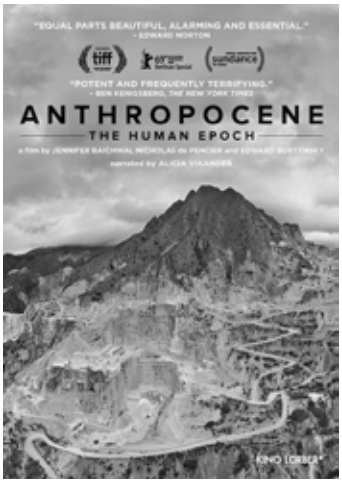
The conclusion of *Power* unfolds with a video titled *Untitled Crude Eye* by artist Monira Al Qadrilia, offering a journey through a desolate model of a machine world, devoid of life and purpose. Only the faint whispers of factory machines persist, relentlessly producing without respite. Maybe the issue has never been power, but rather extractive productivism.

In its entirety, *Power* invites us to interrogate the consequences of spatial design critically and cautiously, recognizing that while our endeavors may shape the future, they cannot reclaim what has been lost.

All of this, indeed, will not give us back Congo.

Johnny Leya (Traumnovelle)
Independent researcher

**Jennifer Baichwal, Edward Burtynsky, Nicholas de Pencier, *Anthropocene: The Human Epoch*, Mercury Films, 87' - 2018**




The term *Anthropocene* refers to the current geological era in which human activities have significantly altered Earth's conditions and processes. This mutation has become more pronounced since the Industrial Revolution, leading us away from the Earth System state, typical of the Holocene Epoch that post-dates the last glaciation.

Although the Anthropocene is not currently a formally defined geological unit within the Geological Time Scale – officially we still live in the Meghalayan age of the Holocene Epoch – many phenomena suggest an irreversible change in our relationship with the Earth. These phenomena have occurred significantly since industrialization, including: a massive increase in erosion and sediment transport; disturbances of elements such as carbon, nitrogen, phosphorus, and various metals along with new chemicals; environmental changes generated by these disturbances, such as global warming, sea level rise, ocean acidification, and the expansion of dead zones in the oceans; rapid changes in the biosphere, both on land and at sea, due to habitat loss, predation, invasions, or extinctions of animal species; the proliferation and dispersal of many new minerals and other materials, such as techno fossils produced by humans.

Science, art, and cinema are collectively contributing a diverse range of experiences and creations to help define the peculiar era in which we currently exist. Filmmakers Jennifer Baichwal, Edward Burtynsky, and Nicholas de Pencier have contributed to the debate producing the documentary *Anthropocene: The Human Epoch*, a journey across six continents to investigate the various ways in which humans are exploiting Earth's resources and altering our planet like never before. The documentary supports the theses of the Anthropocene Working Group, an interdisciplinary research group established in 2009 as part of the Subcommission on Quaternary Stratigraphy and a constituent body of the International Commission on Stratigraphy, which is attempting to demonstrate the transition to a new epoch through scientific evidence. Presented in World Premiere at the Toronto International Film Festival in 2018 and included into its annual year-end TIFF's Canada's Top Ten list, the work is a prominent feature of the *Anthropocene Project*. The project encompasses exhibitions at renowned institutions such as the Art Gallery of Ontario, the National Gallery of Canada, and, among other places in Italy at MAST, in Bologna. Additionally, two books – one consisting of essays and the other of photography – have been published as part of this groundbreaking visual initiative.

Through the work of landscape photographer Edward Burtynsky, the film is conceived as a plural and impressively splendid and terrifying journey around the world through deserts, mountains, forests, and the depths of the oceans where the increasingly incisive signs of human loom: rampant deforestation, large industry, uncontrolled urbanization, indiscriminate exploitation of land and people. It shows the side effects of human dominance over 85% of the landmass not covered by glaciers, which occurs through agriculture, industrialization, urbanization, massive exploitation of fossil fuels, production of synthetic products, and nuclear testing.

The journey shows 43 places in 20 different countries: each stop represents one of the worst global environmental disasters. It begins in Kenya, where poachers kill thousands of elephants to obtain ivory. It continues to Norilsk, in Siberia, one of the most polluted cities in the world, which hosts nickel mines and other metals. The journey then takes us to the Chilean desert of Atacama, where lithium, essential for cell phone batteries, is processed. Meanwhile, in Immerath, Germany, historical architectures are demolished to expand open-pit coal mines. The documentary reveals the structure of an essay film divided into thematic chapters supporting a clear thesis. With a didactic, educational, and politically-oriented approach, it is by far both a transparent analysis and a denunciation.

The film displays a sovereign survey of the planet's overall body, focusing on its fundamental features, from the geophysical and environmental to the economic and productive, from the socio-demographic to the anthropological and cultural. The narrative unfolds through touching landscapes and struggling voices: while the linearity of the journey is held together by Oscar-winning actress Alicia Vikander's voiceover, the testimonies of the indigenous people represent the complexity and multiplicity of the disasters. The languages of storytelling are many: English, Russian, Mandarin, Cantonese, Italian, German. A global fresco

composed of testimonies that live beyond the atlas of wonders begins to take shape through fragments. The three directors of *Anthropocene* had previously worked together on the same themes. Photographer Edward Burtynsky traveled the world observing changes in landscapes due to industrial work and manufacturing to realize *Manufactured Landscapes* (2006) directed by Jennifer Baichwal. Burtynsky and Baichwal later directed the documentary *Watermark* (2013), which shows how the essential element for human existence has been used, while at the same time being wasted. Like *Anthropocene*, the narrative unfolds through a bold journey, from China to Bangladesh, from the United States to India, showing us how human action has been capable of exploiting the presence of water, but also the greed that has depleted its value to the detriment of some areas of the world. *Anthropocene* is the latest work by Burtynsky and Baichwal together with Nicholas de Pencier, previously producer, representing the completion of the trilogy of documentaries, devoted to the impact of human activities on our planet.
Laying within the fragile intersection of art and science, the trilogy shows how humans have marked territories with strong inequalities: the advantage of one area has always led to the impoverishment and condemnation of a second one. As the final chapter, *Anthropocene* seems like a dystopian feature about the dark side of prosperity, started from consumerism and the reckless consumption of Earth's resources. The film serves as a stark reminder of the urgent need to acknowledge and address the destructive forces at play in our quest for dominance.

Alessandra Lancellotti
Politecnico di Torino

**Pierre Bélanger, *Landscape as Infrastructure: A Base Primer*, Routledge, 2017, 508 pp. Paperback: € 63,50 - ISBN 9781138643925**
**Jeffrey S. Nesbit, Charles Waldheim, *Technical Lands: A Critical Primer*, Jovis, 2023, 252 pp. Paperback: € 32,00 - ISBN 9783868597042**



How do infrastructures and technicalities articulate (and perhaps confuse) our conventional understanding of land(scape)? How do they act as a reframing of nature, through culture, value and capital? What implications does this hold in a so-called regime of modernity? According to the planetary urbanization hypothesis, geographical spaces have become so interconnected that nature has transformed into what Jason Moore defines as "cheap nature" through power dynamics, wealth distribution, and labor. Hence, making its way is a "capitalism in nature" indicating that nature is now intricately woven into the economic circuits of capital. Right after Modernism, some scholars acknowledge this epistemic shift by recognizing the value of nature as an object of design and so nature becomes landscape and urban design recognizes landscape through the discipline of "landscape urbanism." Especially following a post-structuralist perspective, there have been attempts to discuss these positions looking progressively at nature as a device.
*Landscape as Infrastructure: A Base Primer*, curated by Pierre Bélanger in 2017 and *Technical Lands: A Critical Primer*, edited by Jeffrey S. Nesbit and Charles Waldheim in 2023 present themselves as two examples of this reconceptualization. While *Landscape as Infrastructure* stands among the earliest works in the tradition of Landscape Urbanism, arguably acting as one of its manifestos, *Technical Lands* seeks to deliver a critical re-reading of the idea, encouraging dialogue with more recent literatures and presenting some forms of what have been defined as operational landscapes. This connection between the two volumes is reflected in their subtitles, which strongly suggest, despite an obvious six-year gap, a discernible continuity, if not an enhancement of the theory. Together, they reach the intent to grasp the metabolic interactions within the dynamics of a planetary urbanization.
*Landscape as Infrastructure* dismantles any romanticized view of the landscape: it should not be looked at as a setting, instead being reduced to nothing more than infrastructure. As a collection of essays spanning more than a decade, this

volume brings together ten texts exploring how the emergence of ecology and the revival of geography are radically reconfiguring the understanding and shaping of environments, unfolding the visible systems, invisible processes, and indivisible scales constituting the infrastructure that supports contemporary urban life. Keeping practitioners, policymakers, students, and educators as its audience, the book reinterprets the infrastructural turn in urban studies as an operative tool for design. Highlighting the need to break free from conventional limitations, its approach emphasizes an usage of landscape natural connections with ecology, engineering and geography. This transformative approach requires a complete review of large-scale planning and a new view of the fine surfaces, promoting both a reshaping of existing urban infrastructures and the installation of new ones. The starting point is a discussion about some of the 400,000 sites listed in the report *Recycling America's Land* (USCM 2006) – airports, harbors, roads, sewers, bridges, embankments, dams, energy corridors, terminals and treatment plants – all of them in a state of advanced decay due to lack of maintenance, a legacy of the modern industry, ultimately resulting as "failures and accidents instead of a proper design." (p. 211) For instance, the challenges faced by a landfill site in Niagara Falls, New York, and a landfill demolition site in Toronto, Ontario, shed light on the imperative to incorporate water management, waste, food, transport, and energy considerations when planning the operations. Any design of food production and energy networks then would necessitate an interpretation of the interconnected flow of waste streams and the cycle of raw material input. It is a shift in perspective, requiring landfills, farms, fishing and storage areas, as well as sorting facilities, to be conceived with their interdependencies in mind. Likewise, motorway networks, sewerage systems, and subdivisions demand an integrated design that acknowledges their environmental impact. Exploring the underlying nature of infrastructure as an invisible instrument of state power, the texts offer a perspective on the role of central powers for growth and development at different levels of understanding. The analysis of the ecological processes underlying such transformations opens up a reinterpretation of territorial powers and, in some contexts, suggests resistances to countervailing dominant forces. Overall, the volume proposes new perspectives on state and citizenship through lighter approaches in terms of engineering and planning, as well as more flexible infrastructures. In this context, landscape emerges not only as a model of thought, but also as a means of intervention, where the existing political entity can undergo a transformation through an emerging ecological one.

In Belanger's perspective, ecology reveals itself as a "constructed ground" (p. 226) built upon the interaction of hydrology, geology, biomass, and climate. Here, the importance of water and river basins emerges as a structuring system, guiding the trajectory of the built landscape. This perspective transforms the project into a telescopic process, capable of assimilating different time scales of intervention. Within this telescopic view, design extends at different layers, becoming an infrastructural orchestration of surface systems, material volumes, logistics implementation: this concurs into a reorganization of territories that transcend man made borders as well as the evolution of soil transformations, the identification of synergies between different land uses and the recognition of mutual influences between different agencies.

By embracing this global approach, the project transcends traditional notions of temporal and spatial constraints, becoming a dynamic and responsive intervention that navigates through the complexities of built ecology. This perspective aligns with the evolving paradigms in landscape design, moving away from static and aesthetic representations to embrace the multifaceted dimensions of performative effects, thus reshaping the discourse on landscape planning and design. The form of design here proposed steers clearly of historical emphasis on over-engineering and over-design, offering alternative directions without excessive reliance on intensive practices.

On the other hand, landscape is often perceived as everything except for roads and buildings, a conceptualization that played a significant role in shaping the definition of "urban," which is getting more and more blurry, both in concept and in execution. The expansion of the urban scale dissolves the boundaries between city and countryside, meshing their distinctions as external areas adopt an urban character. Landscape is hence "operational," acting in the construction of vast urban transnational territories that aim to serve the "urban." As such, landscapes become sites of extraction, extensive agriculture and ancillary infrastructures that connect these systems to the city: it is not the urban that inhabits the landscape, but the landscape that gravitates around the urban.

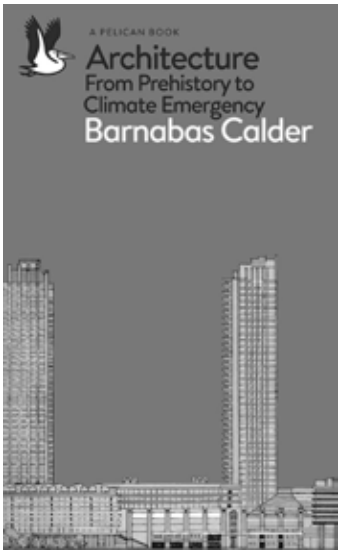
These are the focus of Technical Lands, a concept that the book seeks to explore according to various perspectives, including economic, cultural, legal, and aesthetic ones. The underlying idea is to challenge the common perception that these areas are peripheral to urban studies, though often perceived as distant or marginal in relation to what might be defined as "the urban," are not necessarily wild or remote places, at least not anymore. Indeed, they install an intertwining relationship with cities that feeds on co-production and codependency.

To do so, it is necessary – as Peter Galison explains in the first chapter – to go back to the shift from Newtonian physics to relativity: while Newton affirmed that space and

time make up the fixed stage upon which the events of the perceivable world take place on, Einstein proposed an alternative with the theory of relativity, which states that space and time are not fixed coordinates. Following this parallelism, we could easily argue that land is not a fixed stage upon which we act, instead being relative to human activities and needs, as continuously demonstrated by recurrent events such as desertification and deglaciation, historically driven by human actions which mine the fragile equilibrium of the Earth.
The technical lands are also the result of jurisdictional action, a theorization of places where global practices of knowledge and aesthetics converge to concretely transform the physical geography of the territory. These landscapes indicate a variety of sites with special legal status, especially in relation to the non-human world. They show a diverse nomenclature and include exclusion sites, administration, regulation, demilitarized zones, space bases, and sites of extractive industries and military bases, to name but a few.
A prime example of this is the Waste Isolation Pilot Plant (WIPP), located approximately thirty miles northeast of Carlsbad, New Mexico. Purposefully crafted, WIPP serves as the ultimate repository for nuclear weapons industry byproducts, housing materials tainted with plutonium and transuranic elements. Its core role is to safely contain and isolate radioactive waste until it ceases to be a threat. Beyond technical intricacies, understanding WIPP requires navigating a complex legal landscape made out of regulations that govern its every aspect. Moreover, lands become technical even through the complex mechanism of systems that allow their exploration, visualization and comprehension, such as GIS (Geographical Information System) or remote sensing and satellite views. *Technical lands*, epitomized by sites like WIPP, the 1848 Union Stockyards in Chicago, the Detention Prison-Building built in the Abandoned Mine Lands of Appalachia, and all these operations exert a transient influence on their environs. Outflows, smokestacks, and buried materials undergo transformations affecting soil, groundwater, and wetlands. These radioactive domains instigate environmental changes necessitating extended chronologies, often surpassing the scale of a single human lifetime. What all these examples bring to light – just like all the other parts of the book – is how areas designated as human exclusion zones emerge as sanctuaries for the non-human, ushering in a new classification of lands: and that absence is even more present in the pictures here collected where every form of life appears even by mistake.
The reflections presented in both volumes converge towards a functional definition: as the scope of infrastructure expands from local to state, from national to international, they emerge increasingly as technicalities. A kind of extension of influence is projected onto the planet, outlining the *anthropocene* as the recognition of our transforming of the sea, the atmosphere and the earth into technical entities, lines and infrastructure, with increasingly obvious consequences. Treating nature as an object means a transition from its ornamental role to an active one, where it functions as a contributing device to human life, parallel to artificial constructs. Infrastructures have entered current urban planning discourse as a strategy that supports territory's progress towards achieving environmental conservation, sustainable development and urban resilience. These kinds of infrastructures are not merely understood as machines of supply and transmission but as elements made of folds, temporalities, ecologies characterized by inherent fragilities, dispositifs which act through a different set of action.

Sofia Leoni
Politecnico di Torino

**Barnabas Calder, *Architecture. From Prehistory to Climate Emergency*. Penguin, 2021, 547 pp. Paperback: € 18,52 - ISBN 9780141978208**




*Architecture. From Prehistory to Climate Emergency* by Barnabas Calder begins with an insightful observation, namely that "the construction and running of buildings are currently responsible for 39% of all human greenhouse gas emission." (p. XI)
This sentence works both as a *memento* and as a *leitmotiv* of a text whose alternative title could be: *Architecture Reduced Under the General Concept of Energy*.
The underlying intentions of the author are highlighted immediately, in an introduction that admits the will to instill a different thought about why we create buildings and give consistency to our urban projects. In the first chapter the author's tone expresses a certain concern for the future, which becomes more enthusiastic and optimistic in the last part of the book: here, he tries to raise a sense of responsibility within the building sector that frequently does not do enough to move towards

sustainable energy consumption.
The book is divided into two sections. Part One investigates the events between two fundamental energy turning points: that of the Agricultural (or Neolithic) Revolution which occurred around twelve thousand years ago in the lands of the Fertile Crescent, and that of coal during the European seventeenth century. Afterward, Part Two moves from "the march of bricks and mortar" (p. 197) in eighteenth-century Georgian London to today's Chinese megalopolis. Unlike the first one, almost all of the themes of the second section concern Europe and North America, as they were the first regions of the globe to be industrialized: "Their architectural response to fossil fuels was often the earliest and was frequently, thanks to the economic and colonial power that accompanied it, influential on other parts of the world." (p. XXIII)
The central focus of the discourse is *energy*. In particular, Calder concentrates on the concept of embodied energy, that is, the total amount of consumption necessary for something to be produced, processed and put into service. Embodied energy is such because it is effectively hidden from our sensible experience. It is the perishable trace of history *par excellence*. Calder could be considered one of the first to attempt a narrative of architectural events starting from what can no longer be seen: the energy that has been made necessary to build them and make them work. Nowadays, this effort functions as a fundamental integration to the other various historical narratives already present.
Here, from the times of Uruk (3.500-3.000 b.C.) to those of the European seventeenth century (the so-called "agrarian millennia" of Part One) humanity tried to transform the context to maximize the quantity of useful energy that it managed to obtain from cultivated fields and from the woods, as well as from waters and winds. During this era, the amount of soil for energy production was a direct contender to that necessary for food supply: fate and the prudent use of these resources periodically led a group to prosper significantly, "but every boom was followed by decline or bust, as the remorseless cycles of crop fertility and changing climate imposed scarcity and instability." (p. 193) If the energy required to construct buildings was expensive and difficult to implement, the amount required during their life cycle was minimal. With the large-scale introduction of fossil fuels like coal, oil and natural gas, the price of materials and construction sites collapsed, but the related energy consumption grew exponentially, reaching today's peaks also caused by the fact that in the meantime the world population has increased tenfold. Following this reasoning the main concept of the book emerges: "The wonderful buildings of Modernism were the very antithesis of everything that sustainable architecture needs to become: they gloried in profligate heating, cooling, ventilation and lighting systems, in [...] energy-hungry materials, in car-based cities." (p. 446) In short, it was a season of incredible fossil-derived energy surplus that has contributed crucially to the ecological crisis that we are called to face nowadays – and which we can no longer indulge in.
In further analysis, Calder assumes a sort of cross-eyed posture: while one eye retraces the fundamental stages of the history of architecture in an exhaustive, all-encompassing and not purely Eurocentric manner, the other one remains fixed and sensitive to our present world, within which the energy theme is decisive and fundamental. Any projection of ours, going forward or backward, cannot ignore the situation in which we are immersed and living. So, having that every historical narrative is as if it (also) speaks to us in the present tense, *Architecture. From Prehistory to Climate Emergency*, ultimately, could and should be considered as a possible meta-design tool for the contemporary project. In doing so, what is referred to throughout the text is not something constrained in itself, the architecture as a substance, but rather a relationship between architecture and energy. From this, the work has to be considered very meaningful for two main reasons. Firstly, for being destabilizing and overturning compared to the most widespread historical narratives: in fact, the energetic point of view allows us to see a further face of the potentially infinite polyhedron of the history of architecture. Secondly, it is so because it takes inspiration from present energy issues, which have a crucial role in today's discussion around the ecological-environmental problem. These expedients offer new and valid ideas and references for the present and the near future project: this is why "as architects and technicians come to consider the great energy change that faces us all – decarbonizing our built environment –, architectural history needs to lead the discussion." (p. 445)
All this, finally, also to go behind and beyond the forms of architecture and to reformulate the modernist belief of "form follows function", expressed firstly by Louis Sullivan and later became a popular mantra, replacing it with a more updated (and maybe sincere): "form follows fuel." (p. 291)

Tommaso Antiga
Università degli Studi di Trieste