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Choral Architects and Collective Intelligence: Interview with Carlo Ratti

KHŌREIN: One of the key terms in your statement for the 19th Venice Architecture Biennale is "End." You ask whether it is too late to avoid the end of life on Earth. Is there a way out of this end-times scenario if climate change continues at this pace?

CARLO RATTI: The *Biennale Architettura* 2025 will seek to convey a message of hope. There is no doubt that we are now entering the era of adaptation to climate change—and architecture is the key discipline that can contribute to it.

KH: From another perspective, your question resonates with the ideas of the theory of Dark Ecology and the claim that the world has already come to an end with the invention of the steam engine. Can technology that caused the climate crisis now be used to reverse this process?

CR: I believe it can, but only if we shift our approach. While technology has been used as a tool of exploitation, it is not inherently destructive. The pivotal issue is not the technology itself but the intentions behind its use. Richard Buckminster Fuller once warned that "how we approach urban development today will determine our destiny—utopia or oblivion." This sentiment holds true for technology as well. If design and technological innovation are narrowly focused on consumerism or superficial aesthetics, we risk being distracted from the pressing challenges of our time.

However, if we deploy these tools with a broader vision—using design to tackle the climate crisis and social inequality—they could be forces for transformative good. We have seen examples of this in architecture and design, where the conversation is shifting toward addressing global challenges. For instance, Lesley Lokko's *Biennale Architettura* marked a significant step in bringing the industry closer to addressing both ecological sustainability and social justice. It demonstrates that the solutions we

need are already within reach, but the way forward requires us to rethink how we use technology and design.

I don't consider myself an optimist but a realist. The tools we need to address these crises exist. The real barrier is not a lack of technological capability but a collective failure to prioritize the common good. The future hinges not on whether technology can be used to reverse the damage—it absolutely can—but on whether we have the collective will to deploy it as an instrument of healing and transformation.

KH: Your work in urban planning and design could be summed up as an agenda to bring the natural and artificial worlds together. How do you propose the creation of this symbiosis between natural and artificial intelligence? Finally, how does the third notion of the collective add to this "trialectics?" Where do you position the issue of commoning in this equation and your practice?

CR: The search for a balance between the natural and artificial worlds is a central theme in today's discussions on urban planning and design, especially as we navigate the complexities of the Anthropocene. This era, marked by significant human impact on the planet, reveals that the lines between "natural" and "artificial" are increasingly blurred. As Nobel laureate Herbert Simon pointed out, even a plowed field is not just a product of nature; it reflects human intervention and design. Such insights challenge our traditional definitions of nature, showing how human activity has long shaped the biological world, making it more artificial than we often acknowledge.

This raises an important question: If we can shape the natural world to suit our needs, can we also make our cities and built environments more attuned to nature? This merging of the natural and artificial suggests a shift in how we think about cities, transforming them from concrete jungles into vibrant ecosystems where built environments coexist with nature.

At the heart of this vision is the idea of collective intelligence, which becomes increasingly vital as the distinctions between human design and organic existence fade. Addressing the challenges of urban environments requires more than the vision of a single architect; it calls for a collaborative approach that embraces the adaptive nature of collective intelligence.

Historically, architecture and urban planning have relied on collaboration, drawing from local knowledge and shared experiences. Before the rise of the "starchitect," cities were shaped through the efforts of communities responding to their surroundings, creating spaces that were functional and in harmony with nature. This form of collective intelligence allows for solutions that work with ecological systems rather than against them.

KH: When defining collective intelligence, you start from the idea of "architecture without architects," echoing Bernard Rudofsky's exploration of vernacular architecture. How might we define collectivity or collective intelligence beyond the idea of the vernacular? How do you see the role of academics in this collective intelligence?

CR: While vernacular design is deeply embedded in local environmental and cultural contexts, I believe collective intelligence today embraces a broader, more interconnected framework that recognizes the influence of global networks and collaborative processes. Paul Ricœur's critique of global homogenization serves as a cautionary tale against a world inundated with standardized products and ideas, leading to cities that risk becoming indistinguishable from one another. Meanwhile, Kenneth Frampton's concept of critical regionalism underscores the significance of place-based architecture, striving to balance global influences with local realities. Yet, as the complexities of globalization continue to unfold, architectural discourse must adapt and evolve.

A few years ago, my colleague from Harvard, Antoine Picon, and I proposed the framework of Network Specifism—a contemporary lens for understanding collective intelligence in architecture. This approach recognizes that architectural and urban practices are increasingly shaped by dynamic global networks and collaborative efforts. Building on Christopher Kelty's idea of the "recursive public," it posits that these networks not only facilitate interaction but also actively influence the shaping of community and space.

The concept of collective intelligence in architecture today should marry local specificity with global connectivity, empowered by digital tools and interdisciplinary collaboration. I believe Network Specifism offers a promising framework for crafting spaces that resonate with local

identities while simultaneously engaging with the broader, interconnected world.

As to what you ask about academics, in a parallel sense, I think they ought to learn to shed their insular tendencies and engage more openly with the wider world. Their ideas—and the broader community—would benefit from it. I am not pointing fingers—architects are often just as guilty. And I should know—I am both an architect and an academic.

KH: Perhaps one of the most provocative terms in your writings is "choral architect." If we understand it well, a choral architect would be someone without a specific finished object in mind, that is, whose end goal is rather to orchestrate the very process of collective work. You use an interesting expression in this context, "design-curation ecosystem." Where do you find the relevance of this metaphor of curation? Could it replace the idea of authority with some more ecological approaches in the architect's work?

CR: The concept of the "choral architect" could redefine the architect's role, moving away from sole authorship toward facilitating a collaborative process. Rather than dictating outcomes, the architect curates and steers the design process, much like a curator arranges an exhibition, allowing diverse inputs to shape the project. I would not say this diminishes the need for vision—if anything, it calls for an even more expansive imagination to guide the process toward something remarkable.

KH: What do you see as the role of architecture in the future world, whatever this concept of the future implies? Are we living at the end of architecture, and would you agree with Jean Nouvel that the future of architecture is not architectural?

CR: Jean Nouvel's assertion that "the future of architecture is not architectural" isn't entirely new. Le Corbusier, decades ago, claimed that "the future of architecture is an engineer," hinting at a shift where architects might become peripheral figures in the broader realm of design and construction. If Nouvel's point is that architecture should embrace collaboration with other disciplines—engineering, technology, urban planning—we are on board. But if his statement implies architecture should devolve into mere philosophical speculation or virtual representations, disconnected from practical solutions, we disagree. The profession still

holds a vital role in addressing today's key challenges, as we were discussing before.

KH: You have stated that the digital and physical worlds are converging. In your formulation, the concept of a "real-time city" advances new dynamics in human interactions with urban spaces. You envision cities where physical and social networks are engaged in continuous interchange, mediated by sophisticated communication networks, digital sensors, and big data. Could we say that these complex networks of smart environments are turning our real surroundings into virtual ones?

CR: In a way, yes, but I am more interested in the fact that these smart environments are making our artificial spaces feel more "natural." As our cities evolve, they begin to mirror the complexity and adaptability of natural systems—reacting to us, learning from us, and even anticipating our needs. Sensors, AI, and actuators are turning our buildings and cities into hybrid entities that resemble the natural world—fostering the convergence we were discussing before...

KH: Félix Guattari's suggestion to think transversally in finding solutions for the eco-social crisis can be seen in your approach to the set of problems you would like to address from the position of different disciplines, discourses, or "intelligences." You underline that you intend to "explore a definition of 'intelligence' as an ability to adapt to the environment with limited resources, knowledge, or power." How do you intend to use all the available knowledge to challenge the position of power that, if you would agree, is inherent to the role of the curator of such a major global exhibition? How would you "exercise" this power?

CR: I plan to share power by including diverse voices—architects, scientists, urbanists, philosophers, and even non-human intelligences. While architects should still steer the ship, it is essential to recognize that others need to be on board with us. For that, next year we will challenge the traditional notion of authorship—moving from the autocratic approach architects have been favoring to a more democratic system inspired by what happens in science.

KH: We see environmental issues increasingly frequently becoming the theme of exhibitions and biennales. Your work and the concept you

proposed for next year's *Biennale Architettura* tackle this problem as well. However, a concern raised by T.J. Demos is how the exhibitions that deal at the theoretical level with environmental issues are actually being produced and realized. According to him, instead of finding solutions, major exhibitions tend to contribute to the problem in various ways. How do you, or how does one, practically address the problem of mounting a huge exhibition such as the Venice Biennale in an ecologically conscious way? How would this be implemented in practice?

CR: T.J. Demos raises an important critique, and I fully acknowledge the paradox inherent in large-scale exhibitions that claim to engage with environmental issues while simultaneously contributing to the problem. Exhibitions, conferences, and biennales often, albeit unintentionally, perpetuate environmental harm through resource-intensive setups, international travel, and temporary structures. This concern extends even to the COP conferences focused on climate change.

This irony is not lost on me, and it raises profound questions about the legitimacy of such events in the context of sustainability. In response to this, I find greater inspiration not from exhibitions but from impermanent cultural gatherings like Burning Man in Nevada or the Kumbh Mela in India. These events provide a compelling framework for understanding temporary, large-scale gatherings that function with minimal lasting environmental impact. Both Burning Man and the Kumbh Mela involve the construction of entire cities and ecosystems that are dismantled without leaving a significant trace, embodying principles of circularity, temporary stewardship, and ecological mindfulness.

Our upcoming *Biennale Architettura* 2025 aims to be the first of its kind to adopt a circular approach. The Circularity Manifesto, which we recently released at Climate Week NYC, details how the *Biennale Architettura* 2025 will actively minimize its ecological footprint by employing sustainable construction methods, reusing materials, and integrating the infrastructure into local ecosystems in a way that reduces waste and energy consumption. Our aim extends beyond solely discussing environmental transitions; we intend to implement these principles within the exhibition framework. This means incorporating renewable energy sources, prioritizing carbon-neutral travel options, and post-exhibition recycling plans for installations. Through these efforts, we aim to shift the

Biennale Architettura from being a contributor to environmental degradation to a model of sustainable cultural production.

It is not an easy path and next year will not be perfect yet—but we want to start to walk the talk.

KH: Given that innovation plays such an important role in your architecture and design practice, do you find that the global phenomenon of "biennalization," and in general the format of the biennale, offers much in the way of innovation? Otherwise, are the biennales and other major cultural and artistic manifestations just reproducing the dominant, often market-driven, socio-economic system? Finally, is the concept of national pavilions—which survives only in Venice, the oldest of all the biennales—still viable, or does it need to come to an end?

The term "biennalization" conjures images for me of a global elite—curators and a select group of artists and architects—moving from one Biennale to another in a self-congratulatory, exclusionary circuit. From Venice to Berlin to Chicago, the same names appear, raising concerns that these gatherings offer little room for fresh voices or innovative ideas. I would argue this critique falls short when it comes to the *Biennale Architettura*.

Take, for instance, Lesley Lokko's exhibition last year, which made space for architects who had never before appeared on such a stage. Placing them alongside more established figures, it created a genuinely dynamic, diverse platform. This year, our "Space for Ideas" initiative continues in that spirit, inviting participants discovered through open submissions—individuals who might never have had the chance to showcase their work otherwise. The democratic and inclusive nature of this approach, I believe, offers a strong counterpoint to the notion of biennales as closed, elite clubs.

Regarding the concept of national participations, I believe they still hold relevance. They can be platforms for addressing global issues through local lenses, where the national becomes a starting point for broader, interconnected conversations about architecture, culture, and society. This year we are trying to foster a common conversation on the theme "One place, one solution" in a way similar to what Rem Koolhaas did in 2014, albeit in a more bottom-up way (we are holding regular workshops with

all national curators and are rejoicing in the wonderful interconnectedness that is emerging).

Finally, there is the "biennalization" of Venice itself, a city some critics argue has become an open-air museum, where art installations are parachuted into the urban landscape with little regard for its rich cultural and historical fabric. The charge is that these exhibitions serve more to enhance the market value of the artists than to enrich Venice's local ecosystem. In our vision, the Biennale should not "mummify" the city; rather, it should reinvigorate it. We see Venice first and foremost as a living laboratory—a site for experimentation in architecture and urban design, not a static museum piece. Biennales that merely showcase existing knowledge are outdated and of little use (the Internet does that much better!). However, a biennale can be essential if it aids in developing new knowledge. This is our ambition for 2025!

Interview conducted by Zoran Erić, Snežana Vesnić, Željko Radinković, and Marko Ristić.