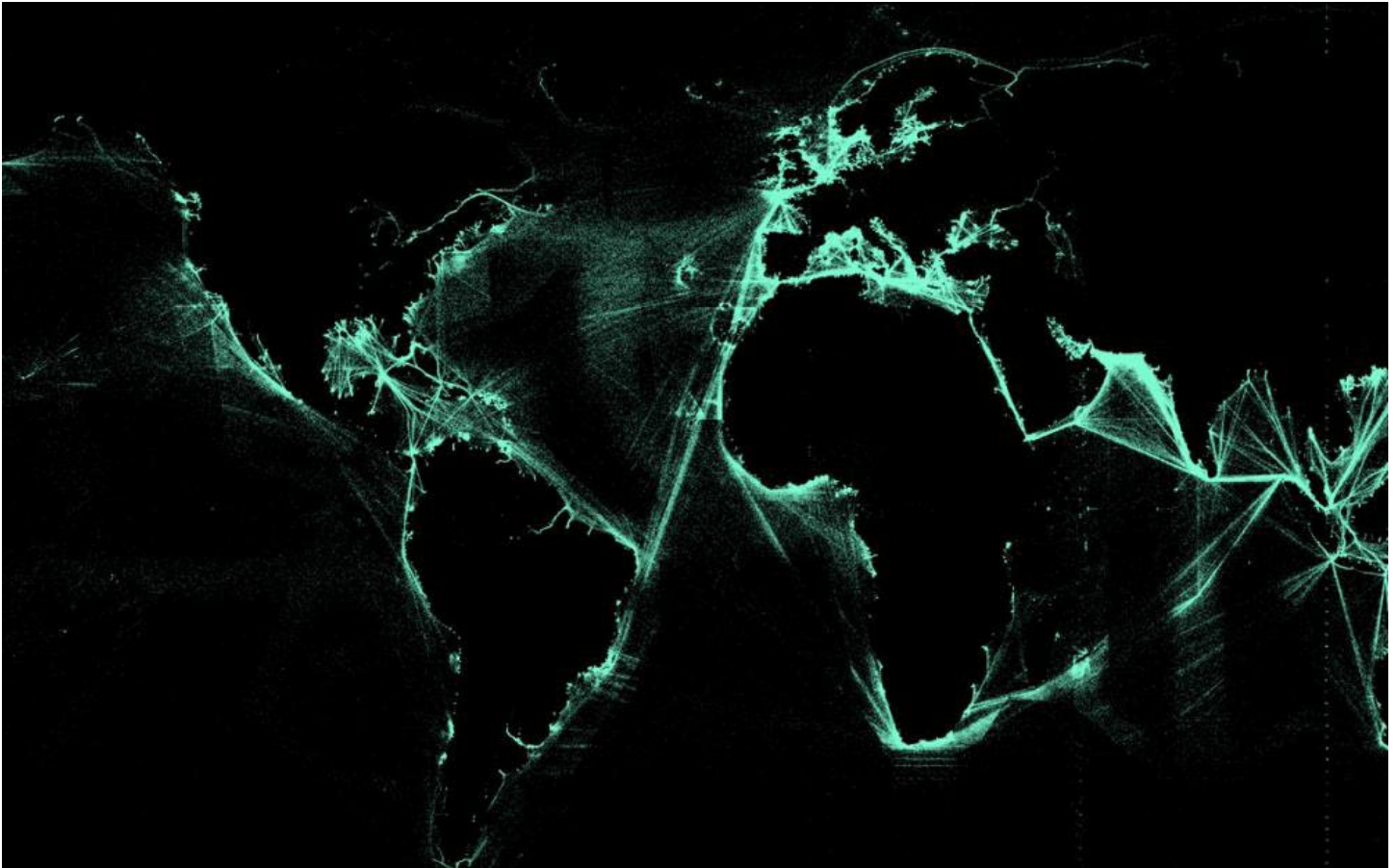


New Intellectual Geographies:

Global Reflections on Architecture and Sustainability

Nader Tehrani



Promoting relevant sustainable architectural practices worldwide, the Lafarge Holcim Awards is one of the key initiatives to place sustainability at the center of the global architectural debate. Within the framework of the current edition of the Awards ⁽¹⁾, TRANSFER invites Nader Tehrani – member of the Global Network of Experts of the LafargeHolcim Foundation and winner of a LafargeHolcim Awards prize in 2014 ⁽²⁾ – to reflect on the evolution of sustainability in architecture and urbanism and its main challenges. In this interview, Tehrani explains the need to develop new forms of communication among different disciplines onto a new platform that can reveal the consequences of their reciprocity across scales and media, and highlights some initiatives that can serve as productive case studies.

How would you define sustainability in architecture and urbanism?

Sustainability in architecture and urbanism needs to be connected to the world in ways that not only respond to the immediate needs of the design discipline, but to become an instrument for changing the very conventions around which the discipline revolves. Correspondingly, the definition of sustainability has evolved over the decades, if only to adapt to the impact of new forms of knowledge from which it has had to benefit. Viewed from the perspective of forecasting, the emergence of data as a discipline since the 1950's –if not, much prior– has offered many ways in which to generate, collect and document phenomena about the world around us. To this

end, the emergence of sustainability as a field of inquiry has transformed a great deal. At the same time, one could have anticipated a much greater degree of impact on how the world has internalized the relationship between population growth, energy consumption, food, transportation and the development of the city, to name just some of the critical aspects that fuel architecture and urbanism. For this reason, any definition for sustainability must, at a minimum, bring the alliances between these varied contingencies into conversation in order to bring about a meaningful understanding on what role design plays in the formation of the environment in which we live. The knowledge of this data is anything but new, but it is not clear to what degree the various disciplines, and the public policies that emerged from them, have used this wealth of information to imagine an alternative from the very conventions that have made the city what it is today.

To this end, we might ask ourselves what the United States would have looked like today if the incremental political and economic forces had not, in fact, been guided into suburbanization as a de facto treatise for the expansion of the American city in the post-war period. If all the political, economic and cultural forces are not always necessarily well-coordinated, there are obvious ways in which one can see the evolving connections between the 1944 G.I. Bill (Servicemen's Readjustment Act), the 1956 Federal-Aid Highway Act and the eventual devolution of the inner cities of the 1960's ("white flight") as one reciprocal episode in this process. By extension, we can also see the ways in which the Reagan years have created an ever-increasing gap between wealth and poverty, the privatization of public space, the compartmentalization of city parcels into gated environments, and a range of other phenomena that have effectively compromised the public's access to the basic infrastructure of health, education, clean water, and a range of other rights that may be considered as a Hippocratic Oath to the public.

As such, sustainability can be said to be defined by the many means we can imagine the recalibration of a world that humans have impacted beyond what nature has offered on its own terms. The delicate balance of forestation, agriculture, global and local interactions, the environmental impacts that transcend political boundaries, all bring a global perspective to the design of "geographies", a scale often neglected in the design of urbanism. At the same time, the finer grain of the daily human existence that constitutes the evolving habits of different cultures – the use of energy for climate control, disposable waste in the airline industry, the impact of construction on the environment, the reliance on fossil fuels for cars, or even the consumption of beef—are also having a much larger footprint that is evident to the eye, as human expectations begin to transform the conventions of comfort and livability; these all challenge the very assumptions of sustainability if not seen as part of a larger framework at a global scale. How the conversation between local and global governance occurs is central to this question and the urgencies of this discussion are becoming ever more clear with the emerging political climate in the United States.

How do you see the evolution of the idea of sustainability in the past ten years? What are the key challenges we are facing today globally, and specifically in the U.S.?

From the North American perspective, in the past decade there have been serious attempts at engaging questions of sustainability, resilience and a deeper inquiry into the very practices that might help the disciplines of architecture and urbanism as more responsible partners in the formation of the environment. Still, as the recent elections in the United States have demonstrated, its communication, impact and engagement is as vulnerable as can be. If we take the new administration's words and actions for what they mean, we stand to lose all of the policies, research and work that has begun in the past decade, this the result of the denial of climate change, the elimination of environmental protection practices, the opening up of public preservation land for speculation as well as many other peculiarities such as the proposed 'wall' between the U.S. and Mexico. The executive changes in the U.S.A. are not merely local of course, as their entire policy requires a global order that sustains it: what is effectively unsustainable in the long term. Thus, the real question is whether the world can survive the U.S. as a steward of the environment in an age when all the projected policies are giving primacy to private profit over public safety, equity, and responsibility.

Which disciplinary shifts do you think are essential in order to move towards sustainable development models?

There are a range of ways in which emerging disciplinary areas are impacting our ability to make connections across fields, and I am not sure I can identify them all here, but it is worth citing some initiatives that can serve as productive case studies. As outlined above, there is a need to develop a form of communication that draws in information, data and knowledge from a varied set of disciplines onto a new platform that can reveal the consequences of their reciprocity –and how they impact each other– across scales and media.

The research of academics such as Laura Kurgan at the Center for Spatial Research at Columbia University have made huge strides at translating big data into spatial, formal and material terms: all aspects that bridge complex informational systems, dynamic and evolving historical phenomena into terms that are effectively architectural even when viewed at a global scale

Bridging the scale of buildings, urbanisms, regions and geographies is a complex challenge that awaits the design discipline – and most ‘urban design’ programs do not have the analytical skill sets to imagine or provide metrics for the scale of geographies.

The intellectuals who have formed New Geographies, from Hashim Sarkis to Rania Ghosn, have begun to give vision to those aspects of thought that are gaining a larger physical footprint in the world, and both their written work, and design speculations, via Design Earth are gaining traction to articulate the importance of developing an intellectual terrain for which we have not yet developed APT programs.

The emergence of inter-disciplinary work in general, has transformed how we are able to link varied platforms together, often targeting the nano scale, while having an impact at a much larger scale, for instance in the arena that connects material sciences, computation and interactive technologies.

Consider the work of Skylar Tibbitts and his Self-Assembly Laboratory and the way in which the transformative properties of materials, geometries and assembly processes are beginning to redefine how we build the world around us: instead of bricks and mortar as it were, with intelligent pixels that react to the environment in which they are placed.

These are just some of the projects that are reforming the ways in which we are thinking, experimenting and contributing to the built environment at many scales. In all cases, there is a sense of ‘worldliness’ and an effort to understand the impact of one’s work at a larger scale. So too, in all cases there is an appeal to bridging across media and disciplines, if only to de-bundle traditional silos of thinking. And finally, in all cases, there is an ethic that is lodged within the research, exploration and work in the academic realm, that sees the urgency at stake in the current political moment.

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The LafargeHolcim Awards is the most significant global competition in sustainable design. Organized by the LafargeHolcim Foundation for Sustainable Construction, the competition identifies the ideas with the highest potential to tackle today’s challenges to increasing urbanization and to improve quality of life.

The competition is now open for registration until March 21, 2017 at 14:00hrs (UTC). More information : lafargeholcim-foundation.org/Awards

(2)

Nader Tehrani won a LafargeHolcim Awards prize in 2014 for his project “Heritage Reframed”: the renovation and extension of the Daniels Faculty of Architecture, Landscape & Design on the site of a culturally significant 19th century structure in the center of Toronto, Canada. He was a member of the Holcim Awards jury for region North America in 2011.