Overlapping Spheres: Environmental Humanities and the Built Environment

After Concrete

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We tend to think of multiplicities as structured like a network: fibrous, webbed, light and elastic. But if we look at architectural design through an environmental lens, we find not only supple nets and free-flowing spaces: we find that environmental forces are congealed, materialized, and rendered totally dense. If we want to rethink architecture's contribution to this environmental idea of multiplicity, then, we had better start thinking differently about reinforced concrete: not as an abstract medium, but as an energetic nexus.

After Concrete is an interdisciplinary research project directed by Lucia Allais and Forrest Meggers. Once conceived as the quintessentially modernist material, a veritable "liquid stone" that announced the arrival of an eternal present, reinforced concrete should be reconceptualized in energetic and environmental terms, to account for the fact that it is in fact a highly dynamic technological system, subject to inevitable failure. In this presentation, Allais presents the history of the "carbonation equation," its history and its impact.

First proposed in 1928 based on research begun in 1911, then published internationally in 1968, and today fully incorporated into the field of materials science engineering, the carbonation equation marked a major transition in the understanding of reinforced concrete: from thinking of reinforced concrete as a permanent material, to realizing that it is explicitly impermanent, an assemblage that inevitably decomposes into its constituent parts. Allais and Meggers address this transformation and the need for greater interrelation between architectural and scientific knowledge in producing narratives of anthropogenic change.