

BIOINTERFACIAL DESIGN

Post-parametric Architectural, Aesthetical and Sociopolitical Configurations

by Mina Yaney

In considering how materiality has been fabricated and deployed throughout modern technoscience, one observes an underlying operating deterministic-analytical anthropocentrism bending nature according to human's intentional will. Variants on such a claim are reminiscent of Heidegger's critique of modern technology, in the seventies, where he describes the essence of modern technology as *Enframing*, [*Ge-stell*], which transforms the world into an instrumental "standing-reserve". Hence, organic materiality has been conceived of as passive, inert, and therefore subject to intentional configuration and organization into desired ends, such as products, objects, and habitable structures. Perhaps the imagery of the Vitruvian Man and of the concomitant model of the machine, as modern guiding metaphors for the production of built environments, depicts how the modern project has been distinctly based on a cognitive approach to materiality.

However, the history of British cybernetics offers a different conception of materiality as well as a concomitant form of technology and science that attempted to generate propositions to circumvent a modern domination of nature through knowledge while incorporating the *morphogenetic and adaptive intelligence* of embodied matter.

The projects of Britain's leading cyberneticians, Gordon Pask and Stafford Beer, as well as their approach of what one may call embodied or biological computation, are most indicative of such cybernetic approach to materiality. The paper critically investigates the interrelation of materiality, information, interactivity, and interfaciality in the case of Pask's notion of chemical computers while characterizing his approach as generating quasi-organic electrochemical interfaces.

Subsequently the paper attempts to expand the Paskian conception of electrochemical interfaces by the introduction and evaluation of the notion of *metabolic biotechnical interfaces*. This introduction seeks to expand on the interfacial (and nondual) opportunities provided by recent developments in biotechnology as potential source of technology, methodological, theoretical, and material transfer. The paper concludes with speculations on how architectural design might, thereby, be rethought as *biotechnical interface between intentionally-dependent and intentionally-independent systems* while inducing organic habitable structures from within – via modulation and interfacing - rather than mechanically and intentionally imposing rigid form from without.

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