The system must be designed to operate for each possible selection, not just the one which will actually be chosen since this is unknown at the time of design.

Claude E. Shannon, “A Mathematical Theory of Communication”

The concepts of “life” and “information” become all the more deeply connected as life becomes inextricably affected by both data and technologies. Architecture is intimately related to this new reality, and it contributes to the discourse of the interdependency of life and information and how it impacts our very structures of perception.

This current movement of integrating life in architecture indicates how earlier computational efforts reinforced prospects to further monitor, calibrate, and animate embedded aspects of life into static elements. Indeed, the notion that life is interchangeable with architecture is decades old and is chronologically traceable. For example, the body of built work and computational developments of the past sixty years demonstrates that there is hardly a theme of architecture in today’s built landscape that has not incrementally advanced the functionalities, efficiencies, and aesthetics of buildings through the radical changes and motifs inspired by the entwinement of life and information. Additionally, these advancements are steadily accelerating and crystallizing with the aid of burgeoning technologies that enable more fluid processes, as well as the synthesis of data that form tangible matter—information that can be decoded and encoded (Shannon, 1972) to and from life.

Looking at this fluctuating milieu and recognizing the multiple possibilities within a given set of technological aptitudes are indicative that life and information, as they relate to architecture, embody a deeper meaning. For this reason, the anxiety associated with how architecture, life, and information intertwine will ultimately give us a different disposition toward the built environment. By using information in the conceptualization process, this alternative disposition sees architecture as intentionally shifting design processes and the genetic modification of material to become more influential and alive. Consequently, from this perspective, the emerging built environment may be referred to as the architecture of life—the creation of an organism that emerges out of an active flow of information and that develops through a complex series of interactions involving a vast number of components. As such, architecture is gaining a prominent role in the way data is employed, especially at a time when its operative modes are enacted through hacking—the use of code writing, algorithms, and other computational methods to perform both prescribed and non-prescribed functions. Within this framework, a set of possible modalities permits the selection, extraction, organization, analysis, and optimization of data in order to render useable contributions that signify a radical shift in how design and making are informed.

In this context, the emergence of the architecture of life out of an informational deluge is in fact an agency for designers to not simply hack data in the way that life does, but, rather, to assess, anticipate, explore, and manipulate its entropic state; a state whose potential may become alive in and through the search for optimization and the perpetual interchange of information. Here, what might
separate the architectural thinkers of the mid-twentieth century from the mindset that propels the architecture of life is that the former used data to rationalize architectural acts, whereas the latter injects and extracts data to and from the circle of life in ways that inform such acts. For current and future design practices, this implies that the informational quality of contemporary processes will not be affected because we exchange more information than before, or because we have access to informational commodities, but, rather, because the quality of these processes will be affected by the actuality that architecture is taking on the attributes of life. Driven by diverse computational and informational exchange of processes, these attributes are causing a steady stream of evolution in database power and design capabilities. Hence, the architecture of life holds an equally important role in the recognition, definition, and validation of information from two opposing yet now interconnected views that which is virtual versus that which is physical. In both instances, information is regarded as a set of measurements extracted from the flux of the real (Whitelaw, 2006) and only when placed into an interpretive context, does such information begin to exert new meaning.

By virtue of becoming, whether based on information derived from data or ideas shaped by information, this milieu provides us with knowledge to re-parameterize, unfold, and perceive new opportunities within our operative boundaries. At the advent of search engines and monitoring devices, recreating and informing environments that perpetually house endless amounts of data become more tangible. Arguably, data is now insufficient on its own to provide enough ground for development; it is only through the phenomenon of informatization—a process by which information technologies transform economic and social relations through diverse informational attributes—that the architectural profession will continue to evolve. This understanding is perceived when envisioned through multidimensional data structures as they shift design’s needs, demands, and probabilities; as such, they are extracted from statistical realms to serve in a manner that promotes information to respond in a dynamic way.

Additionally, database contributions amalgamate the creation of the real with that of the lived object (Merleau-Ponty, 2002), a realization that has set in motion a new wave that once again is in the process of profoundly affecting us on multiple scales and dimensions (Benkler, 2003). Architecture, therefore, continues to extend beyond buildings partly because these informational and technological advancements allow for the gathering of more complete, accurate, and timely information, thereby increasing the capacity for decision-making processes. Yet, due to the over-leverage of productivity and the increase in tools, this power is pushing the processes towards analysis and synthesis from completely different perspectives than those that were once aiming to maximize efficacy. The use of knowledge has been employed to extend opportunities toward influential roles where the information associated with our beings shifts the mechanics of architecture from those of monitoring performance to ones engaging in mutation and adaptation.

In presupposing that life represents a statistical measure of uncertainty—a state in which latent energies can be released and fed through multidimensional informational topologies—the theme “Life in:formation: On Responsive Information and Variations in Architecture” will question how data, information technologies, computational models, built and un-built work among other open-ended topics, may impact design and architecture.

References


