BEYOND CODES AND PIXELS

Editorial introduction

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This year, the CAADRIA conference is held for the 17th consecutive year, and – hosted by Hindustan University in Chennai – for the second time in India. The papers published in this volume testify to the developing and increasingly demanding standards of research and production that characterise this history of ours. Since early on, our community has been utilising computing technology to initiate, trace, investigate and critique changes in bricks and mortar in our physical environments, as well as developments in codes and pixels in our digital environments.

Beyond codes and pixels, however, computer-aided architectural design, research and education offer more than tools and test beds for putting change into our environments with the aid of technology.

The purpose of changing our external environments, according to the principle of homeostasis, is to ensure our internal stabilities. We adapt our sur-

roundings to meet the needs of our insides. For the majority of the human population, establishing and maintaining livable contexts depends on having biological offspring, which leads to considerable population growth in both rural and urban contexts. Technology, too, offers us powerful capabilities to alter environmental conditions, again with a patchy record of sustainability. Our ability to predict whether some alteration of our environments will prove to be desirable in the longer run, or not, is in need of catching up. New practices that initially seem desirable and successful oftentimes develop into proportions that entail considerable penalties. Meanwhile, technology gives us ever-increasing capabilities to monitor our environments, and to mass-communicate the many alarms thus gathered. Thus, in our attempts to improve our environments, we learn to expect and to fear our individual, as well as our collective demise. With such fatalistic perspectives comes a desire to secure one's footing in the world of images and symbols in which we primarily live (Pask in Bateson, 1972, p. 309). While those operating in academic and designerly fields may feel sure of our own footing by creative activity, the majority of us resorts to producing the biological progeny that guarantee this footing (Pask ibid.), further fuelling human proliferation.

Do we have viable strategies for purposeful action to address these challenging states of affairs? How successful have we been so far at utilising design and technology to improve the livability of our environments? How successful can we expect to be with these approaches in the future? What can we expect of academic associations and conferences that aim at improved environments by way of purposeful applications of technology?

Gregory Bateson warns of encounter groups in which clarity and the capacity for self-criticism are lost in the search for emotional communion. He argues that groups of these kinds, including most conferences, make the kind of shortsighted decisions or elaborate the kinds of epistemologies that endanger the world (Bateson, 1972, p. 305). What do a CAAD research association and its annual conferences have to offer besides ever-specialising scientific and technological answers to well-understood questions – in a justifiable proportion to their consumption of jet fuel?

What if we use technological and scientific insights not only to adapt our external environments to the needs of our internal environments, but also the other way around? And what if our accomplishment of change around ourselves is taken as a metaphor for accomplishing change within us? Can we imagine a mirror plane through which our doing and our learning are metaphors of one another? And can we imagine rigorous standards of our thinking and acting to be fostered not only on the objective and moral outside, but also on the subjective and ethical inside? Bateson (1972, pp. 285ff.) suggests that

everyone is his/her own central metaphor. In this way, it can be argued that we and our research field are metaphors of each other. "In every age", Young (1959, p. 14) argues, "men speak about themselves and the world around them partly by making comparison with the tools that they use. Conversely, they describe the actions of their tools by speaking of them as if they were men".

Speaking of ourselves in terms of our tools, according to Pask, offers a way to address questions regarding our footing in history, stresses caused by there being more and more humans as well as fears of individual and collective demise. Pask challenges the notion of the individual as "one head". Instead, he points towards our favoured ideas and ways of acting as that which we may wish to reproduce and regard as our progeny. Pask offers the metaphor of the general-purpose computer for the human brain, and that of classes of programmes for our favoured ways of thinking and acting. With one "computer" being capable of running instances of multiple "programmes", and with "computers" being capable of replicating "programmes" of other "computers", one's footing in history is, according to Pask, no longer directly dependent on biological progeny. It is not necessarily a matter of making more "computers", but one of getting one's "programmes" started in other "computers" which will run beyond one's own runtime. In this view, CAAD research, CAAD education, and the concerns for one's personal footing in history are inseparably interwoven. Which ideas and ways of acting are to be considered and promoted in the absence of technical certainty? This is the search for an essential class of "programmes" capable of choosing wisely between commitment and detachment (Bateson, 1972, p. 305) according to given circumstances.

In this volume, several authors refer to external phenomena and techniques as metaphors for adjusting internal thought and appreciation. For example, Roudavski (p. 659) likens his pedagogical approach to vision tricks in life drawing, since both practices combine available techniques opportunistically according to the circumstances, with the aim of amplifying understanding. Karakiewicz and Kvan (p. 151) describe how metaphorical diagramming in digital environments allowed their students' attention to be shifted to the relationships between elements. Ambrose (p. 699) and students develop potential metaphorical relationships between the human body and architecture, which demands alignments or resonances between architecture's physical and mental constructs.

Such discussions call for a discourse that reaches beyond codes and pixels to acknowledge the mutual metaphorical connections that can be drawn between our external and internal environments, with a view to exerting desirable changes not only in our external environments, but also to adjust our internal ambitions wisely, according to internal and external cues.

References

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