

Editorial

This special issue on Designing in Context consists of six representative articles from the fifth *Design Thinking Research Symposium* held at Delft in December 2001. Previous *Design Thinking Research Symposiums* have focussed, naturally enough, on design thinking. Analysing the thoughts of designers has certainly proved fruitful for design research, but the view of design as an essentially cognitive activity is receiving increasing criticism, particularly as it seems to confer a level of omniscience on designers that an ever more distributed world would seem to deny.

The strength of the symposium series has always been its multi-disciplinary focus and this is reflected in this special issue with papers describing architectural, engineering, and industrial designing and with authors deriving from disciplines such as linguistics, psychology, and marketing. These papers also reflect key issues within the design study field: the development of design theory (Coyne), the role of memory and creativity in designing (Downing; Lloyd and Snelders), the description of design practice (Medway and Clark), and finally implications for design education (Adams, Turns and Atman; Bucciarelli). The DTRS is nothing if not a broad church.

At the original symposium discussants were given the task of reading and criticising specific papers and this proved a productive and insightful approach. For the papers that appear in this issue an edited version of the subsequent

discussion is also included. This gives a more general feel for the issues the papers address. Full videos of all symposium presentations and discussions can be viewed at <http://www.io.tudelft.nl/research/dic>

In the first paper by Richard Coyne, *Mindless Repetition: Learning from Computer Games*, the similarities between the activities of designing and computer game playing are explored. Although seemingly quite different Coyne develops a number of threads to this 'designing as play' metaphor. These include the idea of exploring a (virtual) problem space, of progressing through a number of levels, and particularly the idea of repetition. Involved in the process of repetition is the paradoxical idea that one can learn by repeating and so escape the repetition in progressing towards a final goal. There are also more complex resonances to the paper. The idea that a problem space can be 'uncanny' gives an insight into the emotional nature of designing as well as the cognitive/rational element. Coyne also points out that repetition is often an end in itself, and that designing could be considered in a similar way; as an inherently self-serving activity. In this respect the paper touches on ethical concerns.

Exploring spaces and places is also the theme of the second paper *Transcending Memory: Remembrance and the Design of Place* by Frances Downing. Downing describes how a strong sense of place, coupled with an aesthetic



feeling for 'significant form', can continue to inspire architects in new projects. Although one might think this would lead to unnecessary sentimentality in the design process Downing is clear that this would not result in good designing:

"If what we re-create from memorable experience is to be significant, it must remain aloof from sentimentality. The re-creation of significant form is what allows designers to transcend their own unique experience – to abstract and apply knowledge and import in a new context."

Downing describes a large scale study where architects were encouraged to talk about their 'image banks', their idiosyncratic memories of places coupled with feelings about those places. The paper categorises and illustrates these general places that hold such an influence over, and provide such a wealth of associations for, the architectural imagination.

Do significant experiences embodied in design artifacts guarantee success? This is the question taken up in the third paper, *What was Phillippe Starck Thinking of?* by Peter Lloyd and Dirk Snelders. The method they use is to take an iconic design object, Phillippe Starck's Juicy Salif lemon squeezer, and examine it's causes in two ways. Firstly, by considering the individual process of designing – what we normally think of as creativity and problem solving – and secondly, by considering wider cultural (contextual) factors influencing designing, with the designer being in some sense an instrument of wider social concerns within any given period. After critically reviewing both arguments they suggest that 'the design process' could be said to continue long after the original designer has finished thinking about it, and that what they term 'engaged use' might be a better way of discussing design success.

Both the paper by Downing and the paper by Lloyd and Snelders discuss the way that associations of ideas find their way into design artifacts. The paper by Medway and Clark, *Imagining the Building: Architectural Design as Semiotic Construction*, takes this one step further by examining the activities and conversations of architects working on a professional design project. In doing this they describe how the process is 'palimpsest-like', how layers of meaning are slowly built up (and also lost) through the drawing and discussion cycle. The metaphorical nature of the architectural design process – how new metaphors are integrated into the state of the 'virtual building' – is also well illustrated in the snippets of discussion that they analyse. In the architects office, the authors suggest, the building is still virtual, an ongoing work of imagination that "despite being real in a physical sense, is a solid social fact, something known, often in great detail".

Medway and Clark's paper is reminiscent of Donald Schön's idea of reflection-in-action involving changes in perception; seeing one idea as another. Schön's theories are used more directly in the fifth paper by Adams, Turns and Atman, *Educating Effective Engineering Designers: The Role of Reflective Practice*.

Adams, Turns and Atman take the reflective practice theory of Donald Schön¹ and use it as a 'lens' to interpret the results of a large number of novice-expert studies involving student engineering designers. This is interesting because Schön does indicate what he feels good designing to be (the 'conversation with the situation' should be reflective) and therefore contained within this is the idea that we can distinguish good designers from average designers using Schön's theory. The theory, once operationalised, accounts well for the development of designing ability amongst participants. What

is interesting is the way in which Schön's often vague terms: 'backtalk of the situation', 'naming framing and moving' are turned into measures which can account for individual development.

The proper development of engineering design students is also the concern in the last paper of the collection by Larry Bucciarelli: *Designing and Learning: A Disjunction in Contexts*. Using his well developed theory of 'object worlds' Bucciarelli² shows how traditional (one correct answer) analytical engineering questions can be easily re-written to foster more open-ended designerly thinking (maybe more akin to the associative processes described by Downing and Medway and Clark). The by-product of this is that students learn to actively set their own problems rather than blindly, and passively, applying

analytical techniques. By teaching in this way problem solving has a context, and the techniques which have been taught can be applied within that context. The result of this small but important change is to properly prepare students for design practice, Bucciarelli claims.

Peter Lloyd

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References

- 1** Schön, D *The Reflective Practitioner* Basic Books, New York (1983)
- 2** Bucciarelli, L L *Designing Engineers* MIT Press, Cambridge, Massachusetts (1994)