Editorial

Designing in the wild

The opening chapter of Edwin Hutchins' (1995) now classic book *Cognition in the Wild* invites the reader inside the navigation bridge of the U.S.S. Palau, a navy vessel, where Ed Hutchins is observing the navigation team as the ship is returning to San Diego Harbor through a narrow channel. All of a sudden, steam-drum pressure drops markedly, leading quickly to a halt in all machinery operated by the steam turbine, including the turbine generators that produce the ship's electrical power. Within a few minutes all electrical power is lost throughout the vessel and all electrical devices without emergency power supplies cease to function, leaving the ship outside of full control. Through Hutchins' interdisciplinary *cognitive ethnography,* the reader is taken on an intriguing intellectual journey that incorporates a detailed investigation of the computational basis of navigation, a meticulous exploration of the social organisation of the navigation team as a cognitive and computational system and a thorough examination of how the navigation team eventually manages to bring the ship safely to harbour.

With the phrase 'cognition in the wild', Hutchins is referring to human cognition in its normal habitat, that is, to naturally occurring, culturally constituted human activity, as opposed to cognitive studies of 'captive' humans in the researcher's laboratory. In using this metaphor, Hutchins hoped to evoke a sense of the *ecology* of thinking, in which human cognition interacts with an environment rich in organising resources (see Hutchins, 1995, pp. xiii–xiv). The present special issue is motivated by a similar ambition, which is to examine design in its natural habitat as opposed to the laboratory or classroom, where much design research has traditionally been conducted. We invite the reader into the design field to observe the highly energised daily practices of one particular design team operating in a large and complex international corporate setting. In this context we witness confusing, cross-cultural exchanges with lead-users, we see the collaborative generation, structuring and re-structuring of creative ideas as reflected in external design materials (chiefly hundreds of Post-It notes) and we notice how the design team's management of organisational life involves the frequent interaction with multiple stakeholders and departments. That is, we take a deep dive into situated design practices in one concrete case of a professional design team bringing their project to harbour, studied in the wild using an ethnographic approach, particularly *in situ* observation and recording.

1 Ethnographic approaches in design research

An ethnographic approach to design research allows for many more variables to be drawn into the analysis of design activity than is possible with typical laboratory studies and experiments, which often focus on the identification of cause–effect relations in controlled environments. In addition, ethnographic studies of design permit different levels of analysis from a multiplicity of methodological and theoretical perspectives, whether cognitive (e.g., Ball & Ormerod, 2000a, 2000b; Christensen & Ball, 2014), socio-cognitive (e.g., Reid, Culverhouse, Jagodzinski, Parsons,

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& Burningham, 2000), ethnomethodological (e.g., Button, 2000) or cultural (e.g., Bucciarelli, 1988). Examining design in this way enables the establishment of a rich and multi-layered conceptual understanding of design behaviour (see Ormerod & Ball, 2017, for a detailed discussion of methodological and data triangulation in the analysis of design activity). Some of the 'wildness' of applying ethnography in a real-world design context thus also extends to the act of data analysis itself, inasmuch as an ethnographic approach facilitates a nuanced and eclectic understanding of the complex interactions that arise in the socially-embedded and culturally-laden interplay between multiple actors and stakeholders and the resources and artifacts at their disposal.

Indeed, because ethnography licences an understanding of design through varied conceptual lenses it is arguably the approach to data collection that is best suited for studying the richness of design practice in action. This view is made even more manifest because of emerging evidence that design practice is itself evolving rapidly as designers deal with ever more open, complex, dynamic, and networked design problems (Dorst, 2015) that involve increasing numbers of stakeholders, actors, disciplines, designer roles and ways of working (Valkenburg, Sluijs, & Kleinsmann, 2016). Ethnography is thus suitable for the study of design practice, not just because it allows for the inclusion of additional types and levels of analysis, but also because design, as an evolving form of professional practice, invites such an investigative approach.

While the title of the current special issue pays due homage to Ed Hutchins, we note one crucial difference in our approaches to studying real-world activity: while the anthropologist, Hutchins, recounts his own riveting observations and analyses of having 'been there' in the navigation bridge of the U.S.S. Palau, we instead sought to engage a large number of research teams in the analysis and interpretation of a shared, ethnographically-derived dataset comprising video footage of design behaviour in action in the complex, international, corporate setting that we have mentioned above. Using video data as well as transcriptions of dialogue and background information as their starting point, each research team was able to pursue data analyses from its members' own preferred methodological and theoretical standpoint so that they could address conceptual issues that aligned with their predilections in relation to what they viewed as being the interesting and important elements of real-world design practice.

2 *The 11th Design Thinking Research Symposium*

The papers presented in this special issue all stem from the 11th Design Thinking Research Symposium (DTRS11) held at Copenhagen Business School, Denmark, in November 2016. This symposium represented the culmination of the data-sharing approach to design research that we have outlined above, with the DTRS11 delegates all having received the common, ethnographically-derived dataset well in advance of the symposium so as to allow them sufficient time to analyse the data and produce a formal write-up of findings. The in-field design data that delegates received had been collected by the symposium organisers over a four-month period during 2015 and 2016. The transcribed dataset was shared with symposium delegates in the first half of 2016, after which each participating research team produced a symposium paper that was peer reviewed and further developed ahead of the symposium itself. The final research output from DTRS11 included 28 symposium papers from international research teams and a 30 chapter edited book (Christensen, Ball, & Halskov, 2017a), with selected papers presented in this current special issue as well as in a special issue of the journal *Co-Design*, with a specific focus on the theme of 'Designing across Cultures'.

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