Sille Julie J. Abildgaard, Department of Marketing, Copenhagen Business School, Denmark

Bo T. Christensen, Department of Marketing, Copenhagen Business School, Denmark

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Cross-Cultural and User-Centered Design Thinking in a Global Organization: A Collaborative Case Analysis

Abstract The case presented here was the center of the 11th Design Thinking Research Symposium (DTRS11) and concerns extensive in situ collected video-based data of everyday design team activity traced longitudinally in a professional team of designers working with user involvement. The DTRS11 dataset was shared and analyzed by 28 international design research teams, who approached the data with each their preferred methodology and theoretical interests. In addition to the case description, the current paper also identified themes for distinct analyses conducted by individual design research teams: co-creation, cross-cultural design, design thinking within organizations, and design tools and materials, each of which stem from particulars in the present case, but at the same time serve as hints to developments that are taking place in design practice more broadly.

1 Nigel Cross and Anita C. Cross, "Winning by Design: The Methods of Gordon Murray, Racing Car Designer," *Design Studies* 17, no. 1 (1996): 91–107, DOI: https://doi.org/10.1016/0142-694X(95)00027-O.

2 P. Lloyd and D. Snelders, "What Was Philippe Starck Thinking of?," *Design Studies* 24, no. 3 (2003): 237–53, DOI: https://doi.org/10.1016/S0142-694X(02)00054-6.

3 Seda Yilmaz and Colleen M. Seifert, "Creativity through Design Heuristics: A Case Study of Expert Product Design," *Design Studies* 32, no. 4, (2011): 384–415, DOI: https://doi.org/10.1016/j.destud.2011.01.003.

4 Manolya Kavakli and John S. Gero, "The Structure of Concurrent Cognitive Actions: A Case Study on Novice and Expert Designers," *Design Studies* 23, no. 1 (2002): 25–40, DOI: https://doi.org/10.1016/S0142-694X(01)00021-7.

5 Arlene Oak, "Performing Architecture: Talking 'Architect' and 'Client' into Being," *CoDesign* 5 no. 1, (2009): 51–63, DOI: https://doi.org/10.1080/15710880802518054; Janet McDonnell and Peter Lloyd, "Beyond Specification: A Study of Architect and Client Interaction," *Design Studies* 35, no. 4 (2014): 327–52, DOI: https://doi.org/10.1016/j.destud.2014.01.003.

6 Ben Jonson, "Design Ideation: The Conceptual Sketch in the Digital Age," *Design Studies* 26, no. 6 (2005): 613–24, DOI: https://doi.org/10.1016/j.destud.2005.03.001.

7 N. Morelli, "Product-Service Systems, a Perspective Shift for Designers: A Case Study: The Design of a Telecentre," *Design Studies* 24, no. 1 (2003): 73–99, DOI: https://doi.org/10.1016/S0142-694X(02)00029-7; G. Lee, C. M. Eastman, and C. Zimring, "Avoiding Design Errors: A Case Study of Redesigning an Architectural Studio," *Design Studies* 24, no. 5 (2003): 411–35, DOI: https://doi.org/10.1016/S0142-694X(03)00002-4.

8 Stefan Wiltschnig, Bo T. Christensen, and Linden J. Ball, "Collaborative Problem—Solution Co-evolution in Creative Design," *Design Studies* 34, no. 5 (2013): 515–42, DOI: https://doi.org/10.1016/j.destud.2013.01.002; Bo T. Christensen and Christian D. Schunn,

Introduction

Design research has a rich history of using in-depth case studies to develop and inform theory. Case studies usually revolve around descriptions of individuals, organizations, or events that are contextually bounded in time and space. For example, design case studies range from the detailed work of renowned designers such as Gordon Murray[1] and Philippe Starck[2] to studies of expert behavior in creative design[3] and expert-novice comparisons related to the structure of their cognitive actions;[4] studies of client-designer interaction[5] and tool usage;[6] and longitudinal studies of specific design or architectural processes.[7] Many protocol analysis studies in design fall into the case study category – for example, protocol video data stemming from naturalistic longitudinal tracings of events in a specific design team.[8] One such set of protocol case studies that have had an immense impact on design research emerged from the Design Thinking Research Symposium (DTRS) series, which brings together international academics with a shared interest in design thinking and design studies coming from a diversity of disciplines including psychology, anthropology, linguistics, philosophy, architecture, and design studies. On several occasions, DTRS organizers have utilized a video dataset capturing designers and their practices, which they then share with symposium participants for distributed analysis and publication as the framework for the symposium.[9] This data-sharing approach was initiated in the seminal "Delft Protocol Workshop" (now also labeled DTRS2), which was organized by Kees Dorst, Nigel Cross, and Henri Christiaans at Delft University of Technology in 1994.[10] At DTRS2, the verbal protocol data was collected from professional designers in a controlled context. Subsequently, two more DTRS events have involved shared protocol data of practicing designers. DTRS7, organized by Janet McDonnell and Peter Lloyd, involved professional designers (architects and engineers) working in their natural habitats,[11] and DTRS10, organized by Robin Adams, involved design review conversations in a design education setting.[12]

The case presented here was at the center of the 11th Design Thinking Research Symposium (DTRS11). The case methodology concerns video-based data of design team activity collected *in situ* and traced longitudinally, which was shared with multiple international design research teams for distributed analyses. The dataset and the frame for DTRS11 were open-ended – the researchers were not restricted to addressing a single, definite research question or particular theme. This allowed inductively oriented researchers to study possible new theoretical perspectives and deductively oriented researchers to test theoretical design models against a real-life design case. The principle that guided the data collection was to take a deep dive into actual situated design practices that extend beyond the timeframes and boundaries that had been previously studied in cases using shared design data, by focusing on a design team traced over time and in context, in all of its complexities in the wild.[13] As articulated by Dorst,[14] the complexities of the resulting dataset embrace radical realism. Box 1 provides the information describing the data collection and data distribution methods applied for the DTRS11 symposium.

A total of twenty-eight research teams took part in the analysis of the case. They analyzed the common dataset from their disciplinary perspectives using a variety of both quantitative and qualitative methods. This resulted in twenty-eight symposium papers, an edited book with thirty chapters,[15] and forthcoming special issues of Design Studies[16] and Co-Design.[17]

Here we set forth some of the prevailing, exemplary characteristics of the case as observed through the analytical lenses of different research teams at DTRS11. One might call the current case write-up a themed case analysis review, drawing in case data – primarily observations of interactions, and interviews – and connecting it to analyses themes. The purpose here is not to suggest novel theoretical