

## Managing mess: Exploring how to design and conduct research into design practice.

**Keywords:** Collaboration, Data Analysis, Design Practice; Design Research

### 1. Catalyst Information

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### 2. Context of Conversation Topic

Arlene Oak and Claire Nicholas are currently involved in a large, longitudinal research project (2013-2019) titled *Thinking While Doing: Connecting insight to innovations in the construction sector* (TWD: funded by SSHRC: the Canadian Social Sciences and Humanities Research Council). The TWD research project involves the designing and building of innovative grid-shell structures as well as the study of the processes through which these structures are created in the context of university-level 'Design-Build' architecture education. In Design-Build education architecture students and their instructors (who are professional architects) engage in the 'real-world' processes of designing and making, including activities such as finding clients, acquiring permits and permissions, creating design ideas and building programs, developing concepts (sketches, technical drawings, model and prototype-making), engaging in on-going client consultation, and then actually constructing the buildings.

Oak and Nicholas are members of the TWD project's *Insight Group* - scholars who follow the activities of the Design-Build participants, collect data of these activities, and then analyze them through perspectives associated with the humanities and social sciences (e.g. philosophy, history of technology, anthropology, social psychology, etc.). Oak and Nicholas have collected a wide range of data, including photographs, audio and video recordings, activities from social media, transcripts, etc. It is some of this data that will form the basis for the DRS Conversation on how best to design research approaches that will provide relevant perspectives that shed light on the complexities of 'real' practices in design and advanced - level design education (i.e. in TWD, architecture and architecture education).

In his 2004 book *After Method: Mess in social science research*, John Law, a sociologist of science and technology, explores research into phenomena that are 'messy', that is, aspects of the social world that are complex, indefinite, subtle, and dynamic (i.e. such as the practices of collaborative design and making). Law outlines the problem of scholars who bring research methods to complex social situations in ways that, in their attempts to clarify, ultimately result in distorting these situations (2004, 2). Law argues that, since many methods are engaged with simplifying and describing social realities, rather than offering a neutral mode of understanding them, the methods actively help to create the realities. In effect, social realities as revealed by methods, are underpinned by the political positions of those methods. Accordingly, Law advocates thinking 'hard about our relations with whatever it is we know' as we ask 'how far the process of knowing' (2004, 3) also brings into being that which we seek to understand.

This DRS Conversation is mindful of the issues outlined by Law, and proposes to explore what different researchers and practitioners of design can say about modes of design practice: some (Oak and Nicholas) can speak from the perspective of deep, on-going engagement in the TWD research project (whose data forms the basis of this DRS Conversation); others (McDonnell and Crilly) can speak through a limited familiarity with the selected data (but a deep knowledge of their own research into practice); and yet others (the DRS Conversation audience) who will engage with the data without prior knowledge or understanding, will speak more extemporaneously (though again, informed by their own experiences of design research). What perspectives on the complex aspects of design practices will be offered by these diverse participants with their varied backgrounds? Will their contributions help to reveal aspects of practice more clearly, or will their comments and analyses provide further interpretive complexities that will themselves create further 'mess'?

### 3. Organizing research question

What are some of the advantages and disadvantages of qualitative research approaches, questions, and/or methods when these are brought to the analysis of the 'messy' sociability of real, collaborative design practice?

#### Subquestions:

- What do design practitioners and/or design researchers (i.e. from the humanities or social sciences) notice in a collection of data of collaborative design practice (data that includes images, audio and video recordings, and transcripts)?
- How do design practitioners and design researchers categorize and interrogate what they notice: for instance, how might they determine what 'creativity' looks like, or where it is found in a collection of data of collaborative design practice?
- How can different types of data, e.g. non-verbal data such as photographs, sketches, technical renderings, and models be effectively used in relation to, or separate from, data of social interaction such as audio and/or video recordings and transcripts?
- How do researchers find and determine significant moments in the data if they themselves were not present during data collection to witness the activities of design practice, or if they do not have in-depth knowledge of the contexts in which practice is occurring? (i.e. does having, or lacking, background-knowledge help or hinder aspects of analysis?)

### 4. Set-up of session

We propose a 90-minute session that involves considerable audience participation in engaging with various forms of data such as photographs of practitioners working, sketches, technical drawings, images of models, transcripts, audio and video recordings. We aim to have participants raise questions about how best to deal with complex data, engage with some of the data itself, and propose some possible modes of analysis for it. By engaging with a diverse group of people that includes the catalysts and audience members, we hope to engage in a wide-ranging discussion about the challenges and rewards of undertaking research into design practice.

*Conversation title: Managing Mess: Exploring how to design and conduct research into design practice.*

In this session, first (after introductions and a brief outline of the research project that has generated the data) the two catalysts, Oak and Nicholas, will outline their modes of data collection. The intention is that these two researchers will present the data fairly 'neutrally' without discussing their own analytic paradigms, so as not to pre-condition the other catalysts or audience members with regard to how to most effectively engage with the data. These two catalysts would also secure the permission of participants to be recorded (see below, 'Plan for incorporating and documenting the contributions of others').

Approximate time: 15 minutes.

Second, the two other catalysts (McDonnell, Crilly) will briefly outline how each of them would perhaps categorize and interrogate all, or part of, the data (they have been provided with the data in advance of the session). Their thoughts are intended as instrumental in generating discussion with audience members and the other catalysts (Oak and Nicholas).

It is anticipated that the two catalysts will each approach the data in relation to their own backgrounds: e.g. McDonnell: from the perspective of research into design practice and collaboration and Crilly: from the perspective of research into expert design and concept development.

Approximate time: 20 minutes.

Third, some time will be allocated for the general audience to listen and watch audio and/or visual recordings, look at images, etc., with direction from the catalysts. Approximate time: 15 minutes.

Fourth, the audience members will be invited to discuss how they have undertaken qualitative analysis of design-related research data. They will be asked to speak from their experience with their own collections of data, or can comment on the data that has been provided to them. This part of the session will be interactive, generating a wide-ranging conversation of different modes of analysis (both in relation to the provided data set, or through discussion of other forms of data).

Approximate time: 30 minutes

Fifth, Oak and Nicholas will summarize the session and wind up discussion:

Approximate time: 10 minutes

Entire time allocated: 90 minutes

**Plan for incorporating and documenting the contributions of others:**

We intend to record this session, either as audio or film or both. Then the conversation session would be transcribed. This material would be made available either as a podcast and/or a transcript on the DRS2016 website. This material could then be used by other scholars who are interested in how different perspectives (i.e. from practitioners and scholars in the humanities and/or social sciences) could be brought to bear on issues of design practice.

## **5. Type of space and equipment required**

Not having attended the DRS conference in 2014, and so not aware of the typical number of participants in the DRS Conversation sessions, the following information about the type of space required is just an estimate.

Having said that, we anticipate requiring a room that would comfortably seat around, perhaps, 20-25 people (including four catalysts and audience participants). We are seeking a reasonable number of participants who would all engage in fruitful discussion and debate

In terms of equipment we would definitely require a projector, screen and speakers. A whiteboard would also be useful.

## 6. Dissemination strategy

Our concluding document would itself be a form of 'live' data, that is, either or both of an audio/visual recording and a transcript of the discussion. This would be made available to the DRS2016 site following the conference, and, as this document is circulated, it would be intended to stimulate wider debate and discussion concerning how best to collect and analyze data of live, collaborative design practice.

Further, Oak and Nicholas intend to prepare a publishable manuscript based on the reflective practices and comments derived from the session, a manuscript whose preparation would include the other catalysts (if they wish to be included). Provisional title of such a manuscript: *Managing Mess: A conversation on research into design practice*. Dissemination of the manuscript would direct readers to the DRS2016 site, so that readers themselves could engage with and interpret the data of the DRS Conversation session.

## 7. References

Law, J. (2004) *After Method: Mess in social science research*, London: Routledge.

### About the Catalysts:

**Dr. Arlene Oak** investigates social interaction's relationship to design, both in the contexts of education and professional practice. Drawing on her background in practice, history, and social-psychology, she uses the approaches of discourse analysis to better understand how communication relates to the creation of the material world.

**Dr. Claire Nicholas** conducts research that explores the collaborative practices of craft, design, and architecture. Her modes of collecting and analyzing data are informed by her background as a designer and anthropologist.

**Professor Janet McDonnell's** background in engineering informs her research into forms of design expertise and the acquisition of expertise, and empirical studies of design practice. As a researcher and editor-in-chief of the journal *CoDesign*, she is particularly concerned with questions of collaboration in practice.

**Dr. Nathan Crilly** focuses his research on design, creativity and communication, with a current project examining how engineering design methods can be used to accommodate uncertainty. Through interdisciplinary approaches he explores how products, systems and services are developed and responded to.