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Conversations in Healthcare Service Design – The characteristics and use of conversations in ecosystemic service design

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Conversations in Healthcare Service Design - The Characteristics and Use of Conversations in Ecosystemic Service Design.

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Introduction

This study examines the impact of conversations in public healthcare service design. We define what constitutes design conversations and the role they play in design processes for complex adaptive systems (CAS). Then, we explore the nature and use of conversations in two embedded design lab interventions in two hospital settings. In our summary of preliminary findings and contributions, we suggest future steps.

Healthcare organizations as complex adaptive systems

Public healthcare organizations, such as hospitals, are recognized as CAS. CAS are explained as living organisms, that includes a variety of dynamically linked independent subsystems with a capacity to learn and respond to circumstances (Begun, Zimmerman, & Dooley, 2003). Innovation inside CAS is often characterized as emergent, meaning that higher-order novelty is achieved through interactions and relationships between lower-order system parts or agents (Lichtenstein, 2014).

The need for conversations in systemic healthcare service design

Systemic service design is increasingly used as an approach to support developments of more sustainable healthcare offerings (Barbero & Pallaro, 2017; Jones, 2013; Vink, 2019). Designing within service ecosystems focuses on resource integration beyond organizational boundaries. Facilitated, multiple stakeholder conversations are used to support interdependence, participation and emergence (Sangiorgi, Patricio, & Fisk, 2017; Jones, 2018), adding value in organizational processes and social discourse (Buchanan, 2001; Dubberly & Pangaro, 2015).

All design activities are pragmatically guided by communications on intentions for changing a situation. Hence, conversations for systemic design must seek to expose positions and contributions of various stakeholders (Jones, 2018). Literature on design for systems of cooperative work identifies four main

purposes of conversations as for *orientation, clarification, possibilities* and *action* (Winograd, 1986). Jordan et al. (2009) define conversations in healthcare interventions, as "a collaborative process in which meaning and organization are jointly created" (p.2). Similarly, the early stages of service design processes are focused on learning and sensemaking while the latter stages center around cocreation of propositions (Stickdorn et al., 2018). Throughout these stages, a variety of issues are discussed with multiple stakeholders on various levels, highlighting needs, desires and perspectives.

Despite all conversations taking place in service design, little attention has been given to the nature and use of conversations in such processes. Hence, we set out to investigate the following: *What are the characteristics of conversations during processes of healthcare service design and how are conversations used strategically by healthcare service designers?*

Methodology

To shed light on the characteristics and use of conversations in a multidisciplinary service design setting (Yu, 2020), we applied a qualitative research approach. By combining participatory action research (Heron & Reason, 1997) and research by design (Frayling, 1993; Jonas, 2007; Morrison & Sevaldson, 2010), data were collected from two embedded design lab interventions in two Norwegian hospital settings (figure 1).

Figure 1: Design students engaged in conversations with stakeholders while taking notes during workshops at Ahus (left) and at OUS (right). Photos by Alex Asensi and Jonathan Romm.

The first intervention supported the establishment of a Center for Elderly Medicine at Akershus University Hospital in 2018 to support the development of three specialized healthcare service initiatives for the elderly: 1) supporting final stages of life, 2) hospital at home, and 3) an interdisciplinary outpatient clinic.

The second intervention took place in Oslo University Hospital (OUS). Established in 2019, the lab support three main service developments: 1) an advanced hospital at home for children, 2) hospital at home for patients with blood disorders and 3) an overall vision of hospital at home services at OUS.

The labs became a community of inquiry and practice (Heron & Reason, 1997) or a *rich design research space* (Sevaldson, 2008), where qualitative data were generated and collected. During the interventions, action research cycles of planning, acting, collecting data, observing and reflecting were conducted (Crouch & Pearce, 2012). Student research diaries (Engin, 2011; Nadin & Cassell, 2006) were used to collect 204 non-exhaustive descriptions of conversations (figure 2).

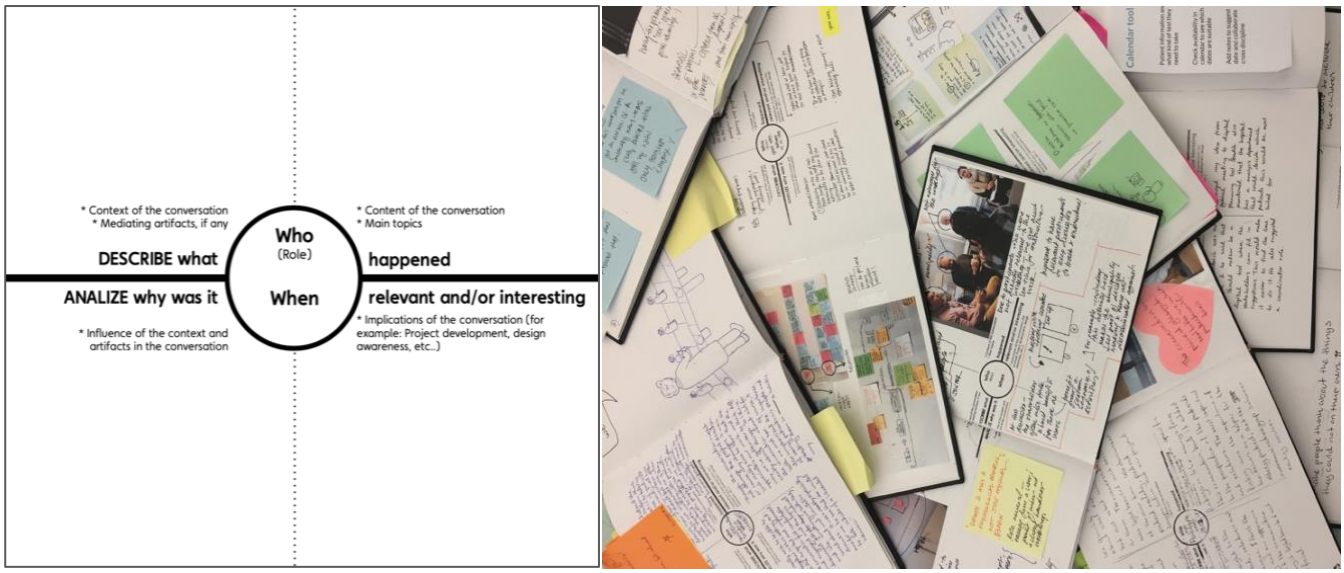

Figure 2: (left) A stamp used as template for annotating conversations inside the student diaries. (right) Collected student diaries. Photo by Palak Dudani

Recorded evaluations from each cycle, photographs documenting activities and posters summarizing each diary were collected. The qualitative data were systematized into a rich data portfolio. Using a grounded analytic framework (Gioia, Corley, & Hamilton, 2013), a preliminary analysis of the data was carried out (figure 3).

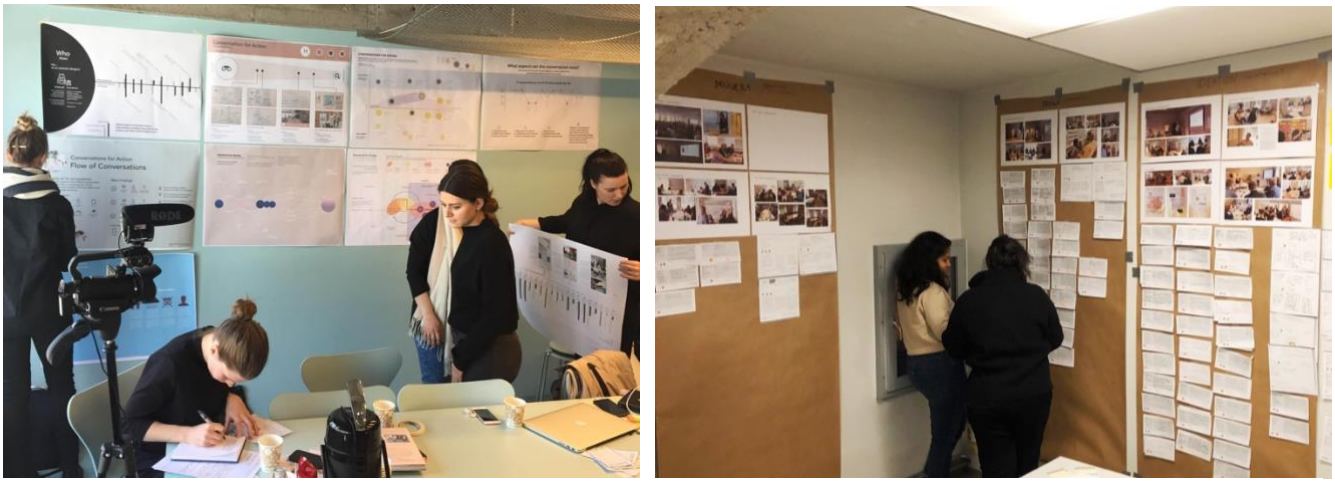

Figure 3: Preliminary analysis of data: (left) Research diary analysis presentations. (right) Analysis of all collected conversations. Photos by Jonathan Romm.

Findings

Our first findings are related to different **types and levels of conversations**: Currently, we use the terms operational, tactical, strategic and philosophical to distinguish between these levels. The types of conversations identified are related to their purpose of framing an orientation, addressing possibilities and for sparking action. During the first stages of the service design process, conversations on all levels were taking place with a multiple purpose orientation. During the latter phases, conversations were mostly directed towards the operational and tactical level with the purpose of addressing possibilities and for supporting action. A second finding was that **conversation annotations** were reported to help the service designers to make use of conversations as material when designing for CAS in healthcare. Using simple templates for noting conversations, eased the design teams' ability to compare, link and make sense of conversations. This points towards the need to develop strategies and tools for better capturing essences and for linking conversations. Finally, we found that designers gained **propositional leverage** through the sensemaking of conversations across levels. A position to propose an agenda for change by suggesting points of interest and new configurations.

Conclusions

To stimulate innovation in systems of healthcare, designers need to become conversational experts. This study brings forward new knowledge and offer guides for practicing healthcare service designers on how to make use of conversations as a design material. We call for better tools to capture, link and share the essence of conversations. Increased awareness and use of conversations as a material may help service designers to increase their propositional power during systemic service design interventions.

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