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I am a professor and researcher at the School of Design, University of Montreal. My academic background is in Industrial Design and Education, followed by a PhD focused on interface design and human-centered approaches. I was first introduced to Cultural-Historical Activity Theory (CHAT) around 2006 through the book *Context and Consciousness: Activity Theory and Human-Computer Interaction*, edited by Bonnie Nardi, and later through the insightful articles of Kari Kuutti.

This introduction led me to explore the use of CHAT to better understand interdisciplinary collaboration in design contexts, particularly during the framing phase of projects. I collected data from case studies involving novice industrial designers working with partners from various disciplines on complex projects. Using CHAT as an analytical framework, I identified strong connections between Engeström's Activity Theory (AT) model and systems thinking in design. In design, we often refer to the co-evolution of problem and solution. The AT model helped reveal how interdisciplinary teams engaged in iterative cycles—marked by tensions and reflections—where they simultaneously explored and redefined both the problem and the solution. This exploration is detailed in the 2017 paper referenced below.

Together with my former PhD student and now colleague, Virginie Tessier, we further developed this work, leading to an expansion of activity theory known as "designerly Activity Theory" (d.AT). During the development of this model, we had the opportunity to meet Professor Yrjö Engeström, which allowed us to validate our understanding of AT and refine our model (Zahedi & Tessier, 2018). I am deeply grateful for this opportunity, which later led to a visit to CRADEL.

The d.AT model, which emerged from the analysis of design project data, continues to inform both our educational and research practices.

Another important dimension of my research is "Research through Design" (RtD), a practice-based approach in which I investigate collaboration and co-reflective practices within design and innovation processes. This includes design thinking and the framing of complex problems, with a particular interest in how early-stage team involvement affects systems thinking. As a former design practitioner turned educator, I strive to bridge theory and practice, emphasize project-based learning, and value practice-led research.

One of the challenges of the RtD approach is collecting data during the design process itself. To address this, I proposed a template—grounded in the AT and the d.AT model—to assist designers in gathering research data while working individually or collaboratively. In this context, the model supports data collection through its systemic structure, exploratory orientation, and explanatory potential. This work was first presented at the REDES conference (Research & Education in Design, 2022) and has since been published as a book chapter (Zahedi & Tessier, 2025).

I am particularly interested in the interplay between Activity Theory and the Research through Design approach, the interactions between systems of Activity Theory within design and innovation projects, and in using CHAT and the theory of Expansive learning to support learner consciousness and reflection-on-action within the design process.

**References**

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**Key Contributions**

- Use of Activity Theory as a lens for understanding collaborative design processes
- Expansion of Activity Theory into Designerly Activity Theory (d.AT)
- Application of d.AT as a framework for data collection and analysis in Research through Design contexts