Conversations Around Semiotic Engineering

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Editors

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Preface

It is our great pleasure to introduce this tribute to Clarisse Sieckenius de Souza's research. When Clarisse established the Semiotic Engineering Research Group (SERG), in 1996, she managed to bring together not only her own students but also students from other areas who were inspired by her unique ideas and rigorous reasoning.

We feel privileged to have been there in its inception and to have followed semiotic engineering's evolution. It started as a theory of human-computer interaction (HCI), with a particular view of HCI as designer-to-user metacommunication, thus typifying HCI as a kind of computer-mediated communication (de Souza 2005). Later, semiotic engineering proposed to use some of its evaluation methods in scientific research in HCI (de Souza & Leitão, 2009) and, more recently, a set of epistemic tools to inform human-centered computing (de Souza et al. 2016).

In this volume, several researchers who have in some way been touched by or contributed to Clarisse's work have come together to participate in a range of conversations around semiotic engineering, each from their own unique perspective.

Terry Winograd opens the volume recollecting Clarisse's time as a visitor researcher at Stanford. Their vibrant research environment inspired her to explore her intuitions about bringing the HCI designers to the center stage as interlocutors of a semiotic conversation. That visit provided a fertile soil in which Clarisse planted the first seeds of semiotic engineering.

By situating semiotic engineering as one of the few "more general conceptual approaches," Liam Bannon highlights the theoretical and ethical commitments of semiotic engineering in the design of technologies that augment humans' skills and expertise.

Susanne Bødker brings attention to the need to explore the role of multi-mediation, meaning, and appropriation in ubiquitous settings, with their multiplicity of artifacts and activities. Her multi-mediation work with Peter Bøgh Andersen and other colleagues, combining semiotics with activity theory, shares with semiotic engineering a concern for designing technology oriented toward people mediated by multiple (interactive, computational) artifacts.

Sharing an interest in creating "richer frameworks and ecologies on how designers and users can interact in the design of computational artifacts," Gerhard Fischer proposes to establish an alliance between semiotic engineering and his own work in meta-design, to face the challenge of embracing the emergent "and making it an opportunity for more creative and more adequate solutions to problems."

In the domain of programming languages, Alan Blackwell argues for a shift in focus from language designers ("the last people to listen to") to programmers (i.e., the language users). From a semiotic engineering standpoint, this may be viewed as going from one extreme to another, as semiotic engineering proposes to bring designers to the center stage as interlocutors with equal standing as users.

Delving into oft-misunderstood concepts of semiotics, Mihai Nadin recalls his argument in favor of a new foundation for semiotics and proposes a discussion about semiotic engineering's role in designing effective interaction languages that reach the pragmatic level of semiotics.

Allen Cypher draws a parallel between some of the characteristics semiotic engineering leverages in designers and characteristics of good teachers, such as "the ability to go a step further and imagine what it will be like for their audience to hear those words." Thinking of the audience in a different way, within computational arts, Ernest Edmonds continues a conversation started in 2015, in Rio, after Clarisse and he met in a computer-based art exhibit. The debate about the "locus" of conception of generative art and its relation to semiotic engineering is wide-ranging, thought provoking, and far from over.

Diving into semiotic engineering, Raquel Prates discusses its advances in the creation of epistemic tools for the design of collaborative systems over the years, framing them as members of the EpisTAMiCS family of models, each one addressing complementary parts of the design process that help to reflect on design alternatives and to make better informed design decisions.

Carla Leitão concludes this book, charting the trajectory of semiotic engineering from its inception onto a reflexive, transdisciplinary, and humanistic theory, which started within HCI but which has now moved beyond, reaching into human-centered computing (HCC) with a set of epistemic tools for various "users" in multiple stages in software development, such as engineers and programmers.

The breadth of conversation topics inspired by semiotic engineering demonstrates the range of influence of the theory and the relevance of Clarisse's lifework to diverse scientific and artistic realms. We hope our readers will also feel inspired to engage in some of these conversations.

Rio de Janeiro, Brazil

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About the Editors

Simone Diniz Junqueira Barbosa is associate professor at the Informatics Department of the Pontifical Catholic University of Rio de Janeiro (PUC-Rio), where she teaches, advises, and conducts research in the field of Human-Computer Interaction (HCI).

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