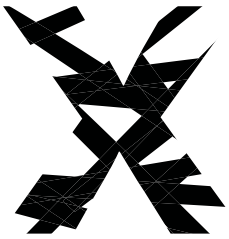

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RtIxD and the willingness to discover, act and contribute

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The Special Issue *'Research through Interaction Design (RtD + IxD = RtIxD)'* emerged from our desire, as interaction design teachers, to value design as a creative, practice-led project activity, based on holistic methodology that contemplates various sides of interactive experiences. Also, as researchers, to position design methods as a noteworthy way to achieve more knowledge in an area still defining itself.

In our understanding, this vision is particularly important for teaching and researching in interaction design, as it allows us to guide future researchers towards thinking about and with design projects, its complexities, uncertainties, riches and advantages. We appreciate the meaning of a design project in an ambivalent perspective, both in anticipation of what does not yet exist, and in the manifestation of what is potentially already there. In this 'in between' we find a privileged space for discovery, as resulting from a mismatch between chance (identity) and necessity (society).

In this context, a design project should not be understood as an unalterable and regulated procedure, but as 'anything' open to mediation, and each choice combines with all the others to unravel the improbable. If the ambiguity of a design project's core is to be removed, the meaning of design will be lost.

Design practice, which in some circles can be assumed as exaggeratedly subjective, dependent on the designer's creative control, has, in interaction design, been flooded by an objectivity, technicality and rationality, which deprives it of some of its purpose. Suppressing a creative practice due to tasks that are merely fulfilling obligations, translates into little gain for the advancement of that practice. It prevents acquaintance and recognition of its process, of the procedures that help to understand proposals and the reflection of those who practice it.

On the other hand, research has been covered by its own analytical and measurable certainty, which has given rise to prejudice to assert other ways of doing it. This apparent departure has made it difficult to realize and, even more, to set in motion, simultaneously, a presence of research in interaction design and a presence of interaction design in research. Although interaction design, given its origins, very close to computer sciences and behavioral sciences, is from all areas of design, perhaps the most conducive to such a relationship.

We often hear about the need to make design research more scientific. For this to happen, appropriate methodologies and procedures are needed in design research, but that does not detract from design creativity.

In recent years, particularly from the perspective of Frayling (1993), operative terms 'research' and 'design' have come together and converged in a methodology that recognizes the design process as a legitimate research activity – Research through Design (RtD). This way to perform research is constituted, in Burdick's perspective, by the design process itself, including materials research, development work, and the critical act of recording and communicating the steps, experiments, and iterations of design (2003).

Several authors (Stappers & Giaccardi, 2002; Frens, 2007; Zimmerman & Forlizzi, 2014; Durrant et al, 2017) somehow claim that knowledge can be learned more effectively through practice, i.e., from the active experience and consequent critical reflection of that experience – for instance, through a design project. In this way, by articulation of practice with theoretical research, we generate a dynamic and iterative relationship – we question through design projects and act through theory, and vice versa.

'Research through Design' was initially applied in the context of Art and Design and gained notoriety in several fields, including Human-Computer Interaction (HCI) and Interaction Design (IxD). As an approach to interaction design, RtD integrates models and theories with technical knowledge in the design process (Zimmerman et al, 2007). This made it possible to generate expanded knowledge through creative, speculative and experimental viewpoints that help designers deal with complexity. Still, we found that, although RtD's relationship with interaction design have mainly fallen within the scope of HCI, there have not been consistent studies with a broad view of interaction in its connection with design as project activity.

This observation led us to propose, as theme of this issue, the association of Research through Design with Interaction Design (RtD + IxD = RtIxD) to provide a space for reflection on design praxis as an acting involvement in generating knowledge for the area. Therefore, an attempt was made for that space to foster interdisciplinary debate and to strengthen an RtIxD methodology, to understand its application in different contexts, to assess obtained results and its impact on research, education and/or design activity. It was also aimed at attesting its potential for developing creative interactive systems that include a critical and speculative dimension.

The articles now published reinforce this suitable connection that can be established in interaction design. Due to processes with similarities, where a sequential structure is based, filled by methods with specific attributions and that contribute to design project's development, interaction design lends itself to an association with research.

We can verify that various authors resorted to practice-based methods in or related to interaction design: user research, personas, user scenarios, customer journey maps, storyboards, wireframes, user testing, user interface and prototyping. Not only are they used as procedures that raise, analyze and process information, which influence designer's options; but also, originate research paths for interaction design.

A broad scope for the practice of interaction design is pursued in several articles, which ranges from paper as physical existence to information immaterial condition. It can also be observed in a reverse way, from an intense digitization and automation of systems that confront and question human beings, to tangible media that privilege the senses and expand our possibilities of action as interaction designers, turned researchers, using our practice to increase available knowledge.

One of the concerns when preparing the call for this issue, which is also evident in the articles now published, is the understanding of what the area of interaction design is nowadays. How is it described and defined, what are its borders, what future paths and how to contribute to them? Höök and Löwgren (2001) give us interesting clues in their synthesis of the area, confirming a physical/digital existence, where the designers' ability for anticipation meets tangibility, where computing and haptic come together without seeming to be a mistake. Understanding interaction design in this way will satisfy designers, those who may have found interaction design, in a path unrelated to HCI and as such, without wanting to obey a technological imposition or without possibilities beyond devices. Not that HCI has not understood the same and has adapted to a ubiquity that no longer sees the computer as a machine, but rather as a constant, continuous and dispersed presence (Rogers 2009). But given this potential, designers find an open field for their research, incorporating methods they know best and deal with the most, those of a practical and qualitative nature.

We have found it clear, the importance of having a creative and reflective process for interaction design, connected or not with material output and beyond measurability. More than testing and evaluating projects in their distinct manifestations – something for human factors to explore and for feasible implementations – it seems necessary to reinforce interaction in the intersection of art, science and technology. Using RtIxD, design researchers must direct their gaze to the future in a continuous anticipation movement that will allow them, not only to find solutions to commercial-based problems, but to exercise the right to have an active and world-wide voice over reality. Published articles relate design projects that are essentially original in their conception and in their approach to contemporary concerns, where interaction design achieves cultural, political, ethical and social function, always directed towards interactive experiences.

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