"BORN AND RAISED" IN THE INTERSECTION OF HCI AND IXD.

ELENA MÁRQUEZ SEGURA AND JON BACK Uppsala University, Sweden {elena.marquez; jon.back}@im.uu.se

Abstract

In this paper, we, relatively new researchers educated and working in the intersection between HCI and IxD, suggest what we think that is missing regarding accepted IxD knowledge within the HCI research community. We base our arguments on the problems we find to articulate and fit our contributions within the accepted forms of knowledge in IxD. Specifically, we suggest the need to discuss the space that lies between what is currently known as intermediate-level knowledge, and the design particulars.

Introduction

Interaction Design (IxD) has gained a foothold with its goal of designing the artificial to create new or change existing interactive systems for the better [6]. However, the Human-Computer Interaction (HCI) community has been struggling to integrate (and accept) it in its research community [17] for a long time.

One reason may relate to how IxD fully recognises itself as a design discipline [6], with its recognized goals, methods, tools, outcome and result knowledge, which have been internally valued and accepted. While HCI might value the practical outcome of an IxD-driven process; its "design exemplars" [17], its "ultimate particulars" [15], the product of a design process, the methods and tools, and the resulting design knowledge might be more strange to many in the HCI community, and hence harder to accept.

Still, in the last years, we have witnessed an increased interest in the HCI community that goes beyond the end result to focus on key elements in design practice – e.g. the understanding of aesthetics, the generative, and inspirational character of designerly-driven processes, and the well grounded design concepts that are typically the result of such processes –, and skills typically attributed to the designer (see the outside view commonly held about designers [5]). This has led to the proposing of new forms of intermediate knowledge grounded in IxD, which are increasingly gaining acceptance within the HCI community; among many others: strong concepts [12], annotated portfolios [9, 2; 11], and manifestos [8].

In the following, we briefly introduce what has already been 'accepted' within the CHI community, to then account briefly for our background. This will both underpin our reasoning in this position paper, and hopefully make for a compelling case to be accepted to participate in this workshop. We end the position paper suggesting what we think is missing, considering the difficulties we are having articulating and validating the knowledge we gain when doing research.

What is accepted

Interaction Design (IxD) is defined by Fallman as "an orientation towards shaping digital artifacts—products, services, and spaces—with particular attention paid to the qualities of the user experience" [6]. With this orientation, there is no doubt that IxD has much potential to contribute to HCI practically by creating and shaping the artificial "for the better" [6]. In this goal, the ultimate particular seems highlighted as the major contribution of IxD to HCI, and a very welcome one since, as Höök and Löwgren discuss, knowledge construction in HCI comes partially in hand of innovative designs [12].

However, IxD has more to offer in terms of knowledge construction than the particulars [3, 12]. As already Frayling puts it, there are many different forms of research, and accordingly, what each of them involves and delivers differs [7]. Hence, knowledge produced in design comes from more than the artifact, for example from the activity of designing and implementing, and from using and reflecting upon the use of such artifacts [3]

This draws a picture of knowledge production with the abstract (theories) on one end, and the concrete (design instances) on the other end [11, 12]. In between, we have what has been called intermediate-level knowledge [12] with classic forms of knowledge in HCI such as heuristics, guidelines, patterns, methods and tools, and even experiential qualities. Recently, several scholars have outlined how IxD adds to these conceptual forms with, among others, conceptual constructs [16], bridging concepts [4], and finally knowledge contribution very tied to design practice, like annotated portfolios [2, 9, 11].

Who we are

In the following we describe a generation in which we think we more or less fit. That is younger researchers with a bachelor in Engineering, and a master in Interaction Design or a nearby field, soon finishing their PhD in Social Sciences. When it comes to innovation and design, our background in traditional engineering and HCI gives us a problem-solving tool, though as researchers schooled in this intersection of IxD with HCI, we place creativity over requirements. We probably identify our methodology with Research through Design or Constructive Design Research [1, 8, 10, 17, 18], being used to engaging in open iterative design processes with research questions that are shaped gradually as we move along each loop in the design process. When it comes to evaluative methods, we feel very comfortable with the "social turn" in HCI [13], performing in-the-wild studies [14], and valuing interpretative research to generate knowledge. We most likely read the scholars who take IxD and fill the intermediate-knowledge gap in HCI [12]. However, we find it difficult to fit valuable insights and forms of knowledge result of our work into the accepted forms of knowledge in the main HCI venues.

In this workshop a few of these young researchers, like us, might be able to contribute by bringing these and other issues on the table. To the ongoing discussion, we represent the voice from within the intersection of IxD and HCI; that is, young researchers schooled with methods and approaches characteristic of IxD, who are still figuring out what is expected from researchers and practitioners in the intersection of IxD and HCI. We expect this workshop will in turn help us greatly in figuring this out.

What is missing

Our research activities could be described using both Fallman's Interaction Design Research Triangle [6] (mainly the activities of design explorations, and design studies), and Koskinen et al.'s activities (mainly the Labs and Field forms)[10].

Typically, the activities within our research projects would not fit in just one of the above categories (we do not have the space here to describe in detail examples of our projects, matching them with one or another group of these models). This is no surprise as, for starters, there is no clear cut border between each category [6]. Also, IxD research projects typically move in between categories [6].

What we think that has not been sufficiently discussed yet is the fact that valuable insights come from this moving, which we think would be a very interesting contribution to the HCI research community.

As it is right now, we have learnt from experience that, in order to get you contributions accepted by the HCI research community, you need to compartmentalize your results and articulate them accordingly with both: a) the accepted knowledge forms, and b) the activities recognized (e.g. those from Fallman's triangle). Insights from moves in between activities are harder to be accepted.

In terms of knowledge forms, we think that what is currently accepted is either concept-driven approaches to IxD research that involve abstractions accounting for an extensive amount of instances (typically accepted by the HCI research community), or very rich descriptive and critical accounts of the design particulars (typically welcome by very design oriented venues).

We think that it is missing as a middle ground between what is now already called the middle ground or intermediate-level knowledge [12] and design particulars. These forms of knowledge transcend the very specifics of a design particular, although they are closely tied to it. We think knowledge in this space is valuable not just for a particular project (because it informs and shapes our designs, and helps us understand the situation we design for), but for also for a wider community, for its generative and inspirational potential.

We think that having such form of knowledge would benefit in terms of the sociology of research, allowing designers to engage with one another at early stages of research projects, which would make for a more coherent IxD research field. But before that, we need to discuss what that kind of knowledge those forms are, what they involve, and deliver, and how to assess them.

References

- [1] Bardzell, S., Bardzell, J., Forlizzi, J., Zimmerman, J., & Antanitis, J. (2012). Critical Design and Critical Theory: The Challenge of Designing for Provocation. In Proceedings of the Designing Interactive Systems Conference (pp. 288–297). New York, NY, USA: ACM.
- [2] Bowers, J. (2012). The Logic of Annotated Portfolios: Communicating the Value of "Research Through Design." In Proceedings of the Designing Interactive Systems Conference (pp. 68–77). New York, NY, USA: ACM.
- [3] Cross, N. (2001). Designerly ways of knowing: design discipline versus design science. Designerly Ways of Knowing: Design Discipline versus Design Science., 17(3), 49–55.
- [4] Dalsgaard, P., & Dindler, C. (2014). Between Theory and Practice: Bridging Concepts in HCI Research. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 1635–1644). New York, NY, USA: ACM.
- [5] Fallman, D. (2003). Design-oriented Human-computer Interaction. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 225–232). New York, NY, USA: ACM.
- [6] Fallman, D. (2008). The Interaction Design Research Triangle of Design Practice, Design Studies, and Design Exploration. Design Issues, 24(3), 4–18.
- [7] Frayling, C. (1994). Research in Art and Design. In Royal College of Art Research Papers, 1(1).
- [8] Gaver, W. (2012). What Should We Expect from Research Through Design? In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 937–946). New York, NY, USA: ACM.
- [9] Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., & Wensveen, S. (2011). Design Research Through Practice: From the Lab, Field, and Showroom (1 edition.). Waltham, MA: Morgan Kaufmann.
- [10] Löwgren, J. (2013). Annotated Portfolios and Other Forms of Intermediate-level Knowledge. Interactions, 20(1), 30–34.
- [11] Höök, K., & Löwgren, J. (2012). Strong Concepts: Intermediate-level Knowledge in Interaction Design Research. ACM Trans. Comput.-Hum. Interact., 19(3), 23:1–23:18.
- [12] Reeves, S. (2013). Human-Computer Interaction Issues in Human Computation. In P. Michelucci (Ed.), Handbook of Human Computation (pp. 411–419). Springer New York.
- [13] Rogers, Y. (2004). New theoretical approaches for HCI. Annual Review of Information Science and Technology, 38, 87–143.
- [14] Stolterman, E. (2008). The Nature of Design Practice and Implications for Interaction Design Research. International Journal of Design, 2(1), 55–65.
- [15] Stolterman, E., & Wiberg, M. (2010). Concept-Driven Interaction Design Research. Human-Computer Interaction, 25(2), 95-118.
- [16] Zimmerman, J., Forlizzi, J., & Evenson, S. (2007). Research Through Design As a Method for Interaction Design Research in HCI. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 493–502). New York, NY, USA: ACM.
- [17] Zimmerman, J., Stolterman, E., & Forlizzi, J. (2010). An Analysis and Critique of Research Through Design: Towards a Formalization of a Research Approach. In Proceedings of the 8th ACM Conference on Designing Interactive Systems (pp. 310–319). New York, NY, USA: ACM.