Crafting Tangible Interactions

Can thinking through craftsmanship values enrich the design process of TI?

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Abstract

While today the digital is ubiquitous and many interaction designers focus on designing manual or digital processes faster, more precise, ascribed, repeatable and replicable, there is a robust counterposing standpoint looking for site-specific, volatile and unique interactions. Craftsmanship is a practice that today is still trying to negotiate its role between technology, the digital, and handmaking values within the Design realm. This workshop suggests that looking closely at craftsmanship practices and unpacking the values craft practitioners hold over materiality, techniques, and processes could enrich our knowledge on human-values. The nuances these values hold provide useful insights that could be used when designing future tangible interactions.

Keywords

Tangible Interaction, Craftsmanship, Human Values

1. Introduction

The Human-Computer Interaction (HCI) field has always been interested in how technologies could be best designed to interact with humans. Thus, as technologies become more complex, the community is trying to change its research agenda, giving a higher and more conscious focus on the importance of the human counter-part of technology when designing systems and devices. To do so, the community is reaching out to new forms of partnerships with other disciplines to "re-examine and reflect on its basic terms and concepts" [6, p.1230].

As Tangible Interaction (TI) is a research field working at the intersection of the physical and the digital, it seems valuable to have a close look at domains trying to negotiate their place between these two fields such as, for example, the one of craftsmanship. In the last two decades, sociologists, craft theorists, archaeologists, and economists have been engaging with the topic of *digital craftsmanship*, contrasting handmaking with digital making and comparing digital craftsmanship to industrial/automatised processes that work with almost no human involvement in the making, stressing how the shifting role of hands and technologies in the active engagement with materials are devaluing the latter, engendering a sense of loss in our heritage [2; 3; 5; 4; etc..].

Valuing handmaking characteristics in the Digital Era seems a crucial notion not to lose sight of, especially in communities that are designing innovative technologies, researching how these technologies could interact at their best with humans.

In a time where HCI communities are taking into deeper account human values, and the boundaries between the physical world and the computer are reconsidered [1], seems appropriate to try to investigate if craftsmanship values could provide useful insights to designers in the TI community.

2. Objectives

In this workshop, the participants were asked to collectively reflect and discuss on how craftsmanship characteristics and sensitivities could be valued and included more in the design of future tangible interactions. This workshop was designed to open debates rather than solving or tackling specific issues. In the workshop, the participants had the chance to discuss how craftsmanship values could open up new discussions within their community.

3. Schedule

To frame the workshop, the author provided a brief presentation on the relationship of craftsmanship to digital fabrication technologies and the relevant tension points and dichotomies between those crafting processes that allow a close embodied encounter with the material, the physical, the tangible world, and those making processes that rely on the abstracted mediation of the material (10 minutes).

The participants were divided into three main groups. They were assigned three different sets of themes related to values in craftsmanship: *errors, uniqueness and replicability* were assigned to the first group, *serendipity and control* to the second group, and *time and materials* to the third group. Each group was asked to spend some time browsing through a series of sources that had been previously collected by the author. The sources selected had been specifically chosen considering each assigned theme and included a diverse set of videos, narratives, pictures and interviews related to artefacts and craft practitioners working in the intersection of fabrication technologies and more hands-on, analogue making processes (15 minutes).

At this point, the participants were asked to discuss and reflect all together upon the sources and the themes explored. To guide them through the reflective exercise, the author provided three different tasks:

- In the first task the groups were asked to reflect upon the sources provided *in relation to craftsmanship* (5 minutes)*;* this exercise aimed to open up the reflective space and encouraged the participants to share with one another the observations done individually over the given sources.
-In the second task, the groups were asked to reflect upon the sources provided *in relation to TI* (5 minutes); here, the participants were invited to choose examples of TI projects that could relate to the themes explored and share personal experiences in relation to their practices as designers.
-In the third task, the groups were asked to *imagine a TI including or expressing more* the assigned themes or even *giving up*, specific values –e.g. giving up control (5 minutes).

While commenting, the participants were asked to track down in a creative space (an online shared presentation) the main bullet points discussed and any pictures, videos and content that was of relevance to their debates. These spaces were collected at the end of the day, to provide a tangible overview of the reflections and the relevant discussions addressed.

The last 10 minutes of the workshop were assigned to the wrapping up phase. The three groups came together, and each group had 3 minutes to share roughly the outcomes of the reflections carried out in their groups, with the other participants (9 minutes).

To wrap up, the researcher left the participants with the following open question: *Did thinking through a craftsperson's eyes bring any added value to how we can think of tangible interactions and the importance of human values, in our practice as designers?*

4. Results

The workshop opened up dynamic discussions over the selected themes. In the following, the author will try to give a brief overview of the debates that the chosen themes were able to entice within the different groups.

Group 1- Serendipity and Control

The group discussed how tools radically change the way we think (and craft). They were impressed to see how artists exploit the potential of 3D printers to make glitches an integral component of their creation.

The group reflected on *Serendipity and Control* in relation to how a designer facilitates co-design workshops; the facilitator needs to continuously balance between the two over the participatory process and the outcomes. The group discussed how *serendipity* is a state of mind, not only a feature of the craftsmen/women or the designer, and pointed out how involving people from different backgrounds in a design process radically enhances *serendipity* as diverse and creative ideas occur more frequently with a diversified team. The group discussion shed light on the necessity to increase the *serendipity* value within creative processes. The group articulated a possible research inquiry to pursue further*: how can we stimulate serendipity in design processes?*

Moreover, the group shared a diverse set of design examples representing an interface that is not immediately intuitive and pointed out how users do find their way to interact with the latter anyways, appropriating it. This reflection stressed that more open- ambiguous designs, with no predefined use, are sometimes perceived as more engaging. The group, by the end of the reflective exercise, started imagining autonomous behaviours in everyday objects (e.g. a sofa that moves to prevent you from sitting on it etc.).

Group 2- Error, Uniqueness and Replicability

The group reflected on how each object a craftsmen/women produces is unique, as it is being shaped by the "perfect imperfection" of expert hands.

The group focused on the theme of *uniqueness,* discussing how a TI and its user, are co-dependent; the user, by choosing to engage a specific tangible, is actively transforming it into something *unique* to them. The group reflected on how *uniqueness* is not inherent in the tangible itself. Thus, it is a quality of the designed interaction which is volatile; the TI is not solely unique, but it co-creates its *uniqueness* with the user.

Moreover, the group questioned whether imperfections in a TI could be positively valued and considered *unique*, as it happens with the imperfections in handmade tangible artefacts which, sometimes, even become luxury goods for it.

The group started imagining how rephrasing the term *"use"* –highly used in TI– and transforming it into *"unintended use"* could be an exciting provocation to explore further in the community.

Group 3- Time and Materials

The group reflected at length on how *time* and materials are used in craftsmanship processes and the design community. They commented on how material choices are under looked in design communities.

The group reflected on how *time* is an element that is always in *control*, both while using hands or technologies in the making processes. The group differentiated time into two different ways of perceiving it. Having dealt with a digital file, once the file is ready to be printed out with a 3D printer, the craft practitioner has a precise *time frame* to expect the machine to be done, if everything within the process goes smoothly. Instead, while crafting by hand, the practitioner is actively engaging with materials in the making process, and it is not waiting. The group reflected on how time here, acquires a different value; is it more valuable to be able to lose the sense of time passing or to have a controlled perspective on time passing?

Moreover, the group discussed how hand-making something, enhances the attachment to the crafted artefact. Even if the outcome is not precise, we generally care more about the things that we make. The group discussed how the attribution of the value of "precision" to technology might be limiting, at present, the potential user engagement with it. The group ended the session suggesting that reflections on how technology could be tweaked in its precision, to enhance engagement, could be beneficial to the community.

5. Reflections

In a very brief window of time (approx. 45 minutes), the workshop initiated interesting reflections successfully, showing how the intent of posing some questions through craft values –rather than answering or solving some issues– can be a valuable asset to the community.
Some of the topics that came up within the discussions were not explored further due to time limitations but could be further explored in a future workshop. However, this reflective exercise's outcomes highlight the possibilities that thinking through craftsmanship values could bring to the TI community and to the design community.

References

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