
Fashion as a Source for Intermediate Knowledge in HCI

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Abstract

Human Computer Interaction is in essence interdisciplinary. It could benefit from applying theories from other disciplines. Here I particularly emphasize studying social practices as a valuable bridge to link abstract theory and practical design; and as a way to produce intermediate knowledge in interaction design. I use fashion as a case and show what HCI could learn from fashion theory and practice. The concept of “Outfit-centric accessory” is introduced as an example of a form of intermediate knowledge.

Keywords

Fashion theory; intermediate knowledge; social practice; outfit-centric accessory

Introduction

In recent years, a few researchers in HCI have proposed different forms of intermediate knowledge that can be articulated and communicated at a level above the level of the particular but below the level of the universal [2,3,9]. They argue that this is a fruitful way to advance the discourse on theory in interaction design. Although it lacks shared understandings and articulations, this type of knowledge is needed in HCI. HCI is quite interdisciplinary and it opens to many theories from other fields. Theories could be very abstract and generative, then a bridge between theory

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and design practice is highly required. Intermediate knowledge contributes to constructing the bridge.

As a researcher with the backgrounds in humanities and social science, here, on the one hand, I emphasize that interaction design could benefit from importing theories of various disciplines; on the other hand, I argue that it is important to study people in social practices when applying theory from other disciplinary to interaction design, especially when it comes to use philosophical thinking.

Since HCI is to investigate *human* and technology instead of only studying technology as computer science does, it is reasonable to embrace all disciplines that study human beings, such as psychology, sociology, and cultural studies. Those theories focus on human behavior and social phenomenon, which could contribute to understanding how human factors impact design and technology. Until now, research on human computer interaction has been developed for many years. Many theories from other disciplines have been imported to enrich the knowledge in this field.

Studying social practices is to conduct a sociological investigation of the topics inspired from theories in the beginning of a design process. To do so, collection of empirical materials is necessary and important. Since theories from humanities and social sciences are often abstract, they need to be “translated” into more concrete design requirements to contribute to interaction design. Sociological investigation could testify the theories in real life and enables researchers to gain knowledge from the pervasive and trivial actions in everyday life. This kind of knowledge could be developed into “Intermediate knowledge”, which is

contextual and situated, more general than design practice and less abstract than theories. Figure 1 describes such a process. In the following, I will give an example of how I use fashion theory and practice to influence mobile phone design, especially in designing aesthetic experience.

Fashion and HCI

Recently, HCI field is paying more attention to the hedonic aspects of technology in daily life. A few researchers start to look at fashion and see what it could bring to interaction design. In HCI literature, “Fashion” exists in a textiles-and-sensors oriented basis for embedding interactive technologies, e.g. wearable computing; in Internet, e.g. fashion gaming [1]; in sustainable fashion design [7,8]. Many aspects of fashion have been discussed, such as its relation to changing conditions, self-identity, social communication, visual appearance and vintage quality. However, there are more to be debated and discovered, as fashion is ambiguous and complicated.

In fashion studies, *Fashion* is an important driver of taste and it molds our concept of what is considered beautiful and aesthetical [6, 10]. We learned from previous studies on fashion and HCI that many aspects should be considered, such as visual form, social communication, and symbolic values of objects [2,3,9]. But it does not have to relate to fashion if we only gain such insights, since we might have gained the same insights from other fields, such as industrial design or consumer studies. It is not the *significance* of visual forms, social communications or symbolic values that features fashion, it is the *particular* visual forms, social communications and symbolic values that make fashion. Thus I argue that the importance of fashion

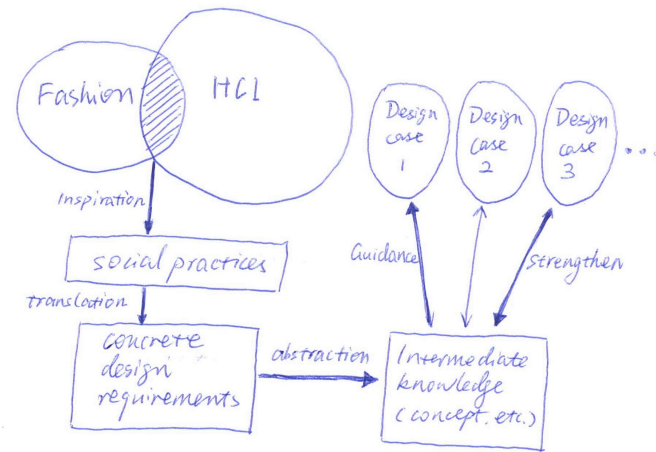


Figure 1 How to generate intermediate knowledge from other theories

studies lies in that it tells us *ways* to shape our ideas of beauty as well as *how* to produce beauty and desire in objects. For instance, luxury fashion has much to do with artisan, craftsmanship and authenticity, which could offer insights for interaction designers to create desire and engagement for their designs, or contribute to sustainable design. Here I will focus on one aspect of fashion- fashion mechanism.

Fashion mechanism

We learn from fashion theory that fashion provides mechanisms that shape our ideas of beauty, especially in creating beautiful physical appearance, e.g. as seen in Kawamura's theory of "Fashion-ology" [6]. She suggests a fashion system that includes mechanisms of production, diffusion and consumption, which are interacted with each other. Gatekeepers play a significant role in making aesthetic judgment as part of diffusion [6]. These individuals are sources of meaning for the masses, and they create and deliver symbolic codes that are largely constructed according to

prevailing cultural principles. So far, it is still very abstract. In order to use the theory to imply mobile design, we studied online fashion media and blogs, which are new fashion gatekeepers, to investigate how they treat mobile phones as fashionable items through language and discourse [4]. In that study, we started from fashion theory, then conducted an investigation of online fashion gatekeeping and qualitative content analysis on the empirical materials; finally proposed an idea of "outfit-centric accessory" in designing a mobile phone as a fashion accessory [4].

Outfit-centric Accessory

Based on empirical studies of fashion practices, we found that the concept of "accessory" is important in both fashion system and mobile design, but with different meanings. In fashion, an accessory is something that adds to the outfit, or the ensemble, like a watch, a bag, or jewelry. We termed this an outfit-centric accessory because it starts from the wearer of clothes. We summarized three features of this concept: first, the aesthetical considerations should focus on visual expressions. The visual features should be publicly available. This argument is grounded in the observation that the parts of the phones that attracted the aesthetic interests of gatekeepers were often the back and the sides, and those parts are also visible for others. Second, the accessory should match the garments and contribute to an ensemble or outfit. Lastly, such an accessory needs to fit with variations in clothing styles, which have a faster turnaround than a device. This suggests take "matching" and "variation" into account in designing attractive digital devices.

We see interesting opportunities for future mobile design in the concept of outfit-centric accessories, eg.

not only in hardware design, but also in software. We further applied this concept in a design exploration. We designed mock-ups in different designed shapes that showed the idea of one shape-changing phone, and did user studies at people's homes [5]. The requirements of matching, public visual aesthetics and variation guided the whole design process. Following the "outfit-centric accessory", we are working on a new design case with smart watch as the platform instead of mobile phones. Since the front side and backside merge into one in smart watch, we believe it will provide more opportunities to implement the concept to design aesthetical and fashionable devices.

Nowadays, wearable devices, such as smart watches, have gained increasing interests in academia and industry. Situating on human bodies requires wearable technology to be attractive and aesthetical. Then fashion studies could be very relevant and inspiring to the design of wearable devices. Making it as a fashion accessory is one way to make them aesthetical. Thus outfit-centric accessory concept could be useful for wearable technology in general. In this sense, it could be seen as some kind of intermediary knowledge that bridging theories and design practices.

To conclude, I focused on a particular point in fashion-fashion mechanism- to show how HCI could benefit from fashion theory and practice. By doing so, I revealed that how we could inspire from various theories, learn from social practices and gain intermediate design knowledge.

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