FASHION, FICTION, FUNCTION: MEDIATING WEARABLE DESIGN THROUGH FASHION FILM

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ABSTRACT
Fashion technology is an expanding field, yet the question of how technology can be considered fashionable remains unexplored. According to fashion theories, mediation plays a fundamental role in transforming clothing items into fashionable garments. In this study, we explored how fashion films, as one of the most important fashion media in the industry today, could make wearable design concepts fashionable by merging aesthetics, experience and fiction. By synthesizing research in fashion studies and Human-Computer Interaction (HCI), we sketch out a framework for producing fashion film for wearables. We then describe our own process of making a fashion film for a fictional concept, and reflect on our process of using the framework. The contribution of the study includes: 1) proposing fashion films as means of mediating wearable design concepts; 2) advocating a balance between fashion, fiction and function in fashion technology mediation; and 3) foregrounding the discussion of design mediation as part of the design process broadly.

INTRODUCTION
There is a growing interest in designing fashion related digital services and technologies within HCI. Wearable technologies offer great potentials in creating new products that are both interactive and fashionable. The term “fashionable wearables” refers to designed garments, accessories, or jewelry that combine aesthetics and style with functional technology (Seymour 2008). Numerous wearable design concepts experiment with new technologies for fashion, such as sound clothes (Elblaus et al. 2015), shape-changing fashion (Perovich, Mothersill and Farah, 2013), texture displays (Harrison and Hudson 2009), activity trackers (Lee, Cha and Nam 2015) or communicative accessory (Liu and Donath 2006). Fashion is then referred to as designed, expressive or beautiful wearables.

However, well-designed objects are not necessarily fashionable. Technology-oriented fashion design lacks in addressing research within the area of fashion studies, which points to the role of media in shaping and defining what is fashion. A wearable garment alone cannot become fashionable, until it is mediated as a fashionable item by specific institutional practices (Kawamura 2004). Thus, this study is motivated to mediate wearable design concepts through fashion means, with a focus on a particular new media form i.e. online fashion film (Khan 2012; Uhlirova 2013a; Skjulstad and Morrison 2016).

Fashion film has emerged as one of the most influential fashion media since 2000s. Similar to design fiction (Bleecker 2009), fashion film depicts a fictional world where design concepts are situated and contextualized. Both use narratives to explore the felt experiences rather than demonstrate functionalities. Its fictional component motivates our interest in fashion film as a way to mediate wearable design concepts. We suggest it as a vehicle for aesthetics, experiences, style, narrative and emotions, which can transform technical gadgets to fashionable wearables.
In this study, we propose a framework as a pragmatic tool for mediating wearable design concepts as fashion. We take a practice-based approach to produce a fashion film according the framework, i.e. a smart watch changes colors and patterns to fit with the wearer’s dress ensemble. The fashion film is also a design fiction, since it portrays an unrealized design vision which is embedded in the context of a fictional story. We discuss our learnings and challenges, which can inform, challenge and expand the area of interaction design for fashion, due to the differences in mediation tradition of technology and fashion.

DESIGN FICTION
Recently there has been an increased interest to use fictions in design research in interaction design. Fiction film about imagined technological functions applied in future settings, has gained recognition as opening up new design possibilities and driving the design thinking (Reeves 2012). Corporate concept videos that envision the future of computing have a value in narrating tradition of technology and fashion. With a similar goal, design fiction, deliberately render motivations for design (Tanenbaum 2014).

With a similar goal, design fiction, deliberately render fictional functions as real, by depicting a fictional world where the existence of a new technology is believable in the fictional reality (Bleecker 2009). Design fiction is loosely defined as “the deliberate use of diegetic prototypes to suspend disbelief about change” (Sterling 2009). Diegetic prototypes are the “cinematic depictions of future technologies…that demonstrate to large public audiences a technology’s need, benevolence, and viability” (Kirby 2009a). A notable examples of design fiction film is “corner convenience” from Near Future Laboratory, which depicts a set of prototypes situated in a convenient store, and their functions and implications were explored through a series of short stories (Near Future Laboratory 2012).

For example, Figure 1 is a still from the film which situates design concept of a scratch card for winning Twitter followers. Such product is available for purchase in a convenience store, which indicates a particular fictional world the design is situated in. The films create a fictional world for the design, contextualize the design and perform the design. The experiences of designed fictional artifacts become realized through the fictional films. It is an important shift in the perspective, from fiction film as presenting a design item, to a perspective where the fiction becomes the design itself, in the form of a design proposal (Pierce 2014). Thus, creating design fiction is a way of designing.

In recent HCI research, design fiction has been further explored in various forms and continuously expanding the design and mediation of technology, such as imaginary abstract (Blythe 2014), comics (Dykes et al. 2016), steampunk culture (Tanenbaum, Tanenbaum and Wakkary 2012) and short film (Gilardi et al. 2016), just to name a few. These studies extend the notion of fiction in design by linking them to other area such as film, literature, comics and maker culture. It is also important to understand these studies collectively highlight the importance of how design fiction is told, i.e. the mediation of design fiction in the forms of research abstracts, short films, commercial posters or comics. The old phrase “medium is the message” perhaps still have its relevance today (McLuhan 1964). However, since our goal is to create design fiction for fashion, we need to understand fashion mediation better i.e. how garments become fashion through media.

FASHION FILM
Moving image, as a way to display fashion, was already used during the silent film era (Uhlirova 2013a). Fashion documentary films and reportages also appeared as early forms of fashion films. But it was not until the age of the high-speed Internet that online fashion film became a new media format that ubiquitously present and an essential aspect of the symbolic production of fashion (Mijovic 2013). Although lacking a clear definition, fashion film can be categorized as short films that produced by fashion institutions (e.g. fashion houses, magazines, designers and filmmakers), distributed online (e.g. brands’ websites, online magazines, Vimeo or YouTube), and intended to mediate fashion by focusing on experiences, storytelling, aesthetics and the “personalities” of the garment beyond the physical forms (Soloaga and Guerrero 2016). Khamis argues fashion film affects how fashion is both defined and displayed (Khamis 2010). More importantly, such films “open fashion to a performative dimension with a different kind of sensorial and experiential complexity” (Uhlirova 2013b). This performative dimension can be understood as an intertwined relationship between a garment and a fiction (Soloaga and Guerrero 2016).
Fashion films, as a form of new media, was pioneered and populated by UK fashion photographer and filmmaker Nick Knight, who established the online platform SHOWStudio.com in 2000. This platform follows perhaps more of an Avant-Garde art tradition of fashion imagery in terms of fiction, whilst most common fashion films enhance the engagement the audience through storytelling. By screening narratives that represent their key values, fashion brands show their universe, tell their stories and seduce or provoke the viewers. Fashion films are woven into a wider network of mediated articulation of fashion; we need to understand them from a genre ecology perspective and recognize this genre as “a performative construct fundamentally linked to social and cultural navigation and negotiation of tastes and identities”. (Skjulstad and Morrison 2016).

Thus, we need to recognize fashion film is not merely a media form, but it tells its audience about a world. For instance, Karl Lagerfeld is one of the fashion designers who has created numerous fashion films for the fashion house Chanel. The film Reincarnation (Lagerfeld 2014), for example, presents the jacket design through a story of the encounter of Gabrielle Chanel and a lift-boy in a hotel near Salzburg, with a cinematic use of the environment, interior design and lighting, as well as the mood conveyed by the two characters dancing affectively. The fashion film portrays a garment within a fictional world where the garment carries particular style and performs the fiction. It is in that juxtaposition of a garment with a fiction, the audience come to desire and understand the garment. Again, it is in that association a garment becomes fashionable. The fiction enables fashion, and fashion becomes fiction.

We argue that design fashion oriented technology, e.g. wearable computing, would benefit from understanding and incorporating this part of fashion design. Such inclusion could be used to communicate wearable design concepts to the fashion audience, as well as actually generate a fashion experience for what would otherwise be considered a piece of gadgetry.

**FFF: FASHION-FICTION-FUNCTION**

By looking at related work from both fashion and interaction design, we recognize the overlapping area between fashion film and design fiction – they both intend to mediate the design concepts in the world where the design concepts are situated, through the making of fictions. In a way, the early rational of identifying these three key elements – fashion, fiction and function, was pragmatic, so that we have a productive tool at hand as framework for mediating the wearable design concepts, as well as for reflecting on them (See Figure 2). The framework is simply named as FFF which indicates the three aspects of fashion, fiction and function should not be considered as hierarchical, but as a set of complementary and dynamic relations.

Within the framework, each aspect includes a list of relevant elements to be created for its own goals with the considerations of other aspects. Function represents the most important elements of technology and design, i.e. the functionalities and their means of interactions. Fashion aspect encapsulates a set of qualities that are crucial for fashion communication, such as style, aesthetics, expression, beauty ideals, gender, eroticism, culture, identity and so on. These elements can vary significantly depending on, e.g. the overall design vision, the intended outcome and audience. Fiction aspect emphasizes on the world where the design concepts are situated in, the setting and people in that world, as well as their relationships and emotions.

![Figure 2. FFF: Fashion-Fiction-Function](image)

The framework is not a strict doctrine, but a working guideline that intends to steer the process of creating the mediation for fashionable wearables. Thus, we need to recognize, the aspects addressed are not necessarily exclusive from each other. Rather, they should together create a world that accounts for the aspects and their dynamic relationships of fashion, fiction and function.

**UTILIZING THE FRAMEWORK**

In this study, we produced a fashion film as design fiction that considered these import aspects. Here design refers to the practice-led process of creating the fashion film which is a mediation of a wearable concept; the wearable concept itself is not part of the process of this study. Thus, the designed artifact is the fashion film itself, in the form of a design proposal (Pierce 2014). The smart watch appeared in the film should be considered as a diegetic prototype (Kirby 2009b), which embodies the fictional technology and drives the narrative of the fashion film. In the following, we describe the making of the film before discussing the reflections and implications.

The production of the film follows a general process of preproduction, production and postproduction, while most design decisions were made during the preproduction phase. In the preproduction phase, we conducted a workshop with filmmakers to communicate the goal of the research and design proposal brainstorming session to establish the narrative of the
We also did script writing, location scouting, production design and recruitment. We outlined storyboard and a detailed production plan. The production phase included the actual shooting of the film. It took two days in multiple locations in south England in July 2015. The post-production phase consisted of editing, music scoring, color grading, animations, sound effects and visual effects for the design concepts. In the following, we present the film according to the previously described framework.

FUNCTION
The wearable design concept is manifested in the form of a smartwatch that responds to the character’s outfits. The smartwatch adapts the color, texture and patterns of the wearer’s outfits. The generation of the concept has been reported elsewhere (Juhlin et al. 2016), thus not described in details. The focus is the making of the fashion film as mediation of this concept. The watch prop used in the filmmaking was a regular analog watch. And the interactions were designed in advance and then produced during the post production phase by a professional animator (See Figure 3).

FASHION
Driven by this intention, we chose to target on the traditional luxurious fashion audience who don’t necessarily be the earlier adopter of wearable technology. We also chose to focus on a male audience, since are seen as “man’s most prominent accessory” (Wilson, 2003). The orientation towards a male audience is also supported by fashion press.

In order to speak to the intended audience, the style of the film has to fulfill the aesthetics of a classic fashion line, and more importantly, to make a piece of wearable garment relevant to a classic dressing ensemble. This combination creates an interesting clash between the classic men’s fashion and the technical gadget. Thus, the visual style of the film has to highlight the clash by emphasizing the conventions of classic men’s fashion where a wearable design is contextualized.

The complete styling was done by a professional stylist, who brought various clothing items from her studio and borrowed outfits from well-known British brands. In order to show the watch’s function in changing into interesting patterns, a lot of effort was spent on finding the accessories – the scarf and the pocket square.}

Figure 3. Three sets of still images. Representing the patterns and colours of the smart watch in relation to the wearer’s outfits and activities © Authors
fit in the style and provide an interesting reference for the watch to react to. To support the style and plot of the film, the overall setting is chosen to be the countryside of England. The specific places include a big house is where the man lives, a high-end stud farm where the man visits for purchasing horses, an old castle where the couple goes for dinner and a scenic driveway connecting these places (See Figure 4). These settings provide the context in which the story develops and the fashion style fit in. The objects appeared in the settings, e.g. car, chess, fireplace, also help to build up the mood and the atmosphere, thus convey a complete style of the classic men’s fashion.

FICTION
Prior to the start of the process, we first looked at existing films for fashionable wearable both in academia and in industry. In academia, we found video demos of various wearable projects in ACM digital library. These videos are straight forward technology demonstration videos that do not use creative means to mediate the concept. For commercially available wearables, two types of films stand out as mediation strategies: one is represented by Apple Watch film that emphasizes the craftsmanship of the watch as a product visualization piece; the other strategy is represented by Fitbit as a collections of use cases or scenarios where the device seem to be useful, such as sleeping, running and commuting. Our intention is to challenge this established rhetoric of design mediation by making a film that stands out in other end of the spectrum - that is about romance, style, luxury, history, countryside, strong and particular cultural influence – a fashion film.

During the brainstorming session, one of the character profiles becomes extremely interesting to us, namely, the English gentleman, as it stood out as an identifiable fashion style and a somehow odd choice for a modern smart watch. We had a hunch this would be an interesting character for the project and sketched a male character who can be characteristic as “conservative Englishness”, in Hall’s term, which represents a recognizable communication strategy for classic men’s fashion representing masculinity associated with the personality of assertiveness, the codes of business and luxurious lifestyle, the neatness of the civilized and the romantic connotation (Hall, Evans and Nixon 2013). To make a romantic story, we created a supporting character, an independent young woman who works in the stable and carries an authentic charm. Her confidence comes from her mastery of and the connection with the horses. And she is certainly not an urban office lady who uses wearable gadgets for health tracking, thus her character helps to reinforce the clash mentioned previously.

According to the character profiles, we searched for actors on various model agency websites. This process turned out to be one the most difficult, as we wanted to find the “right” look. For the male actor, it meant he should look English, mature and confident. For the female actor, it meant she should be confident, but down to earth, and more importantly, she could handle a horse. Eventually, we found the suitable candidates for the film; he was an experienced actor and she was a professional model.

The plot is that he male character went to a stud farm to purchase a horse, but encountered with the horse master lady, whom he fell for. The smartwatch catches her interest and facilitates their romance to develop. The female character is intentionally objectified through the male gaze of a materially powerful man with a sense of preening entitlement who believes his wealth enables him to own whatever takes his fancy - in this case, a lowly stable hand. He is intrigued by her ability to control a powerful stallion. And what reads initially as
an old-fashioned Cinderella scenario mutates into a female empowerment narrative, as she gains the whip hand and takes the decision to play the game with him. This is symbolically illustrated by the chess scene where queen takes knight (Figure 6, left) and the connection between his view of her controlling the stallion by the chain (Figure 6, middle) and her view of her controlling him by his tie (Figure 6, right).

A SNAPSHOT

The above sections described the design decisions we made for creating the fashion film. In the following, we share a snapshot of the production process in order to illustrate how these elements are at play in the making of the film. However, the detailed production process is highly iterative and complex, which requires a different study to unpack. The important concept we want to show is the watch face changes into interesting patterns in relation to various garments the characters are wearing. Thus, a lot of effort was spent on finding the accessories, such as the scarf and the pocket square, which fit in the style, provide an interesting graphic reference for the watch to react to, and also appear aesthetically harmonious in the setting. However, a practical challenge is where to start.

For instance, in the shot where the character walks down the hallway who is dressed in a classic evening outfit, i.e. a black tuxedo with white shirt, yellow tie and pocket square. This shot is a transition shot where the character transforms from a casual outfit to an evening outfit, in order to attend the dinner in the castle in the story. We selected this hallway in a castle when scouting the locations for the film, in order to complete the transition of places and establish the next activity. On the walls of the interior appeared a yellow tone. This yellow colour became the point of departure for selecting accessories for this shot. Photos of more than 30 pocket squares from different fashion stores were collected as design inspirations in the production design phase. One tie and one pocket square were then chosen after juxtaposing with the tuxedo, the colour in the hallway, as well as with other accessories we had collected, in order to create harmony with the shot and differences from other outfits. The scene was shot with the actor wearing normal analogue watch. Then a digital watch face was designed in parallel with the styling, created through an iterative process of sketching and animating, and eventually added on the film in post-production by an animator, before he whole scene went through colour correction to achieve a cinematic look.

DISCUSSION

Both fashion film and design fiction intend to mediate design concepts through fiction and contextualize the design in the reality of the fictional world. They differ in the way the artefact (garment or computer) is portrayed. The garment in a fashion film is often a finalized design item both in terms of its concept and its material form. In other words, the garment is not make-believe; it is the world, in which the garment is situated,
is a fiction. In design fiction, however, a designed digital artefact is often fictional and inherent incomplete, which is important for its speculative nature. Furthermore, it is crucial for fashion film to highlight the aesthetic experiences in terms of style, while design fiction does not focus on aesthetics.

To adopt fashion film as a form of design fiction to fashionize wearables, we need to accommodate the important aspects of both practices. Design fiction emphasizes on the design concept as diegetic prototype, the setting of the fictional world, people in that world, as well as their relationships and experiences. Fashion films encapsulates a set of qualities that are crucial for fashion communication, such as aesthetics, style, expressions in terms of gender, culture, identity.

Utilizing the FFF framework as a productive device helped us to balance between a technological concept and a fashion expression. It also acted as a reflective tool to examine the connections between the different elements from the three aspects, fashion, fiction, and function. Examining this balance enabled us to highlight aesthetics and emotions and portray characters as real people who have desires, powers and complexities. Instead of erasing genders and portraying human who use technology as personas or dummies, we chose to bring personalises, comedy, romance, countryside, luxury, style, culture, history and power into play, in order to problematize tech mediation conventions and raise the questions of how we could position fashionable wearables that are both relevant to tech and fashion audience.

However, we also revealed new challenges during the process. One challenge is that a fashion film requires high production aesthetics and craftsmanship which may seem contradictory with the speculative intention of design fiction. The production quality could be interpreted as persuasive thus less critical. Even though our intention is critical, the glossy impression of the film is liable for misinterpretation. However, this reflection opens up the discussion on the power of mediation. As media channels such as fashion films are in a way also designed, it requires designers to consider designing both things and their mediation, as well as to include a wider spectrum of culture and communication in the process of design.

Furthermore, production design is extremely important to create the world for fashion, and requires attention to details in order to achieve a certain look on the film. This requirements on details are motivated for fashion mediation, but not clear how much of it contribute to the knowledge of technology design. This study is limited in discussing a deeper relationship between fashion and technology beyond the symbolic representation of fashion reflected in one film. Future studies are needed to unpack this relation, particularly when the boundary between traditional fashion and digital technology is blurred in the case of emerging field of fashion tech.

CONCLUSION
We have introduced fashion film as a form of design fiction in mediating wearable design concepts. We proposed a framework as a productive tool to create fashion film for wearables and presented our own practice of utilizing it. The aim of the study is to explore the genre of fashion film and use typical genre elements to situate a technological concept in order to create a contrast with how wearable technologies are often portrayed - urban, youth, futuristic. The intention is to provoke thoughts around the rhetorical conventions of technological concepts and open us new creative dimensions of bringing in fashion expression in technology design representation.

By presenting our experiences of producing the film, we highlight that incorporating these genre components may inform, challenge and expand the area of wearable design, due to the differences in mediation tradition of technology and fashion. Our attempt in investigating fashion film as design fiction for wearables is a step forward to unpack the differences and provide nuanced understandings of how to balance them. We argue that that mediating design concepts is another process of designing. And we call for further exploring design mediation as an important part of design.

REFERENCE


Near Future Laboratory (no date) Corner Convenience. Available at: http://nearfuturelaboratory.com/projects/corner-convenience/.


