Aesthetic Interaction — A Pragmatist's Aesthetics of Interactive Systems

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Abstract
There is a growing interest in considering aesthetic aspects in the design of interactive systems. A set of approaches are emerging each representing different applications of the terminology as well as different inherent assumptions on the role of the user, designer and interaction ideals. In this paper, we use the concept of Pragmatist Aesthetics to provide a framework for distinguishing between different approaches to aesthetics. Moreover, we use our own design cases to illustrate how pragmatist aesthetics is a promising path to follow in the context of designing interactive systems, as it promotes aesthetics of use, rather than aesthetics of appearance. We coin this approach in the perspective of aesthetic interaction. Finally we make the point that aesthetics is not re-defining everything known about interactive systems. We provide a framework placing this perspective among other perspectives on interaction.

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INTRODUCTION

There is a growing concern that we need new points of references when designing interactive systems for homes and everyday lives rather than designing interactive systems that are tools to be used in workplace contexts (e.g. [7], [17], [25],[30]). We very much share this concern inspired by our work in a multidisciplinary research center termed Interactive Spaces, where we develop visions and implementations of interactive spaces focusing on the domains of schools, libraries, and domestic environments. These domains all encompass a mixture of work, learning and leisure and call for new ways of interacting with digital materials requiring the expansion of ideals as transparency and efficiency to include subtle poetic elements exciting imagination. Thus in line with others we are looking to aesthetics as a way to pursue these ideals, acknowledging that functionality and clarity is not enough to meet human needs and desires when engaging with interactive systems ([20, [12], [11]).

We seek to frame an extended expressiveness towards interactive systems through the concept of Aesthetic Interaction that can be obtained when the human body, intellect and all the senses are used in relation to interactive systems. However, when looking into the work that takes an aesthetic perspective on the design of interactive systems it becomes clear, that not all perceptions of aesthetics are equally fruitful as we see a danger in adopting superficial understandings of the aesthetics of interactive systems. We wish to challenge the assumption that aesthetics are mainly concerned with the immediate visual impression of products as we see it in e.g., [8], [16], [28].

Drawing upon the work of Shusterman [32] we explain how some of the emerging projects connecting aesthetics and interactive systems represent an analytical approach to aesthetics. We suggest adopting a pragmatist perspective instead and illustrate with cases from our design work why this is a promising path to follow. Finally we point out how there is a lack of discussion of how the perspective of aesthetics relate to other paradigms for understanding interactive systems. We offer a framework, which places Aesthetic Interaction in a wider context of other perspective on HCI.

THE AESTHETIC POTENTIAL IN INTERACTIVE SYSTEMS

In the search for new agendas for designing interactive systems a set of perspectives has emerged. These include:

- Those who have recognized that something else is needed beyond ideals of efficiency and transparency, e.g. like considering the emotions, attraction, and affect invoked by design
- Those pointing specifically to the notion of aesthetics as the place to look for new ideals for designing interactive systems.

As discussed in the following, what is most striking is perhaps the diversity within each of these trends. In striving

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for new ideals for interactive system design a lot of new terms emerge. As argued by Norman[28] "To avoid technical distinctions among the concepts of affect, emotion, feelings, mood, motivation and quality I use the reasonably neutral term affect" (ibid, p. 38). In his view products should both be useful and beautiful since attractive things work better (ibid). Given decades of research into aesthetics and related terms, we find that Norman adopts a very pragmatic stance on the use of terms and provide a rather simplistic picture of the world arguing that attractive things work better.

Aesthetics and emotion locomotion

Despite Norman's rich set of terms, one of the more prevalent tendencies at this time is that of designing for emotions ([28], [24], [8], [31], [26], [22]). With very few exceptions [31], the interaction ideal pursued as part of this "emotion locomotion" ([24], p. 29) is to design for pleasure and attraction, assuming that users "just wanna have fun" (ibid, p. 31). Or as put by Overbeeke et al [29]. "Interfaces should be smart, seductive, rewarding, tempting, even moody, and thereby exhilarating to use" (ibid, p.10). We see two problems inherent in some of this work. First the assumption that users always want to have fun and be pleased represents a simplistic view on human nature. In contrast Dunne and Raby [13] provide refreshing counterexamples with their critical design approach, where provocation and sparking imagination are the concerns with regard to the artefacts in use. Secondly, some of this work assumes that emotional qualities can be assessed detached from use experiences as well as the socio-cultural context of use. E.g. Desmet and Dijkhus[8] have developed a Product Emotion Measurement Instrument. This technique allows for evaluation of emotional qualities of technologies (in this case of wheelchairs) on the basis of judgements of pictures of wheelchairs.

Aesthetics as appearance

Some specifically advocates taking aesthetic qualities of interactive systems into account, when identifying new ideals for interaction. But there is a variety of notions of what it means to consider aesthetics of interactive systems. Some work focuses primarily on the properties of form as perceived visually, with vague relations to the functionality and instrumentality of systems. We see this represented e.g. in the work of Fogarty et al.[16], who see aesthetics as "an added bonus" (ibid p. 141). Here aesthetics is seen as the answer to questions like "Does it go with the couch?" (ibid). We also see traces of this in the work of Hallnäs and Redström[20] who argue that "to design with aesthetics in focus means to concentrate on appearance as constituting the essence of things" (ibid, p. 116). Along these lines it is also striking how many references that are made to physical objects without interactive qualities when discussing aesthetics [28], [8]. Notable exceptions to this are the work of Dunne[12], Gaver et al.[17], and Djajadiningrat et al.[10],[29]. E.g. Djajadiningrat et al.[10] explicitly argue "Don't think beauty in appearance, think beauty in interaction" (ibid, p 132).

However, while we appreciate the effort to provide richer bodily experiences in the interaction with systems, as represented by tangible computing approach [11], we find that this leaves out opportunities we have as humans to interact with the world via complex symbolic representations. Direct manipulation also has its drawbacks.

As illustrated above there is wide agreement that new perspectives are needed on interactive systems design, however, the agreement seems to stop there. We see a range of different applications of the same terms and more importantly these different applications represent different inherent assumptions about the role of users and designers (or artists) and interaction ideals. These inherent assumptions are well worth investigating when developing an aesthetic perspective on interactive systems design. For instance, we find that those who view the potential of aesthetics as the possibility to provide users with a pleasing visual appearance of products are leaving out much of the potential of aesthetics. To qualify the discussion on these matters, we draw upon the distinction made by Shusterman[32] between Analytic Aesthetics and Pragmatist Aesthetics. We argue in the following that Pragmatist Aesthetics is a strong theoretical basis to take on with respect to designing interactive systems and we provide examples of how we work to implement systems adopting pragmatist aesthetics.

PRAGMATIST AESTHETICS

As stated above a lot of effort is already put into designing interactive systems beyond rational and functional requirements. However, the very notion of aesthetic is used in ambiguous ways when it comes to answering the important question, what is the aesthetics of interactive systems. To answer the question we turn to pragmatic aesthetic as a theoretical foundation for staging a concept of aesthetic interaction. Shusterman[32] propagate pragmatic aesthetics as opposed to analytical aesthetics. We will use this distinction to qualify our discussion. Three central aspects of aesthetics will be discussed to establish a foundation for an aesthetic approach to interactive system design. These are the socio cultural approach to aesthetics, designing for mind and body and the instrumentality of aesthetics.

A socio cultural approach to aesthetics

The analytic aesthetics in the words of Moore (1952) rely on the intuitive assessment of aesthetics of objects, as if the objects existed by themselves in isolation. In this analytic perspective, as the artist or designer shapes e.g. the chair of exquisite material, and aesthetics arise as a product property. Shusterman argues that until recently most analytic aesthetics simply ignored the socio cultural background as irrelevant, "probably because aesthetic experience was traditionally conceived as pertaining to immediacy, not only because of its immediate satisfactions but because of its assimilation to direct perception rather than inferential thinking." ([32]pp.21). We see this perspective represented e.g. in works that assume that aesthetics of interactive systems can be evaluated based on visual perception of pictures [8]

In contrast, a pragmatic approach to aesthetics is represented by Dewey[9]. Dewey insists that art and the aesthetic cannot be understood without full appreciation of their socio-historical dimensions. He stresses that art is not an abstract, autonomously aesthetic notion, but something materially rooted in the real world and significantly structured by its socio economic and political factors (ibid, pp.22). Accordingly, aesthetic is not inherent in the artefact itself but rather a result of the human appropriation of the artefact. Consequently, the chair is not aesthetic in itself but rather the aesthetic chair is a result of the socio-historical appreciation of the material, and the shapes. Accordingly our ability to engage in an aesthetic experience is based on our social context, manifested in a personal bodily and intellectual experience prolonged beyond the immediate experience. According to the thinking in pragmatist aesthetics, aesthetic is not something a priori in the world, but a potential that is released in dialogue as we experience the world; it is based on valuable use relations influencing the construction of our everyday life.

Designing for mind and body

Where as analytical aesthetics is preoccupied with separating humans into mind and body, a part for thinking and a part for sensing, pragmatist aesthetics insists on their interdependencies in the aesthetic experience. In a pragmatist perspective, aesthetic experience is closely linked not only to the analytic mind nor solely to the bodily experience; aesthetic experience speaks to both. The role of art and design is to give "…a satisfyingly integrated expression to both our bodily and intellectual dimensions…" [32], p. 7. The sensed is without meaning if de-contextualized from the intellectual and vice versa. According to pragmatist thinking the aesthetic experience encompasses the immediate sensational auditory, visual and tactile qualities of artefacts and the intellectual process of appropriating the artefact, and moreover it points to the fact that past experiences fashion those of the future.

In a pragmatist perspective we have to move beyond ideals of meeting human sensor motor skills and somatic sensing, to include among others the human intellectual capacity to grasp and make sense of complex, contradictory and even ambiguous systems and situations [18]. It is the systems capacity to excite imagination that potentially will reward the user an aesthetic experience comprised of both a bodily sensation and an intellectual challenge.

The instrumentality of aesthetics

In a pragmatist perspective, when harvesters sing work-songs in the field "...these not only provide the harvesters with a satisfying aesthetic experience, but its zest carries over into their work, invigorating and enhancing it and instilling a spirit of solidarity that lingers long after the song and work are finished"[32]. Through examples like this Shusterman argues against the tendency to regard art and aesthetics as something above or otherwise outside everyday life, as is the case for analytic aesthetics. In a pragmatist perspective, for anything to have value it must relate to human needs, desires, fears and hopes. If the song was part of a concert the aesthetic experience would be different, but as it is used in the field it becomes an integral part of the work.

From point of view in Pragmatist philosophy aesthetics has the ability to surprise and provoke and to move the subject to a new insight of the world. This goes well hand in hand with existing understandings that systems are not necessarily understood and used as designed [6] [7]. They are appropriated in use. Meaningfulness and aesthetic experiences emerge in use, they are not predefined.

In a pragmatist perspective aesthetics is a part of everyday life. It stems from a use-relationship. Aesthetic Interaction comprises the views that aesthetics are instrumental and that artifacts are appropriated in use [2]. By this Aesthetic Interaction promotes improvisation to be the key modality in how the user explores the world around her and learn new aspects.

What we stress here is that aesthetics has a purposeful role in the use of interactive systems, aesthetics is not only an adhesive making things attractive, and it is part of the foundation for a purposeful system. Aesthetics cannot be sat aside as an "added value". Emerging in use; it is an integral part of the understanding of an interactive system, and its potential use.

Aesthetic Interaction

To summarize, a pragmatist approach to the aesthetics of interactive systems implies that aesthetics is tightly connected to context, use and instrumentality; circumscribing our perspective on Aesthetic Interaction. Thus it becomes meaningless to think of aesthetics of artifacts in themselves. They might contain an aesthetic potential, but its release is dependent on context and use. In Pragmatist Philosophy aesthetics is also released from its tight connection to art and its many definitions, instead it is connected to experiential quality and value. This provides the basis for focusing on the aesthetics of interaction related to our everyday experiential qualities when engaging in and designing interactive systems.

What makes Pragmatists Aesthetics a particular well-suited perspective on designing interactive systems is that the legitimacy of the experience of the system is not confined to be in line with the intentions of the designer of the system but emerges from the personal and interpersonal sensations, experiences and reflections that is connected to the system in context. It does not regard man and world as separate things but focuses on the integration and interrelations bound to context. Designing for aesthetic experiences invites people to actively participate in creating sense and meaning.

Aesthetic Interaction is not about conveying meaning and direction through uniform models; it is about triggering imagination, it is thought-provoking and encourages people to think differently about the encountered interactive systems, what they do and how they might be used differently to serve differentiated goals.

AESTHETIC INTERACTION IN PROTOTYPES

In realizing the concept of Aesthetic Interaction there are several paths to be followed. In the following the perspective of aesthetic interaction is illustrated through two concepts developed in relation to the Centre for Interactive Spaces, which forms the basis for our research. The presented concepts has acted as internal prototypes and provocations to facilitate discussions on Aesthetic Interaction and are not rigorously evaluated through user involvement.

Aesthetic interaction with music

In Interactive Spaces we have developed a new remote control for interaction with music, film and other media in the home. Existing remote controls neglects and limits our complex understanding of music and potential expressiveness in terms of interaction, while asking us to relate to music and other media through button pressing. Our design departs on the fact that digital media increasingly is published without a physical representation as a CD or DVD, resulting in vast amount of media data stored on hard drives, primarily accessible through traditional computer interfaces. The design issue can be approached in various ways: designing new physical representations, or as seen in many play-list based applications taking advantage of metadata incorporated in the files, Or it can, as illustrated in our prototype, be approached by re-designing the way we interact with music.

Figure 1. Interacting with music

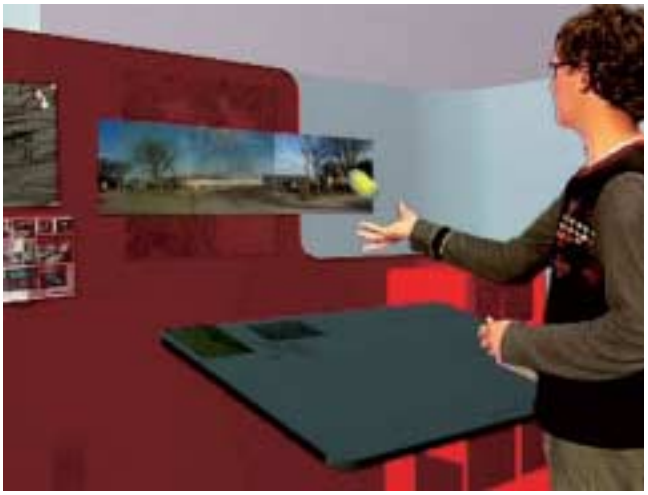
Volume up and down Skipping tracks Mute

By means of sensor technologies in the form of accelerometers in the eMote, we are able to record gestures with the device and relate that to playing music-files. The current system allows one to turn the music off as the remote is turned upside down, to skip tracks by making a throw gesture, and to turn the volume up an down through vertically tilting the remote itself. The design ideal of the remote control is to enable the user of the system to relate directly to the music as it is sensed and reflected upon, rather than replicate the functionality of the music-playing appliance. In furthering the implementation of the perspective of Aesthetic Interaction a wide range of design issues and future possibilities are considered, which among others are: dependent on beat mediated by shaking the remote the system will play a music file offering the same beat, a pitch control will add a tonality dimension to the choice of music file, hard or soft throws will determine the style music etc.

The present prototype is but a first step in establishing a new relationship with music through giving people an instrument for interaction allowing them to relate to music with both their body and intellect and allowing people to gradually build up a virtuosity in the way they are able to interact with media. The prototype relates to pragmatist aesthetics and the design ideal of aesthetic interaction in the way that it takes advantage of the complex dialogue between mind and body in a sense-making process, the interaction is based on not just the immediate sensational, but it builds upon earlier experiences as well as it draws upon the socio-cultural richness of gestures.

Aesthetic interaction in hybrid environments

Playful interaction is a concept illustrated in a videoprototype [3] [23] developed as part of the WorkSPACE project [19], a predecessor to InteractiveSpaces. The purpose of developing the prototype was to provoke existing interaction paradigms and to engage the design team in the discussion on the use of digitally augmented artefacts [1]. As illustrated below, the



prototype envisions a pervasive computing environment, where walls, tables and floors are interactive surfaces, documents can be exchanged, moved around and arranged in a spatial setting. The concept proposes the use of a ball as an instrument for interaction. Targeting a digital document residing on e.g. the floor with the ball, will cause the ball to "pick it up", while when targeting a vacant spot with the ball, a document will be added to the interface. Part of the vision has been implemented, e.g the interactive tables. We currently work on an implementation of the ball and the interactive floor. In the following the concept of *playful interaction* is analysed on the basis of pragmatist aesthetics illustrating the perspective of aesthetic interaction.

Engaging mind and body in the interactive space

The ball is a culturally significant object with many connotations of e.g. play, competitions, exchange, practice and fun. Applying it to move and exchange digital documents implies an experience where both intellectual and physical capabilities must be drawn upon. As with tangible interaction, aesthetic interaction allows the full faculties of the body to come into play, but beyond that aesthetic interaction recognizes that man is capable of working with complex and abstract models for interaction. Though the ball at a first

glance is a “throw-able” clipboard, it, when more closely inspected, also hold functions for arranging and manipulating documents.

The ball is an artifact challenging our kinaesthetic skills. The idea in the videoprototype is that through use and practice the user can become better at interacting with the artifact and achieve greater expertise, as we know it from all games, in interacting with the interactive system and other users. The ball as a means of interaction promotes playfulness rather

Figure 3. In the central office space where a range of different projects is displayed on the floor, the users engage in an informal exchange of digital materials by bouncing a ball to pick up documents.

than efficiency when exchanging documents and materials. The term tool does not express the full potential of the ball. With a millennia old history, the ball implicitly affords a certain way of engaging the environment, both animate and inanimate. The ball is not an attempt to rule out mistakes and failures happening when people interact with systems. The intrinsic imprecision in and trickiness of manipulating a ball, is an understandable fact in the physical world. Learning to master and use a ball is prone to errors; in general making small mistakes is part of everyday life. If you drop a piece of paper during a meeting you do not think of it as a failure – you simply pick it up again. It is a common thing for a physical artifact to be prone to mistakes. But in the digital world even small mistakes are recorded by the system that reacts and warns you through sounds and dialogue-boxes. From an experiential point of view warning-sounds and boxes in traditional computer systems often can be equally warning whether the printer has run out of paper or you are about to erase a hard drive. Warnings of failures or malfunctions are important, but these warnings could be subtler and in line with their actual consequences. Mistakes that might occur when handling a ball and the gravitas of the action are immediately understandable. Using well-know physical artifacts in pervasive computing environments enables, apart from their general understandability, more subtle communication of system warnings and reactions as these are not only connected to abstract visual displays or audio channels but can be related directly to the physical handling of a device embodying the socio cultural interpretation of the artifact and the connected informal rules. When digital materials and documents become, or are pervasive parts of everyday life, and indeed when dealing with interactive spaces, the affordances of the artefacts are to be explored in regard to how they both address our bodily capabilities as well as our preconceptions of the nature of the artefacts.

Instrumentality of the interactive space

When the ball is thrown towards a wall or the floor the entire environment is perceived in a new manner. The world of

Figure 4. The ball is not a personal object. Documents are perceptually stored in it and can be exchanged in a game-like fashion, adding an informal and playful aspect to the work environment.

possibilities is opened up and the user can start to explore the ball as an interaction artefact, and the environment as interactive surfaces. This is in our terms an aesthetic experience since it is experienced with the entire sensual apparatus of the user and at the same time it establishes new relationships between users and digital materials.

The aesthetics of the use experience becomes an instrumental perspective. It is used to instigate a new vision for the user on how to engage the use of e.g. the ball or the documents. As an aesthetic experience it finds its value in revealing the potential of a new experience and thereby broadens the user’s perspective on the world.

The game of interaction

Any aesthetic experience is dependent on context: the life and abilities of the user, the affordances of the artefact and in what ever physical and social space the interaction takes place. We need to think of the aesthetic experience as more than a chance for contemplation, but rather as an event that resides in context informing the people who experience it and the people they experience it with.

The ball has a long history of being used in games and play by children and adults alike. It is an open-ended appliance for

play. There simply has to be set a few rules to the game and then most people will be comfortable in trying to bend and break these rules and to heighten their abilities within the game.

By designing the videoprototype we wanted to bring a new mode of interaction into the office environment in order to bring a more playful mode of interaction than usually found in such a setting. We utilised the two very different socio-historical contexts of the ball and the office to create a type of clash and surprise comprising an aesthetic potential that could bring the users to redefine ways of working and collaborating inspired by the mode of interaction.

AESTHETICS AS A FIFTH ELEMENT OF INTERACTION

In 1984, Bødker & Kammersgaard[5] reviewed different perspectives on human-computer interaction and coined four different but co-existing perspectives on interaction styles. Subsequently, these perspectives have been applied to provoke new design ideas through taking the different perspectives to the extreme in design brainstorms [25]. The four perspectives system, tool, dialogue partner and media are briefly introduced in this paragraph to promote a fifth perspective of aesthetic interaction.

In the 80s, the *system perspective* was far the most dominant perspective on IT use. When viewing IT use as a system, man-machine interaction is characterized by the user being an integrated part of the system. Practitioners being in control of the machinery characterize the tool perspective. As opposed to the system perspective the human task is not comparable with machine operations. The initiative is on the users' side. The user acts through the machine, and ideally, the computer artefact is transparent for the user. The *dialogue partner perspective* considered man and machine as equal communication partners. The implication of the dialogue partner perspective is further discussed by Engeström[15]. Finally, the *media perspective* assumes that all communication takes places between people. IT can mediate this communication by processing data created by a sender and interpreted by a recipient. In this way the interaction between man-man is mediated by IT artifacts.

Table 1: from four to five different perspectives on HCI – elaborated on the model proposed in [5]

Perspective/	**System**	**Tool**	**Dialogue Partner**	**Media**	**Aesthetic Experience**
Man	system component	master	equal partner	Communicator	Improvisator
Man-Machine Interaction	between equal partners	Mediated by machine	Man machine dialogue	Supporting human-human dialogue	Play
Interaction ideals	efficiency	Transparency	human dialogue	Communication	Intrigue

By proposing a fifth perspective on interaction, the *aesthetic* interaction perspective, we emphasize the experiential aspects of interactive systems. As opposed to the tool perspective aiming at transparency as its interaction ideal the aesthetic interaction perspective focus on the intriguing potential of interactive systems promoting less directionality of the users interpretation of the encountered system. By focusing on intriguing and sometimes even ambiguous aspects we aim to encourage the user to explore and playfully appropriate the system. As there is not one "right" way to understand and use the system, the process of appropriation encourages the user to improvise her way into the interactive system promoting a freedom of interpretations of the artifact and it potential as it is experienced in use.

We do not wish to claim that these four perspectives on design of interactive systems are no longer valuable, but we argue that these views lack the potential of addressing the experiential sides of everyday life.

There are two main points to distinguish our fifth perspective from the four previous:

First, aesthetic interaction aims for creating involvement, experience, surprise and serendipity in interaction when using interactive systems (for further discussion see, Iversen, et. al. [21]). Whereas the dialogue partner perspective treats man and machine as equal dialogue partners, the aesthetic interaction perspective acknowledges man's ability to interpret and appropriate technology. The ideal appropriation of technology is not the shortest way to mastery (as proposed by the tool perspective) but rather the process of appropriation itself becomes essential.

Second, Aesthetic Interaction promotes bodily experiences *as well as* complex symbolic representations when interacting with systems. It puts an emphasis on an actively engaged user with both cognitive skills, emotional values and bodily capabilities.

As voiced in an earlier paragraph two aesthetic approaches propagate the need for an aesthetic approach to designing interactive systems. However, they either forget to bear in mind the existing perspectives on interaction (e.g Marcus, 2003)(the aesthetic perspective is only meaningful in close relation to the four existing perspectives). or treats aesthetics as an 'added bonus'[16] which does not embrace the potentiality of an aesthetic approach to system design.

In our work aesthetic interaction is used as the fifth element of interaction (the five perspectives are represented in table 1). We set up frame for interaction, but it is up to individual user to interpret and explore the system. The perspective of aesthetic experience creates a frame for allowing the user to express herself through the interaction.

FUTURE WORK:

Within InteractiveSpaces we are currently focusing on projects in the future interactive environments of schools, libraries and the home. These domains will be the platforms for further experimental work applying the perspective of aesthetic interaction.

As discussed we are exploring e.g. the developmental perspective of aesthetic experiences. Applying it to provide learning experiences for children is one of our immediate pointers-forward. In the up-coming work we will focus on experiments and descriptions of implications for design when pursuing the perspective of Aesthetic Interaction and how we can we promote the perspective in the design processes.

The aim of this research is to operasionalize the perspective of aesthetic interaction with regard to design praxis, and bring a deeper understanding of the nature of aesthetic experiences to the design community by further developing the methods we are currently exploring for user studies, prototyping and interaction design.

CONCLUSION

In this paper we presented Pragmatic Aesthetic as a theoretical foundation for the perspective of Aesthetic Interaction. We reasoned how the aesthetic experience through interaction relies on addressing both the mind and body, as well as it is rooted in the socio-cultural context of people's everyday life. Moreover aesthetics in this perspective becomes instrumental to the use situation, going beyond ideas of "added value" and the immediate attractiveness of systems, placing aesthetics as an integral element of the artefact and a continuously encouraging element in the future use of a system. In order to exploit the full potential of aesthetics in interactive systems all three aspects has to be addressed. Working with this perspective of Aesthetic Interaction incorporates and highlights the experiential aspect of designing interaction.

Although the aesthetic interaction perspective is important when designing interactive systems we position the aesthetic perspective as the fifth element of interaction design. Designing interactive system requires multiple perspectives.

The perspective of Aesthetic Interaction presented here promotes curiosity, engagement and imagination in the exploration of an interactive system.

We presented two examples of how we work towards aesthetic interaction in design cases. One case represents a new way of interacting with music. In the prototype, we are able to record gestures with the device and relate that to playing music-files.

Secondly, the playful interaction videoprototype and concept envisions a pervasive computing environment, where walls, tables and floors are interactive surfaces; documents can be exchanged, moved around and arranged in a spatial setting. In such an environment the concept proposes the use of a ball as an instrument for interaction. The ball is a culturally significant object with many connotations of e.g. play, competitions, exchange, practice and fun. Applying a ball as means of interaction to move and exchange digital documents implies an experience where both intellectual and physical capabilities must be drawn upon.

The concept of Aesthetic Interaction currently presents theoretical considerations and will need further empirical experiments in order to provide more concrete guidelines for working with aesthetic interaction generally. However we see Aesthetic Interaction as a beneficial perspective when designing interactive systems.

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