

# “AS WE MAY FEEL”

## - FOUNDATIONS FOR DESIGNING TOWARDS EXCITABILITY

Martin Sønderlev Christensen  
IT University of Copenhagen  
Department of Digital Aesthetics  
and Communication  
mach@itu.dk

---

### ABSTRACT

This position paper argues as to *why* it seems appropriate for approaching “experience of use” by elaborating a critical and aesthetical-based theory within HCI. The paper then introduces the concept of *Excitability* as a conceptual expansion of the traditional HCI vocabulary and praxis.

### Keywords

Aesthetics, Affective interaction, beyond Usability, New Media, Cultural Interfaces

### 1. INTRODUCTION

When Louis and Auguste Lumière showed the world's first motion picture to the public in Grand Hotel, Paris 1895, the legend has it, that the moving images of a train arriving at a station, coming directly towards the camera, made the audience flee to the back of the room, simply out of fear for being run over by the representation on the screen. The audience was in “affect”, partly intrigued and partly scared, but they did not run away. They stayed, stunned by this ambiguous and fascinating phenomenon unfolding for their eyes. The rest of course is history, movies were not put to an end by this accidental “user-test”. Instead a vibrant media for experience emerged that has not ceased to excite and amaze us. By this event *technology* and *experience* were entangled in a historically unprecedented way. Affective and aesthetical experiences were now something we could attend, distribute, share and engage our self in.

While the beginning of computer technology into the public sphere, has a rather different entry to show for, it does nevertheless, today, seem to become an increasingly more and more media-like technology, entailing a larger focus on “experience” in and through the technology. In fact as new-media theorist Lev Manovich draws to our attention, the Human-computer interface is increasingly speaking in a “new language” that has a clear affinity to the cinematic language [11], and a that the digital invariance has further implications on how information are processed in an new “info-aesthetical” paradigm.

### 2. CULTURAL INTERFACES

Previously the computer interface had little or nothing to do with the domains and distribution of cultural object, signs and expressions. The current use of digital computer interfaces is increasingly becoming a host for and a distributor of *cultural* data and experiences, arriving i.e. from the use of Internet applications, websites, computer games or interactive movies etc. etc. We also see *cultural* aspects emerging from productivity-software that increasingly allows us to manipulate, store and distribute texts, images and sounds in new and excessive ways. We might even see operation-systems, such as the Mac OS X or Windows XP, becoming expressive media-like cultural objects. The modern computer seems better described as a *new media* object, than a control interface as conceptualised in traditional general-purpose HCI. Hence an expanded notion of aesthetics of use and design within HCI is becoming increasingly important to envision. As we might expect that HCI research is no longer purely a concern of making tools for augmenting human efficiency and productivity. Increasingly the subject matter of HCI is dealing more fully with the “lifeworld” of humans

#### 2.1 ...and the proliferating use culture

What defines computer technology today is not that it is used as a productivity tool, rather it is increasingly also a medium for handling social networks, communication, creativity, sharing “soft” information – text, images or sound rather than processing “hard data”. We see the possibility of new technologies to embed deeply into our private sphere, increasingly becoming features of our everyday and available anywhere, via wireless local and distributed networks and that mobile platforms: laptop computers, pda's and mobile phones etc. proliferating in use. In some respect technology has become an immersive part of the experience itself or the experience has become the purpose, as when with playing computer games or browsing the Internet, or using mobile phones for text or image messaging etc.

We might say that technology is no longer just a matter of enhancing the technical infrastructure, but also increasingly, a question of comprehending the social infrastructures that emerges among users in the melting pot of computer/communication technology, media and the rapid changing cultural vogue of contemporary society. Hence digital technology is perhaps better understood, designed and evaluated in the image of “how we may feel” rather than from “as we may think”, to rephrase Vannevar Bush’s iconic dogma for the efficiency work-environments from some 50 years ago.

The focus on ease of use, usability, work-related and productivity-based use contexts has been predominant in HCI, while “everyday” use contexts and more loose modes of use, have been left relatively untouched. Hence i.e. Usability measures and methods might even entail a de-humanization, as recently stated by Jordan [10]

Yet, it seems as if traditional use contexts are coming to a threshold, due to a number of factors. Notably societal and cultural changes have unleashed “post-traditional” environment on individual, organizational and societal levels [3]. In this context our social practices must be seen as increasingly *reflexive*, and our tools and environments therefore must adapted more to our increasingly reflexive life-world, and possibly be able to go along in the foundation of new interaction forms that enables and support the everyday modern life in a more reflexive way.

This development was anticipated in Weiser’s vision on ubiquitous computing in the early 90’s [17]. But while Weiser accurately estimated that computing would embed potentially everywhere, his idea of this being a “weaving” seamlessly into our everyday life, becoming practical invisible for the user, seems to weaken. It seems more likely today that computing has become more and more opaque to our perception and ever-present in our surroundings. From this perspective, it seems more likely, that aesthetical factors are just as crucial as functional factors when designing for human-computational interaction. While it seems a laudable goal that interfaces are easy to use, transparency as pointed out by Bolter and Gromala [2], is inherently a *myth*, as computers is not like automobiles or toasters, they feel a lot more like media, and should be assessed from more “reflective” stances. This has also recently been called for in HCI [5, 6,15].

### 3. HCI RE-SITUATED

Human computer interaction can no longer be preset to a certain use context i.e. the office or the like, but is increasingly more randomly *situated* in proliferating new cross-contextual use situations. Hence the subject of study for HCI has ultimately become vividly diverse, from approaching the limitations of technology in terms of usability, ideal transparency and efficiency in interaction, we might also want to understand interaction from more experience-guided approaches, and envision stronger views on aesthetical aspects.

While it seems obvious as to why usability and functionality has historically taken a central position in design heuristics and evaluation methods of HCI, this position has often entailed aesthetics to *follow* function, perhaps nurtured a predominant narrow notion of on user culture, the “experience” of use and placing the “optimal” form of interaction with computer technology, as mere information processing. These notions are currently under siege, as use of technology and interaction is proliferating *beyond* the traditional use context toward more ubiquitous and pervasive settings. In this relation we have seen a rising number of terms, concepts and related fields addressing this. Hence the use situation has been seen in direction of i.e. ambiguity [7], enigmatic [9], enjoyment [1] and the irresistible [14] aspects of affective and aesthetics or objects in general. These approaches are investigations in interaction and use situations in general, that critically go beyond the HCI paradigm. Other researchers like Anthony Dunne [4] actually speaks against core concepts in the HCI package by appropriating objects and environments with a notion of aesthetical or *poetical* abilities, by featuring an *estrangement* or gentle *alienation* in the use situation. Dunne rather radically speaks about *in-human* or user-*un*-friendliness factors applied to the product-user relationship in order to highlight the obvious falsity of the transparency dogma. The different approaches (the references are not exhaustive) flesh out some resourceful thoughts and praxis for more experience-led conceptions of the relation between human and computers.

### 4. AESTHETICS IN HCI

Aesthetics is a concept that not easily position it self clearly in relation to HCI, as aesthetics is *both* a naturally part of the HCI thinking, as HCI works from an functional aesthetical direction, while more art-like and radical aesthetics are often seen apart from or opposite to HCI, as these aspects not easily validates in the large perspective and generally is presumed to be counter-useable. Indeed aesthetics is a hard concept to discuss in the first place. Obviously, as recently put forward by Donald Norman, who have revised his strong position on functionality; aesthetics do matter! But how? And why?

Normans approach to aesthetics is perhaps predominant to HCI thinking, as he seems to understand aesthetics as “beauty” or “simplicity”, and places this in the triangular relation between *aesthetics* (visceral), *functional* (behavioral) and *symbolic* (reflective) aspects. While we often easily can *describe* these obvious features of an object, say a teapot or a mobile phone etc., it might come more difficult to distinguish these aspects, when we think, more holistic about contextual occurrences of everyday life?

The role of contexts has been emphasized by Lucy Suchman, introducing the notion of “situated actions” [16], pointing out that activity and interactivity is conditional to the situation in which it takes place, and therefore more

likely to be of an improvised nature rather than planned. Hence we might enhance the understanding of the use of computer technology by looking more towards use as a “event” unfolding and intermingling in a variety situated contexts, rather than planned and designed “experiences”, as also recently suggested by Malcolm McCulloch in his recent book *Digital Ground* [12], where he states:

“When conducted according to behaviorist notions of inducing demand, “experience design” seems overly manipulative, culturally sterilizing. But when allowing for unforeseen activities, this latest stage in the trajectory of human –computer interaction has high potential for cultural expression.” [McCulloch 2004:162]

## 5. USABILITY REVISITED

The predominant measure for information technology has been usability, and while usability factors are still important, they can no longer tell the whole story about why and how the use situation unfolds an experience by the user.

In criticizing the narrow mindset of HCI, Hallnäss & Redström [8] suggest a philosophical approach to design. Envisioning the coming ubiquity of computational objects Hallnäss & Redström argues for seeking towards aesthetical “meaningfulness” rather than focusing on increasing productivity. Aesthetics here is seen as the basis for design, as a way to create meaningful objects and systems and not simply “icing on the cake”. Aesthetics is the point of departure for the enabling a stronger focus on *presence* rather than on *use*. Meaningfulness does not arrive from efficiency, but appears when we have the possibility to *engage* in something or develop affectionate relationship with it beyond the functional aspects of use.

Thus bringing HCI, new aesthetical interaction paradigms is likely to be a natural advance, corresponding to societal and cultural progression. Where usability and general HCI previously was the main paradigm for dealing with and reducing complexity in the use situation. It seems likely that this has produced a culture with a somewhat instrumental outset, which not easily endorse aesthetics. Therefore this use paradigm is increasingly unfit to handle the rapidly changing cultural background of computers, as it is pending towards more ubiquitous and pervasive use contexts and qualities. New paradigms are perhaps needed.

## 6. INTRODUCING “EXCITABILITY”

Above I have tried to elaborate *why* aesthetical should be more elaborated in regard to the HCI praxis, here I would like to introduce a term that could incorporate a number of current concepts. and expand or go beyond the most commonly known notions of usability and the traditional mindset of the HCI paradigm.

While usability in general can be seen as non-aesthetical or merely pragmatic oriented, serving as a driver for endorsing utilitarian goal, we might also think of use

situations that are *too* usability-minded, ultimately leading the use situation to become tedious and instrumental. The proposed term, *Excitability*, might be seen a deliberate juxtaposition to this, but the intention is to establish some relative link between the terms presented below, there might be established balanced approaches somewhere between the to positions.

Where Usability is:	Excitability is:
Functional	Artistic
Transparent	Ambiguous
Efficient	Exciting
Learnable	Memorable
Easy to use	Inspiring to use
Rational	Affective
Comfortable	Peculiar
Measurable	“Tellable”
Predictable	Surprising
Conventional	personality
Simplicity	Exceeding

So what is *excitability*? *Excitability* can be defined as: the ability to create and facilitate a certain amount of *excitement* in the use situation. *Excitability* points towards the instances of some sort of affective “excess”, a surplus of meaning or action that arises in the use situation or from the use context. *Excitability* is occurring when there is *more* to the use situation than *just* use.

Usability approaches focus extensively on functionality and ensure that interaction is kept *non*-affective to the user and hence entails a diminution of the any excessive possibilities in the use situation. Usability testing often reveals those moments when the user must think about, and occupy her self with, the interface, rather than the task at hand, and usability often cuts away unnecessary cues and other possible distractions away. After seemingly lacking non-utilitarian concepts, the term “User Experience” has emerged recently to expand the usability terms. Though it seems to encompass an understanding of users and their experience and while it does state that there is more than usability to use, it ultimately seems assesses experiences as something planned and packed. *Excitability* aims at pointing to those situations that offer experiences from a more “ambiguous” outset for use the situation, a concept derived from Gaver [7]. *Excitability* arrives from a position where not all options are given beforehand, where certain possibilities are yet uncovered, a situation where chances need to be taken, and where the object or the interface, not demands, but encourage or stimulates an affective investment from the user, entailing exactly an to a more ambiguous experience. Aesthetical experiences often are more affectively pronounced when deriving form unpredictable situations point than from foreseeable obvious ones.

HCI success-criteria are often chosen valid if they are measurable and accounted for by quantifiable sets of data such as time used, tasks completed, etc. collected in often constructed unnatural test-situations. *Excitability* might respond to other aspects of the use situation, as to *why* users would use an object rather than being occupied with specific outcomes of the use. What factors are implicit in the use situation, not accounted for by usability-measures, instead of seeking to learnability of a use situation, we could also ask if the use situation is at all *memorable*? Instead of asking if the use situation is measurable, we could ask is it “*tellable*”? Can we express, read, interpret, analyze or portray what is in the use situation, without these subjective factors? Rather than making the interaction conventional, we might also find situations that are surprising, and leading to an extension of the experience of use. These are often not accounted for.

## 7. CONCLUSION

In this paper I have tried to discuss as to *why* aesthetical and affective use situations are becoming a persistent topic of interest. And it seems clear this is purposed by factors that relates to a new cultural role and a changing. Introducing the term *excitability* we have merely drawn attention to a concept that goes beyond a traditional HCI paradigm. I obviously intend to develop the concept further to see it appropriated, and developed into more operational approaches and methodology around the concept.

But a discussion of *excitability* offers an inherent call for contextual and conceptual expansions on the traditional labels of the use situation. The terms might offer a much-needed end of the use spectrum from usability. The concept is not intended to define any exact, optimal experience. Rather *excitability* is about setting a juncture for aesthetical and inherently more interesting interaction forms to occur, not limiting aesthetics to be merely “the icing on the cake”. Instead the excitability is about creating and highlighting that use situations can exceed and excite, beyond the predictable and “sterile” concept of user experience. Not just for sheer *fun* or more *artistic* interaction, but more over to stimulate creative, sustainable, engaging, meaningful and more culturally significant contributions to human use of computer. In fact by turning HCI in direction of a more aesthetical conscious mindset, there might be a linkage more interesting use situations, enabling also more critical and reflective awareness on the situational everyday use arising with the increasingly proliferated presence of digital technology.

## 8. REFERENCES

- [1] Blythe, M.A., Monk A.F., Overbeeke, K., Wriqth P. Funology - From Usability to enjoyment. Human-computer interaction series 3, Klüwer Academic publishers (2003).
- [2] Bolter, J.D. & Gromala, D. Windows and Mirrors, MIT Press (2003).
- [3] Bødker, M., Christensen, M.S., Jørgensen, A.H.J. Understanding affective design in a late-modernity perspective, In proceeding of DPPI Pittsburgh, ACM press, pp.134-135 (2003).
- [4] Dunne, Anthony. Hertzian Tales. Electronic Products, Aesthetic experiences and critical design. RCA CRD research publications (1999).
- [5] Dourish, P. Where the action is. The foundations of bodily interactions, MIT Press (2001).
- [6] Dourish, P., Finlay, J., Sengers, P., Wriqth P. Reflective HCI: towards a critical technical practice, Proc. CHI 2004, 1727-1728 (2004).
- [7] Gaver, W.W., Beaver, J., Benford, S. Ambiguity as a resource for design. Proc. CHI 2003 233- 240 (2003).
- [8] Hallnäs, L. & Redström, J. From Use to Presence: On the Expression and Aesthetics of Everyday Computational Things. ACM Transaction on Computer-Human Interaction, Special Issue on the New Usability. ACM Press (2002).
- [9] Höök, K., Sengers, P., Andersson, G., Sense and sensibility: evaluation and interactive art, Proc. CHI 2003, 241-248 (2003).
- [10] Jordan, Patrick. Human factors for pleasure seekers. In Frascara, Jorge, Design and the social science making new connections, Taylor/Francis (2002).
- [11] Manovich, Lev. The Language of New Media, MIT Press (2001).
- [12] McCullogh, Malcolm. Digital Ground – Architecture, Pervasive Computing and Environmental Knowing, MIT Press (2004).
- [13] Norman, Donald. Emotional Design - why we love (or hate) everyday things. Basic Books (2004).
- [14] Overbeeke, K., & Wensveen, S. From Perception to Experience, from Affordances to Irresistible. In Proceedings of DPPI 2003, pp 92-97, ACM Press. (2003).
- [15] Sengers, P. et.al. Culturally Embedded Computing. IEEE Pervasive Computing, Special Issue on Art & Design, March-April 2004. (2004).
- [16] Suchman, Lucy. Plans and situated actions: the problem of human-machine communication. Cambridge University Press (1987).
- [17] Weiser M. The computer for the 21st Century. Scientific American 1991; 933–940 New York, (1991)