

# HAPTIC HEDONISM - DESIGNING PLEASURE FOR THE FLESH

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## INTRODUCTION

Haptic hedonism is about producing sensual enjoyment through corporal stimulation. Haptic here refers to the sense of touch in all its forms, including proprioception and kinaesthesia, but in particular the cutaneous sensations of tactile pressure (mechanoreceptors) (Paterson 2007: ix). The context of art, design and technology frames this investigation on how corporal pleasures can become an integral part of interactive experiences. The focus on the design of haptic bodysuits relates to questions such as: How can corporal pleasure constitute the user experience? How can the sensations of the body be understood as an artistic and design specific 'material'? And, can we aesthetically manipulate our bodies to sense a real and reproducible pleasure? How can the body be experienced as a canvas of sensations? Or even a design product?



*The Erotogod bodysuit, outside and inside*

During a visit to Florence in 1817 the French novelist **Stendhal** was so struck by the immense artistic beauty

that his body went into tremor. He experienced a form of aesthetic ecstasy. This was later defined as *The Stendhal Syndrome* by the Italian psychiatrist Graziella Magherini. Symptoms of the syndrome are erratic heartbeat, dizziness, confusion, breathlessness, panic attacks, fainting to the floor and hallucinations when one is exposed to art. As with Kant's notion of the sublime the syndrome might not necessarily appear as a pleasant experience there and then, but time and distance can change awe and startledness into an aesthetical pleasure. This is the experience of autonomy (Kant 2005: 38) (Gilbert-Rolfe, 1999: 45): when an awesome and 'sublime' corporal experience is digested over time by a rational being it will most likely reappear indirectly as pleasure (Kant, Critique of Judgment: 68). When one's expectations dissolve it might even result in a sensation of delight.

And indeed Stendhal's epiphany implies a strong dimension of overwhelming pleasure. On the other hand one can ask in how far this was a learned experience in line with Bourdieu's notion of cultural knowledge (Levinson 2002: 121) and how it influences our corporal experience, epistemological reflection and cultural condition. Was Stendhal's reaction simply due to a culturally refined aesthetical perception? In Bourdieu's view we possess a certain cultural background that enable us to experience something as something. This becomes a referential backdrop for our culturally coded interpretation. Contextually it appears as if Stendhal's experience is perceptually preconditioned through culture. It appears as in Bourriaud's relational aesthetics where the viewer is not in front of an artwork anymore, but through a set of relational and cultural codes included in the process of its construction.

Another question is in how far Stendhal's ecstasy produced a pleasant corporal experience? What happens if we expand the artworks visual appearance, and impress it directly at the user's body? How can the

probably culturally coded mental ecstasy of Stendhal become a real, living, physical ecstasy?

Returning to Bordieu's notion of cultural knowledge I would like to pose the hypothesis that corporal reactions to works of art possibly are more similar and inter-human understandable than culturally coded reactions. It is interesting to test this hypothesis in the field of art and aesthetics because these represent, sensorially speaking, a substance of its own:

*'Art is in general the only bastion which is not blinded by the business of deception (Schein). In art, deception (of the senses) is shattered because art in itself is deception',*  
R. Bubner, 1973

Haptic sensations produced by touching technologies are in themselves artificial, and therefore not necessarily anything more than that what they appear to be to the body. Technologies such as bodysuits create a layer between the subject and the experience. This distance makes it possible for the body to experience so to speak for itself. This again can be considered a phenomenological experience of corporal autonomy.

In Stendhal's case simply gazing at artworks creates such a strong mental reaction that it triggers corporal reactions. And indeed visual impressions can be pleasant to the senses. An example is Olafur Eliasson's *Weather Project* at Tate Modern in 2004 where his immense 'sun' radiated low frequent light in the museum's turbine hall. This massive environmental installation produced 'Stendhal' like experiences for many users. Such strong corporal reactions are rare in a relational art and design industry dominated by visual products. Even if excluding the body from the user experience can be seen as a limbic loss equal to castration, the haptic as a 'material' for these experiences is a literally untouched dimension and represents a potential for the production of new kinds of expressions and products. But why is the haptic domain hardly explored? (Classen 2005: 2, Paterson 2007: 2) Our culture is still captive by the craving eye. Visual expressions dominate our experience economy – as we know it from the theater, the movies, opera, design artefacts, museums, TV and the internet. We are all fetishists of the image. Often we look at other 'primitive' cultures as superstitious cultivators of the iconographic, but strangely enough we are ourselves blind toward the daily influence of our own icon- and logoindustry. That we are ourselves - sensorially speaking – almost one-dimensional doesn't fit in with the wishful portrait of a modern, advanced and rhizomatically (Taylor 1998: 107) connected society. Our visual culture makes itself into a superficial society. Our ideals of beauty as well as body culture and pornography are built upon the surface and visual appearance of the body. The inner, experiential sensations and experience are left invisible and are therefore considered as less 'important'. Although our

perceptions are arguably both a- and cross-modal (Paterson 2007: 55), we perceive our bodies almost monosensory visual – whereby the corporal escapes us. The dominance of the visual stimulates selfconfirmingly to further superficial gazing. As Aristotle points out (Paterson 2007: 17), touch is prior to the other sensory modalities. As such it represents a possible bridge to the Cartesian gap between mind and body. As Merleau-Ponty points out, our body thinks as a complete unit, not with singular and separated senses.

### **Status Questionis of haptic technologies**

So how to use haptic stimulus to design haptic pleasures? What haptic technology makes which sensation possible? Haptic and multisensory systems dealing with pleasure can be traced a long way back in fiction and fantasy. Several of the significant images and visions on haptic technologies within popular culture, literature and film have had an impact on the way we think and act with technology. Culturally rooted inspirations for such systems are the 'Feelies' described in Aldous Huxley's *Brave New World*. Here a future movie format gives you a sense of touch in addition to seeing and hearing. In the 'Feelies' people feel intensively as being part of the action, also when watching a couple making love on screen<sup>i</sup>. Another popular cultural inspiration is 'The Excessive Machine' that appears in the 1968 fantasy-sci-fi film 'Barbarella', starring Jane Fonda. Shaped like an organ for the body, the Excessive Machine is an orgasmotron made to torture the user through over-stimulation of pleasures. It's the ultimate version of the Freudian ID's craving for the pleasure above all pleasures. With the superego out of control the ID will pursue pleasures until breakdown and happily succumb to death. Barbarella, the true heroine of corporeality, represents the ultimate hedonist. In her unending need for stimulus the machine burns out. Her ID entity overcomes and outdoes the machine because it cannot satisfy her libidinal needs. A third example is the **SimStim**, -Simulated Stimulation- a concept for haptic media that *William Gibson* described in his book *Neuromancer*<sup>ii</sup>. The technology wires your brain and body directly to a pre-recording of another person's full sensory experience. Instead of seeing Britney Spears in concert you could for example experience being her, in her body, singing her songs, on stage, live. Or having sex with her boyfriend. As Britney. An interesting test scenario would be how to haptically stimulate users to feel a Stendhal-like tremble as he did before the aesthetical beauty in Florence.

Works of art using technology to produce haptic and touch experiences are uncommon, but goes a long way back. In 1921 the futurist Marinetti produced an essay on 'tactilism' where he described the various values he associates with tactile sensations (Classen 2005:308). With this tactile 'vocabulary' he produced 'the first abstract suggestive table'. Interesting about this work is how the tactile sensations can be imbued with symbolic values. As Classen comments, this points towards the

day when touch comes into its own, and ‘the hands can be as knowing as the brain’ (Classen, 2005:309).

A visual interface to simulate the effect of touch is ‘Telematic dreaming’ by Paul Sermon (Wilson, 2002). The installation is based on a videoconferencing system where the participants lie on separate beds double functioning as screens, giving the visual illusion of lying beside one another in the same bed. In this intimate situation the users tend to (visually) touch each other and even report sensations of being touched (Kozel in Classen 2005: 439). Thecla Schiphorst’s installation ‘*Bodymaps*’ works on a similar principle where the visitor touch the image of a body that is projected onto a reactive table covered in white velvet. The image will (visually) react to the touching. Here the viewer becomes participant in the work through the sense of touch. These installations use touch to let the user interact with media. But how to touch the user back? There are several haptic technologies where a two-way touch is used as a tool of communication. There are various force-feedback systems like the *Reachin Desktop* by Reachin Technologies, exoskeletal and external devices for exerting tactile pressure on the skin or haptic displays that simulate shape and texture in three dimensions (Mark Patterson in Classen, 2005). Another is the InTouch project by *The Tangible Media Group* at MIT Media Lab<sup>iii</sup> where ‘*two identical inTouch devices use three freely rotating rollers. Force-feedback technology synchronizes each individual roller to the corresponding roller on the distant mechanism*’.<sup>iv</sup>

That pleasures come in many forms and variations is wonderfully illustrated by the Painstation project by Volker Morawe and Tilman Reiff. This subversive work of game design is built as an arcade game where two players compete against each other based on the older Pong (table tennis). ‘*During the game, the players place their left hands on the PEU (Pain Execution Unit) which serves as a sensor and feedback instrument. Possible feedback effects are heat impulses, an electric shock and an integrated miniature wire whip. The feedback generated is dependent on the playing process and can increase in its intensity*’.<sup>v</sup> Literally this work is about the pleasure of pain. At the Norwegian Detox exhibition (2004) several users were observed happily and laughingly playing themselves to bleeding and screaming. The social and competitive instincts take total control of users and make them into suckers for the pleasure of (haptic) victory – or simply the joy of feeling alive.

The most common touch technology is through vibrotactile feedback, much like the vibrator in mobile phones. In ‘Mobile Feelings’ by Christa Sommerer and Laurent Mignonneau two people communicate via vibrotactile touch and body sensations through an egg shaped ‘phone’ interface they hold in their hands. Yet, these are not really hedonistic pleasures. They are more about tickling the possibilities of pleasure than

exploiting them. What about works that deliberately work with the induction of corporeal pleasure in the participant? How to intentionally and directly produce a real Stendhal syndrome?

### **Haptic Hedonistic Bodysuits**

A challenge is to practically create and reproduce physical, sensomotory sensations. Sensations of pleasure are often associated with the (cutaneous) skin and its many functions. It is both a sexual jewelry and a tool to sense. It’s a perceptual gateway to physical reality. My works use skin as an intersensorial surface to serve as a basis for sensual excitement.



*Male and female version of cyberSM bodysuit*

In my **CyberSM** project (1993) bodysuits were used for the first time to induce both users with haptic stimulus. The cyberSM project includes touch, sound, voice and visual 3D navigable bodies into its sensory vocabulary, allowing humans interacting in a virtual space to actually feel each other with their bodies. Not only does this physical element of communication let the CyberSM project model inter-human communication, it also creates a new form of complex, multisensory interaction. The physical dialogue made possible by the bodysuits included nipple-, anal-, penile- and vaginal stimulation. In terms of pleasure, sexual feelings can be provoked through a combination of visual stimulus and vibrators. This has a certain degree of sexual brutality, and putting a dildo in/up your groin is not always necessarily pleasant. Or wanted. But the playfulness and multisensory sensations of cyberSM compensated for the brutality and most of the 1000+ participants observed reported having had a good experience.



*Erotogod bodysuit in action, DEAF festival, 2001*

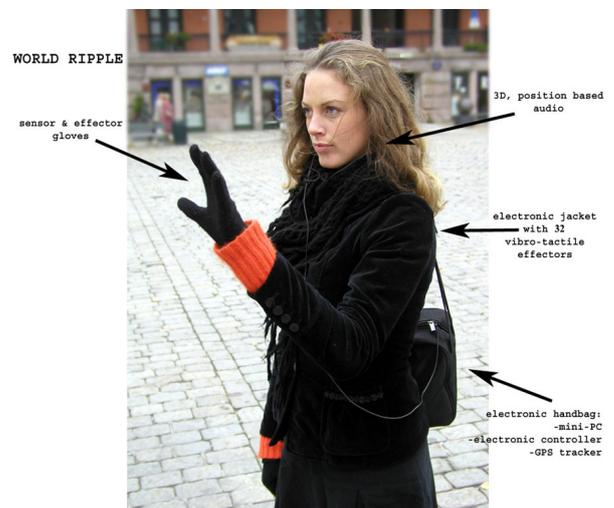
Autoerotic pleasure was one of the themes of my **Erotogod** project (2001 -03). Here the user enters a seven meter long and five meter tall installation of metal, screens and light. The user kneels down and is dressed in a full bodysuit, a two way touch interface. Through 90 sensors it records the user's self touch, thereby building an image of the user body in the installation's computer. The installation use this virtual body to touch the user back through more than 100 vibrotactile effectors in the suit, immersing the user in tactile stimulus. Thematically *Erotogod* is a multisensory space of experience that lets the user interactively write his own myths of creation. These myths appear as realtime generated, interactive stories through three dimensional sound (16 channels), graphics and corporal experiences.

One of the open aims of employing multiple sensory channels into the Erotogod projects was to explore what happens to experience when the senses play together in unknown and new ways. The project aims at creating a synaesthetic space of experience: from *syn* –joined- and *aesthesia* –sense-, hence meaning *cross-modal sense association*, or the *joining* of sensations (Campen 2008). The synesthetic combination results in sense experience that is experienced as more than, or different from, the sum of the individual components. It is often described as a neurological phenomenon, but the question is whether it also can be provoked, or triggered, through cross sensory linking like sound-to-vision and touch-to-hearing.

One example of combining touch with hearing is the e-skin project by Jill Scott (Hauser 2008:63). Through combining various wearable interfaces that can both respond and produce touch as well as sound, the e-skin project attempts to augment the “unique cross-modal potentials of human sensory perception” In Erotogod similar synergetic linking of stimulus aims at facilitating

an action-oriented, multisensorial environment that promotes synaesthetic and pleasant experiences. One of the goals is a better and more persuasive perceptual manipulation of the participants. The synaesthetic is about experiencing unexpected combinations. The sound of Erotogod is based on breathing recorded during a live intercourse. The users' autoerotic touches hence produce a live sound composition<sup>vi</sup> creating an aural intercourse. The tactile patterns expressed in the bodysuit are all re-combinations of pleasant sensations felt and recorded by a female prostitute. Her professional skills were important to the design of the better touch patterns.

Michael Heim calls cyberspace a '*metaphysical laboratory, a tool for examining our very sense of reality*' (Heim 1994:83). Is it also so that the physical body ends where immaterial cyberspace begins? Haptic stimulations provides a reality check for virtual worlds and extends the physical world into a corporeal, and therefore realized cyberspace. My ongoing *World Ripple* project builds physical sculptures out of emotions rendered real. Through a haptic system the artistically emotional and 'virtual' content becomes physically experiential. It is an invisible, immaterial sculpture made sensually senseable by a tactile, wireless, mobile bodysuit and binaural sound system. The sculptures are triggered by GPS coordinates. They are expressed as physical stimulations and soundbased compositions. The sculptures of World Ripple are experiential –and sensed - in the open, outdoor landscape. As computer constructed structures they can be endlessly large and dynamic experiences that can cross, be sensed around and encompass the world. The users wear a transparent, bodybased and visually hidden system. The bodysuit is worn underneath the ordinary clothing and has a resolution of 64 puls modulated outputs controlled by an arduino board. The mobile, sensor- and GPS based computing system is carried in a shoulderbag. Walking through the world users will sense and interfere with the sculptures.



*World Ripple system set up*

World Ripple combines computer constructed structures with the existing, physical and real landscape, and is therefore a "Mixed Reality" project. It is a corporal interface where none of the interaction is screen based. The project focus on the individual, body oriented spaces of experience. The parameters enabling the user to experience the immaterial sculptures are mainly location and behaviour (orientation), but also personal profile (individual needs) and biometric data (personal condition). The user experiences the sculptures as combinations of different tactile patterns triggered in the bodysuit. These stimuli give the sculpture texture and strength. The shape of the sculpture, that is walls, boards and consistency are rendered through different combinations and strengths in the effectors of the suit (vibrotactile stimulus). Different sound patterns and recordings are triggered and played as the user meets and affects the sculpture. This combination of physical stimulus with sound gives a strong and immediate sense of physical consistence and spatial experience.

Feedback from users indicate that the use of bodysuits - as in my projects - represents one of the most direct ways of inducing the body with the sensation of corporal pleasures. Even if the suits not necessarily reproduce the ecstatic sensation as Stendhal reported, as artefacts they represent a step towards an art- and design-specific way of producing pleasures as experience and perhaps even a product in itself.

Phenomenologically interesting is the layer, that is the distance between the subject and the experience, which the bodysuit creates. This estrangement makes it possible for the body to experience for itself and can therefore be considered a phenomenological experience of corporal autonomy that in itself can reappear indirectly as pleasure.

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<sup>i</sup> <http://www.huxley.net/studyaids/bnwbaron.html>

<sup>ii</sup> <http://en.wikipedia.org/wiki/Neuromancer>

<sup>iii</sup> <http://tangible.media.mit.edu/>

<sup>iv</sup> [http://www.aec.at/en/archives/festival\\_archive/festival\\_catalogs/festival\\_artikel.asp?iProjectID=8232](http://www.aec.at/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=8232)

<sup>v</sup> <http://en.wikipedia.org/wiki/Painstation>

<sup>vi</sup> Made with realtime granular synthesis