Props for real Life:
Style and Artistic Strategies in Wearable Technologies

By Laura Beloff
Researcher/Artist, Planetary Collegium, Plymouth University.
Visiting lecturer, University of Art and Design, Helsinki.
off@saunalahti.fi
http://www.realitydisfunction.org/

ABSTRACT.
The essay investigates alternative and artistic strategies in the field of wearable technologies. The investigation focuses specifically on the non-standard aspects, such as the peculiar and atypical aesthetics that can be observed in some of the projects appearing within the field. The author explores these as non-standard aspects of aesthetics, which can be seen as emerging strategies that create alternative, critical viewpoints into the field of wearables.

The non-standard aspects are traced throughout the field of wearables and are based on a comparison of similarities and dissimilarities to the stated aims of wearable technologies and wearable computing[1]. These non-standard aspects and the alternative approaches are often noticeable as a certain style or sensibility present commonly in the artistic projects. As an example of a style used as a strategy, the article introduces a style and sensibility called Camp that has been theorized by various scholars during the past decades, for instance, notably by Susan Sontag in her article "Notes On Camp" from 1964. Camp was a strategy that offered alternative perspectives to the current (at the time) situation and created criticism that appeared within and towards what was considered as the mainstream style, opinions and values in life. The author claims that projects appearing within the field of wearable technologies, which can be detected with the non-standard aspects, can be seen in a similar manner as Camp's relation to its environment, constituting a critical viewpoint into the field.

The second part of the essay introduces several projects in detail by the author and the author's developed concept of the Hybronaut, which can be seen as a kind of research vehicle in the author's investigations.

KEYWORDS: wearables, wearable technology, art, camp, Hybronaut

INTRO: PART 1

The increased interests in wearable technologies by various disciplines have triggered the appearance of a diversity of applications and approaches within the field of wearable technologies. In particular, textile and fashion design have actively incorporated technological experiments in designs as presented to the public as fashion or occasionally by the fashion industry. This essay looks at identifiable conceptual approaches that are often coming from the field of the arts rather than fashion or wearable computing, per se. In identifying these conceptual approaches, the author traces projects that exhibit non-standard aspects, which can be recognized as viable markers in distinguishing a formative strategy arising in the field of wearable technologies. The essay aims at giving attention to these kinds of approaches emerging within the field.

In similar kinds of economically stable environments that enabled the appearance of Camp[2] as a style and a strategy, wearable technologies have emerged within stable and materialistically directed circumstances in urban settings. In this paper, Camp is used to demonstrate how a style can be used as a strategy for creating critical ethnographical and socio-political perspectives, drawing parallels in the conclusion of the first part of the paper between Camp and the argued alternative perspective in the field, which challenges the functionally oriented approaches to wearable technologies.

SECTION 1.1

The field of wearable computing and wearable technology is usually considered and evaluated through designed purposeful functions, which will be argued later in this essay (in section 1.2). However, one can detect within the field contradicting aspects of functionality that do not to follow criteria for purposeful functionality and smooth usability. For example, these projects often manifest themselves through a distinct style. Instead of aiming at unobtrusiveness and invisibility, these works commonly use peculiar aesthetics to attract the attention of the public, and often in a blatant manner. The chosen specific style often strikes one as the primary impression that seems to hold more value to it than solely as an attractor to the audience. This style, or sensibility, can also be considered as a marker for non-standard criteria upon which the project is based. Another aspect common in these kinds of projects are unexpected functions that, by putting the user into non-standard situations, create awareness about different uses of technology and our relation to it. This essay focuses on investigating how a style and certain sensibility can function as a strategy for presenting alternative perspectives.

Sensibility is defined by the Merriam-Webster Dictionary, as "awareness of and responsiveness toward something"[3]. Style is defined as a "distinctive manner of expression, a distinctive manner or custom of behaving or conducting oneself, or a particular manner or technique by which something is done, created, or performed."[4] In 1964 Susan Sontag wrote an essay[5] about a style called Camp and how it can be seen as a critical strategy. The essay is one of the first and best-known theoretical articulations about Camp. Camp has been defined as a style, a taste, and a sensibility, which in the early 20th century urban setting was talked about in reference to the worlds of the theatre,

the fashion and the show business, but which later, during the postwar period, emerged as a part of the public discourse.

What is Camp? Sontag writes that: "the essence of Camp is its love of the unnatural: of artifice and exaggeration. And Camp is esoteric – something of a private code, a badge of identity even, among small urban cliques."[6] Based on Sontag's depiction of Camp, it can be understood as a kind of theatricalization of experience and of life. Camp converts the serious to frivolous and appreciates things-being-what-they-are-not. Sontag continues that pure Camp is unintentional, it rests on innocence, and its essential element is seriousness that fails. "Camp sees everything in quotation marks. It is not a lamp, but a 'lamp'; not a woman, but a 'woman'. To perceive Camp in objects and persons is to understand Being-as-Playing-a-role."[7]

Throughout the years, many interesting articles have been written on Camp within gender studies.[8] Esther Newton writes that Camp is concerned with transformation and incongruity, and that it can be seen as a strategy for a situation. According to Newton, "Camp is not a thing" but it signifies a relationship between things, people, and activities or qualities, as well as with homosexuality; but this relationship is not a permanent one because camp taste is always changing dependent of individual perspectives. Newton's article locates the three most recurrent characteristics of camp: incongruity, theatricality and humor. "Incongruity is the subject matter of camp, theatricality its style, and humor its strategy."[9] Another researcher Jack Babuscio adds to the list two more features: aestheticism and irony. Irony in Camp comes from its inherent incongruous juxtapositions between an individual or a thing and its context or association. "[Irony] constitutes a criticism of the world as it is."[10] In other words, one could claim that Camp is an applied attitude toward a way of seeing the world. Rather than trying to see various objects and things as Camp, it seems more viable to consider Camp as a strategy that can be applied to the acts of seeing and perceiving. In a comparable manner in how Camp functions in the world creating an alternative perspective, one can see the non-standard aspects in the field of wearable technology as interventions that have a potential to bring fresh viewpoints into the field.

SECTION 1.2
Based on published literature, it seems that the wide field of wearable technology is primarily concerned with practical issues and the process of development. For example, the disciplines of augmented reality and wearable computers are often considered closely linked in their development and objectives. According to Barfield & Caudell[11] these disciplines have been similarly motivated by two primary goals: the need for people to access information while being on the move and the need for people to better manage information. Noticeably, we have invented a wide variety of wearable technologies to extend our visual and auditory modalities— the sensory, motoric, and information processing abilities of eyeglasses to mobile phones and beyond.

Over the last decade, the intense research and development of wearable technologies in academia, in industry, and in military have produced a wide variety of applications, projects, research papers and publications on this development. During the mid and late

90's, a diversity of written articles exemplify these investigations. A variety of researchers such as Bradley Rhodes, Steve Mann, Steven Feiner, among others, have revealed a set of properties, or criteria, for wearable systems that seem to agree with these researchers. The expected properties for wearable computers can be listed as following: portable while operational with negligible operational delays, controlled by the user with a need for minimal manual input (hands-free), sensitive to the user's surrounding environment, always on, and able to attract the user's attention even when not actively in use. Steve Mann has considered the wearable systems from a perspective that includes thoughts on their social impact. Mann has been strongly emphasizing the importance of control issues; privacy and individual freedom with wearable device. He proposes wearable systems for use in everyday circumstances within the surrounding fabric of the individual. According to Mann a wearable system should be situated physically in a way that the user and others consider it part of the user.[12] Although this list of criteria from the 90's for wearable systems may have somewhat changed during the recent years, the current research and projects seem to follow somewhat similar guidelines. For example, Ana Viseu continues in a line with others by writing in 2003, "Initially, wearable computers were considered tools that were designed to give wearers' instantaneous and constant access to information. [...] Nowadays, the ultimate goal of wearable computer developers is to make them proactive, i.e., responsive, communicative and 'aware'. A wearable computer should be able to recognize its 'owner', its 'location' and the 'activity' being undertaken."[13]

The prevailing aspect in all these formulations and criteria for wearable technologies is their seemingly inherent focus on purposeful functions — what a wearable device enables a user to do. Additionally, to the clear direction of considering the wearable technologies in terms of purposeful functionalities, few researchers have articulated the importance of aesthetics or style in the commercialization of wearable devices. Researchers such as Mann, Barfield & Caudell, followed later by Seymore[14] seem to agree that to become accepted by general public, wearable technologies need to adapt to sleek style and fashionable aesthetics.

As aforementioned in this paper, the majority of publications within the field of wearable technologies concentrate on the above-mentioned functionally-oriented approaches and on research results in finding elegant solutions for practical problems in combining technology, ergonomics and various materials. And publications coming from the area of fashion primarily focus on fashion's relation to technology. However, there seems to be a lack of attention in the literature, which would focus on the non-standard and unexpected aspects and on the conceptual meaning of the wearable. Further, these kinds of wearable projects are not merely located into the area of fashion or technology. Commonly, projects with these kinds of often self-defined criteria and distinct aesthetics seem to be coming from the field of the arts, where one can even find a traceable line of "wearable art works". While the projects with distinct style and unexpected sensibility can also have interesting developed technical functions or other technical qualities, it is not self-evident to how or under what category they should be scrutinized.

In this essay the author proposes an awareness about these kinds of Camp-like approaches, which create an alternative, perspective and the potential of fresh viewpoints into the field of wearable technology.

SECTION 1.3
Susan Ryan has written about what she calls "wearable technology art". She writes that: "serious art in the form of clothes, presented on the body (as opposed to on a wall, for example), emerged in the 1950s and 1960s alongside art world interest in the body (body art) and in time-based art forms, like performance and video."[15]

In my research, I investigate projects that are wearable and utilize technology[16] but which have non-standard aspects that seem almost contradictory in the field. The shared commonalities and identifiable contradictory aspects in the projects are a sense of exaggeration in their aesthetics and sensibility and peculiarity in their functionality. In comparison to the request for sleek and unobtrusive design of the wearable technologies, these projects appear often overtly visual and theatrical, even to the point of absurdity. Another aspect is that these projects or experiments are not necessarily designed to be convenient to wear, but often require attentiveness physical and even mental adaptiveness from the users. When one investigates various projects with these kinds of aspects, one inevitably arrives at the conclusion that many of these projects clearly originate with a conceptual approach and have little to do with objectives for purposeful functionality.

These kinds of projects find their historical precursors in projects and art works such as Japanese artist Atsuko Tanaka's Electric Dress from the 1957. The Electric Dress was originally designed and worn during a performance on stage; it is made of compilation of cables and slowly blinking electrical light bulbs. In the 1960's, for example, Austrian artist Walter Pichler sketched out several wearable concepts in the late 1960's and created works Small Room (1967) and TV-Helmet (Portable Living Room) (1967). They were exceptional looking white plastic helmets, which cover the entire head of the user and had inside embedded technology of the time. They were created as cynical viewpoints into the media atmosphere of the time. Another Austrian artist Alfons Schilling began his long-term work on a series of Seeing Machines in the late 1970's. His experiments were constructed in relation to investigation about human perception; they were head-worn objects in diversity of shapes. Benoit Maubrey started in the early 1980's his development with various audio-uniforms and costumes, and notably, Krzysztof Wodiczko with his wearable and portable works that commonly investigate social problems from individual's perspective.[17]

The author's interest in these kinds of projects and their contemporary counterparts is their form as wearable, the way they address and use technology and the non-standard features they use. For example, all have noticeably strong aesthetics in their look. They appear to be props built on a human than designed with the purpose of being functional in extending the abilities of a human. Likewise, a frequent characteristic in many of these works is their ironic nature[18], which can be seen as a marker designating the works to different criteria, apart from the projects that emphasize the appropriate functionality as their primary

aspect. In irony –and in these works- the literal meaning of the work contradicts itself. For example, the context, function, or appearance of the wearable causes the observer (or user) to doubt the literal meaning and, later, interpret a new meaning to the work. However, it is still the one in the same perspective that produces the contesting views.[19] Designer Anthony Dunne has defined a term 'critical design' in a very similar sense. According to Dunne, critical design challenges audience's preconceptions and expectations and provokes new ways to think about the object, its use and its environment.[20] Both irony and critical design have been described as kind of position; irony reveals multiple contradicting viewpoints into the same situation, and critical design emphasizes other possibilities in design beyond solving problems. They are also comparable to Camp as a way of creating a critical strategy.

The usual characteristics in the artistic wearable projects from recent years are that all of them could be (imagined to be) used within the everyday situations or environment, although they often are presented as a temporary performance or in a museum. The relation to the everyday life is an aspect that is common in the majority of wearable technology projects and in the development in general, though in the selection of works with non-standard aspects this characteristic is easily unnoticed. The everyday with technology seems regardless to be one of the issues many of these projects comment on. The works specifically appear to be discussing or commenting on our attitude and perception of technology and contemporary technologies' continuous relation to the everyday environment and to humans.

It is worth of noting that the offered perspective to the field, which sets apart functionally oriented wearable projects in comparison to projects that have non-standard aspects in them, is not meant to be rigid or restrictive. There is no point in residing only in one or another category in a field that is actively evolving, and it is worth noting that many of the projects in the wide field of wearable technologies can be located in the threshold, and crossing over to various other disciplines.

CONCLUSION 1.4
As mentioned already in the first section, Camp establishes itself via style and can be considered an applied attitude toward a way of seeing the world. Camp is a strategy applied to the act of perceiving; this strategy forms a base for a criticism towards our expected ways of seeing the world, toward standardization of values and assumptions, and offers us an alternative set of criteria.

Likewise, the non-standard aspects traceable in some wearable projects propose alternative viewpoints into the field. These kinds of works establish themselves as an identifiable group, for example, through a specific style and sensibility. The appearance of these kinds of alternative aspects and approaches can be seen as emerging criticism developing in the field. This criticism is not necessarily only negative; it can be playful or humorous in its form and in its absurd aesthetics, but simultaneously it is serious. It can be seen to be pointed towards the set of standards, values and expectations existing in the field. The criticism arises as a strategy from the actual appearance and awareness about the non-standard aspects in various projects, rather than from critical content embedded in

single projects. The group of projects that exhibit similar non-standard aspects form a criticism toward the field of wearable technologies on a meta-level. This strategy works subversively toward the expectations of the environment within which these projects and works are placed.

In an analogous way to the appearance of Camp that was enabled by large public whose standards and taste it was opposing, the existence of the criticism created by the non-standard aspects in the projects is totally dependent on the existing set of standards, values and expectations in the field of wearable technologies.

INTRO: PART 2
The second part of the essay introduces several wearable works by the author and the concept of the Hybronaut, which is a concept closely linked to the author's artistic research and production. The author's artistic projects can be seen as belonging to the group of wearable projects that manifest themselves through the non-standard aspects (described earlier in this essay). For example, they are constructed with a strongly visible aesthetics, which don't follow the criteria for unobtrusiveness, nor do they aim at sleek fashionable look. Instead these projects have a chosen style attracts attention and fosters interaction and dialogue with the public. They transform the user into a kind of a public performer or an agent that comments about technology, its use and emphasizes the existence of hybrid space. The chosen style of the works has a kind of a "campish" attitude, they are simultaneously serious and ultimately absurd in some sense; like Camp they essential element is seriousness that fails. And by doing this they reveal new viewpoints into the field and its issues.

SECTION 2.1
The majority of the author's wearable projects utilize wireless networks (either wifi or mobile phone networks) in their structure and functionality. As well, one of the issues investigated and experimented in these works is the existence of hybrid space. Hybrid space is a concept that has been used by many scholars, for example, Adriana de Souza e Silva defines it in a following way: "… the mix of social practices that occur simultaneously in digital and in physical spaces, together with mobility, that creates the concept of hybrid reality."[21] The technological attempts to combine the physical and the virtual worlds sometimes take a very pragmatic approach with a focus on technology and its implementation; while hybrid space, the way it is defined by de Souza e Silva, is defined by mobility and sociability. Hybrid space is merging the physical and the virtual into a new entity, which is enabled by the use of mobile and wearable devices.

The author's developed concept of the Hybronaut references the existence of hybrid space. The Hybronaut evolved from the need to have a term, which contains the user and the wearable equipment as a single unit instead of investigating them separately. The Hybronaut constitutes of physically constructed equipment, which is offered for public use. This equipment enables one to become the Hybronaut and explore the potentiality of hybrid space from a non-standardized viewpoint. "Hybronaut is a figure, a person, or a body, coupled with a peculiar looking wearable device. This figure becomes a kind of space traveler, who is equipped to be able to exist within hybrid space and explore its

possibilities by producing a non-standardized perspective on this space, and also by pointing to the restricted manners in which we are currently allowed to use hybrid spaces."[22] In other words, the Hybronaut offers an alternative perspective and experience within networked wearable technologies and challenges the approaches focused primarily on purposeful functionality. But simultaneously the Hybronaut is permanently tied to a society, which it can neither fully accept nor reject, in situations of constantly proclaiming his existence against the world whose rational and utilitarian concerns are alien to him. The Hybronaut, as a developed practice-based concept, aims at directing the focus away from the functionally oriented approach to hybrid space and wearable technologies, towards a more conceptual approach. By simply focusing on being rather than doing the Hybronaut refers to a wider phenomenon of technology within our society and in our future.

The Hybronaut's equipment is constructed from technological components and it often makes a use of existent technical infrastructures (i.e. wifi and mobile phone networks). The way these various parts are linked together differs from what is usually expected, or possibly even allowed for normal consumers with commercial mobile devices. The creation process often involves humor and ironic sensibility in the choices of the utilized technical components and the aesthetics of the physical construction. Together all the components create an applied attitude toward a way of seeing the world. For example, the author's prototype project Tratti is constructed by hacking a mundane electronic megaphone and a mobile device together with a few custom-build parts and custom-written software, or The Head which encapsulates a hacked mobile phone inside almost a life-size head with a custom written software. The projects Heart-Donor and Seven Mile Boots bring forth an eye-catching aesthetics, one inspired by life-vest and the other by fairytale; both works contain custom-constructed hardware and software.

SECTION 2.2
This section contains short descriptions of six projects by the author, some of which are collaborations with others.

1) HEART-DONOR by Laura Beloff & Erich Berger with Elina Mitrunen (2007*) is a wearable vest addressing our life in hybrid space. You can "wear" the hearts of your own selected network, and observe the presence of these people in physical and virtual space.* The work takes its point of departure by rejecting the concept of the differentiation of virtual (digital) and physical ("real") layers of the world. This work is specifically constructed for hybrid space. The work Heart-Donor is a physical instantiation of a concept concerning personal social networks and life in hybrid space. It is imagined as one's personal apparel –a life vest- for a long term everyday use.

The wearer can make 30 recordings of heartbeats of friends and family as collected personal mementoes into the HD-vest. Each heartbeat will be stored into one of the 30 small lamps embedded on the front of the vest. The lamp will blink in the rhythm of the recorded heartbeat. Additionally each heartbeat is linked with this person's Skype-name (if s/he has one). The default color of a recorded heartbeat is green, but it will change to beat in red-color when the person (whose heartbeat is stored into the HD-vest) goes online

with Skype. The "owner" of the HD-vest can observe his/her selected social network of people shifting their presence between the physical and the virtual layers of the world wherever s/he and the people in the network may geographically be. The HD-vest and its wearer reside continuously within hybrid space.

The form and design of the HD-vest is inspired by the traditional life-vest as a reference to the fragility of life. The heartbeat is used as a sign of physical life and presence, which is combined with another sign for a global presence within a technological sphere of the world. The work is not created as a tool or defined as a function aimed at specific tasks. It is created as wearable apparel enabling everyday existence within a hybrid space. One becomes an observer of the hybrid world, the one who simply exists within it.
http://www.realitydisfunction.org/heartdonor/

2) SEVEN MILE BOOTS by Laura Beloff, Erich Berger, Martin Pichlmair (2003-04)
"Seven mile boots, the magical footwear known from folk tales, enables its owner to travel seven miles with one step. With little effort one can cross the countries, to be present wherever it seems suitable and to become a cosmopolitan flaneur with the world as the street."

The project SEVEN MILE BOOTS is a pair of interactive shoes with audio output. When wearing the boots the user walks around -as a flaneur- simultaneously in the physical world and through the literal world of the Internet. While walking in the physical world one may suddenly encounter a group of people chatting in real time in the virtual world. This encounter is noticed by hearing the chats suddenly coming out as a spoken text from the boots. The user can pass through a group of chatters or s/he can decide to stop for closer observation.

The boots join irc-chat rooms automatically under the name of "sevenmileboots". Every time while walking, the boots are looking for a new selection of channels from the irc-servers. The boots are embedded with all the necessary hardware, a computer with wireless network, microprocessor, sensors, amplifiers and loudspeakers. They are ready to function in any location provided with an open wireless network. Wherever you are with the SEVEN MILE BOOTS, the physical and the virtual worlds will merge together. The piece is built upon feet and shoes as an interface to move in the text-based "non-space" of the chat rooms. The piece offers a perspective into processes that are an inherent part of our current lifestyle. The artistic focus of the piece at the time of creation, was in the construction of an open structure, which would be filled by real people in real time; real life. This kind of structure creates a possibility space that pushes the users forward in a search for more substance, with a desire to consume and to experience.
http://randomseed.org/sevenmileboots

3) THE HEAD (wearable sculpture) by Laura Beloff (2004-06, 07 various versions)
The Head (wearable sculpture) is a piece with process-like, participatory and mobile approach to art practice. It is dealing with a view of contemporary, mobile and technologized society. It is built as a "wearable" object for people to adopt.

One of the main features of The Head-sculpture is that it is available for a free public adoption. The person adopting this wearable sculpture becomes responsible for it. It becomes like a second head for them and it should follow its "foster-parent" everywhere s/he may go (or occasionally be placed in a location of their choice).

The Head is connected to the Internet and it has an open public access via mobile phone text messages. The Head contains a mobile phone, which is embedded in such a way that the camera of the phone functions as the technological eye of The Head-sculpture, and a microphone is embedded into the ear. The general public can access The Head by sending a mobile phone text message (sms). When The Head receives the sms-message it responds by capturing an image and recording a short sound file simultaneously. The captured image together with sound is sent back as a reply to the sender. These images are also automatically uploaded to the public site in Flickr.com. In a similar manner as many of us use Flickr for storing and sharing our photos, The Head is doing the same. The dedicated Flickr-site can be thought as the mind of The Head-sculpture with continuous accretion of memories. On the site one can see all the observations of The Head. It develops to a collective memory. The Head will be adopted and carried around by various individuals and its' vision and hearing are triggered by others to collect memories on the way.

Ideally The Head sculpture should be occasionally adopted by specific public figures; for example, a police officer, a politician, a tourist guide, or a teacher -professions, which generally have "a view" on society. The public access via sms-messages would naturally remain open for the general public equipped with mobile phones. The piece has no permanent location. It is a nomad living amongst the people, moving from place to place. Simultaneously it is present and accessible at any moment via mobile phone.
http://www.realitydisfunction.org/head/

4) THE FRUIT FLY FARM by Laura Beloff (2005-06)
The Fruit Fly Farm is a wearable space station designed for fruit flies. The nest for the flies is located in the center of this traveling artificial habitat. The public can observe the nest via captured mobile phone images.

The Fruit Fly Farm is a second work (after The Head), which uses one of the most common everyday technologies for observations—the mobile phone. While The Head-sculpture is observing outwards to the surroundings and the society, the Fruit Fly Farm has an entire community under observation. The Fruit Fly Farm is embedded with a camera mobile phone, which is observing the nest. The public can access the phone camera by sending a text message, which will trigger the camera to capture an image. The image will be sent back as a reply and also uploaded to a dedicated website where one can see all the uploaded images observing the fly nest. The sent sms-messages (comments) will be displayed on the website with the image.

Traditionally fruit flies are considered to be a nuisance and a pest. In this piece they are treated as a living community, which can be observed by public. For the "owner" of this wearable Fruit Fly Farm, it is a pet that requires responsibility and care taking. The nest is located in the middle of the Ø20cm transparent acryl ball. The nest capsule contains rotten

fruits and needs to be re-filled approximately once a week. The outer ball and the nest capsule are perforated with small holes. The flies are free to fly in and out of the nest.

The audience members are invited to adopt the work and become responsible for the fly farm. It is designed as a lightweight transparent ball with a custom made easy-to-carry system. http://www.realitydisfunction.org/

5) TRATTI by Laura Beloff and Martin Pichlmair (2006-07)
The Tratti is a constructed prototype for a wearable noise instrument with artistic twist, aimed specifically at kids of all ages. The initial inspiration was the idea of using the world as a constantly changing real-time score for the sounds and the notion of children being very loud at certain age-period. Tratti records a short sound clip (for example one's own voice) and continuously transforms it using the surrounding world as a score. Tratti was also planned with a connection to the far-away environment; the satellites passing above Tratti's location would be heard as specified sound-signals from Tratti.
The TRATTI contains custom-written software for a camera mobile phone, microphone, modified megaphone system with amplifier and rechargeable batteries, all within a custom-designed wearable device. http://tratti.attacksyour.net/

6) EMPTY SPACE by Laura Beloff (2008-09)
Our lives are full of persons, events and things, which completely fill up our world and time. These worlds are organized and full until an occasional loss of someone or -thing leaves an empty space into it. This empty space exists until it gradually fills up again.

The work is functioning in hybrid space; it is accessible for the public through an online site, the results (dedications) will show on the physical object, which is carried around by volunteering people within their everyday lives on the streets, at homes, etc.

The piece consists of a peculiar looking wearable transparent capsule designed to be worn on the back. This medium-size capsule is constructed as a vacuum; an empty space. It can be considered as a physical instantiation of a mental empty space that may occasionally enter our lives. The piece is offered to general public for use and it is thought out to be worn within people's everyday lives. The piece is equipped with a networked small screen, which always displays the current (scheduled) dedication of the piece. This means that the general public has a possibility to dedicate the piece temporarily for their own needs. Via an online website one can reserve a date/hour/minute within the 3rd millennium, during which the capsule is dedicated for one's cause; be it private and personal, or an universal cause impacting the entire globe. The persons who are wearing the Empty Space are volunteering for other people's needs as well as their own.

This piece is not able to 'perform' without the participation of the public but is dependent on it. The work is taking place within the everyday life while people are having it in their homes, wearing it on streets and any place they might be situated.
The work makes apparent the technologically networked world our lives are entangled in.
http://www.emptyspace.info/

SUMMARY 2.3

With this essay the author has aimed to create awareness about non-standard aspects in various projects emerging within the field of wearable technologies. These non-standard aspects and the self-defined criteria seem to be contradictory to the usual and traditional aims of functionally oriented approaches within wearable technologies. Similar non-standard aspects can also be seen in the artistic projects of the author. The projects with non-standard aspects show an alternative approach and bring critical viewpoints to the field of wearable technologies.

It seems possible that in the future the functionally-oriented wearable and mobile devices, or their functions, are fused with the human body. But what and how will be the role and form of the wearables that do not follow this line as their criteria?

END NOTE

[1] Stated for example by Barfield & Caudell in Basic Concepts in Wearable Computers and Augmented Reality. *Fundamentals of Wearable Computers and Augmented Reality.* Lawrence Erlbaum Associates, Inc. (2001)

[2] Cleto, F. (Ed.) (1999) *Camp: Queer Aesthetics and The Performing Subject: A Reader*, The University of Michigan Press

[3] [http://www.merriam-webster.com/dictionary/sensibility -accessed March 30, 2009]

[4] [http://www.merriam-webster.com/dictionary/style -accessed March 30, 2009]

[5] Sontag, S. (1999) Notes on "Camp". In Cleto, F. (Ed.) *Camp: Queer Aesthetics and The Performing Subject: A Reader*. The University of Michigan Press.

[6] ibid.

[7] ibid.

[8] One should note here that Camp has been strongly related to homosexual aesthetics and it has been very much debated in queer, lesbian and gender studies. However, Sontag did not consider Camp exclusively in this context, an aspect for which she has also been criticized. I also am not primarily interested in Camp for its relation to gender- and sex-related arguments, per se, and I will therefore leave this aspect primarily on the side. In this essay Camp is considered as an attitude towards the world, and as a strategy that establishes itself via aesthetics.

[9] Newton, E. (1999) Role Models. In Cleto, F. (Ed.) *Camp: Queer Aesthetics and The Performing Subject: A Reader*. The University of Michigan Press.

[10] Babuscio, J. (1999) The Cinema of camp (aka Camp and the Gay Sensibility). In Cleto, F. (Ed.) *Camp: Queer Aesthetics and The Performing Subject: A Reader*. The University of Michigan Press.

[11] Barfield, W. & Caudell, T. (2001) Basic Concepts in Wearable Computers and Augmented Reality. *Fundamentals of Wearable Computers and Augmented Reality.* Lawrence Erlbaum Associates, Inc.

[12] Mann, S. (1996) Smart Clothing Wearable Multimedia Computing and Personal Imaging to Restore The Technological Balance Between People and Their Environments *ACM Multimedia* Boston, Copyright ACM.

[13] Viseu, A. (2003) Social Dimensions of Wearable Computers: An Overview. *Technoetic Arts,* 1 (1).

[14] Seymore S. (2008) *Fashionable Technology; The Intersection of Design, Fashion, Science, and Technology,* Wien, New York, Springer.

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[16] I am also including works that do not always utilize (digital) technology, but clearly address issues inherent in the developments of these technologies, for example, such as perception.

[17] Examples of works from recent years include, for example, Auger & Loizeau's The Interstitial Space Helmet, Jahrmann's Pong-Dress (2007), and Savicic's Constraint City (2007), as well as the author's artistic production from the several years. They are introduced in the section 2 this essay.

[18] Here I would like to note that irony is understood to be rooted in time, location and in the culture where it is taking place; not everything that we see as ironic will be seen similarly by someone from another culture.
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