

WUNDERKAMMER: WEARABLES AS AN ARTISTIC STRATEGY

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INTRO:

Many of us are currently, and possibly permanently, living in a hybrid space conditioned by the use of mobile and wireless technologies. This space, which emerges from our technological condition, has been scrutinized by various theorists and researchers during recent years. Amongst others, Timo Kopomaa has written about the concept of a *third space*, Anthony Townsend about *phonespace*, and Adriana de Souza e Silva has defined the more general concept of hybrid space which is formed from a merge of physical and virtual spaces.

Our use of technology is generally limited to standard applications and commercial ready-mades, which commonly exhibit a very functional and task-oriented approach to technology. The wider possibilities of hybrid space are often left unnoticed due to the ordinary and pre-defined perspectives offered by mobile devices available for consumers.

The focus of my research is in artistic experiments and works which investigate and refer to concepts of hybrid space, ubiquitous computing, the individual *third space* and/or *phonespace*. These works enable a person to experience hybrid space in a different manner than from standardized perceptions. They aim at directing the focus away from a functionally-oriented approach to hybrid space, towards a more conceptual approach. In my practice I have introduced the figure of the hybronaut; a person coupled with an artistic wearable device. The hybronaut exists within and continuously explores hybrid space. By simply focusing on being rather than doing, the hybronaut refers to the wider phenomenon of technology within our society and in our future.

WORLD: anecdote

Some time ago in a Finnish newspaper there was an article concerning the life circumstances of a person who has spent the most part of his life in a wheelchair. At the end of the article the journalists asked him about the possible communities formed amongst people in wheelchairs. He commented: "When people traveling with caravans meet on the road, they always wave hands and joyfully greet each other. But people traveling in wheelchairs, they don't. Everyone carries his own world with him."

SPACE: space, time, hybrid

Timo Kopomaa writes that the mobile phone itself, as a communication device, can be interpreted as a kind of virtual space parallel to work and home. A mobile phone with its connections forms a *third space* for socializing and meeting friends, as well as functioning as a place to withdraw into privacy and safety within the midst of an urban lifestyle. According to Kopomaa chatting in the *third space* is a primary function and a major way of expressing one's personality and individual self. The meeting of two people in third space is considered completely private in relation to the surrounding environment: it is one's own personal zone of freedom. The mobile phone is firmly linked to sustaining connectedness. As Kopomaa writes, the mobile phone is not solely a device to keep in touch, but a device for being together. (Kopomaa, 2002)

Anthony Townsend has observed that time is the most important change occurring with new lifestyle opportunities offered by mobile phones. Time is a commodity, which is bought, sold and traded over the phone. Instead of living within a more traditional schedule based on minutes, hours

and weeks, individuals now live within a constant stream of negotiations, reconfigurations, and reschedulings. One can be interrupted and can interrupt others at any time. Townsend has defined this as *phonespace*. According to him, a person living in the *phonespace* cannot let go of it; it is a primary link to the temporally and spatially fragmented world of personal networks of friends, colleagues, as well as offering constant reconfiguration of schedules and meetings. "It has become their new umbilical cord, pulling the information society's digital infrastructure into their very bodies." (Townsend, 2001)

Adriana de Souza e Silva defines a concept of hybrid space in order to re-conceptualize physical spaces through the connectivity of digital mobile media. She writes about hybrid space: "...the mix of social practices that occur simultaneously in digital and in physical spaces, together with mobility, that creates the concept of hybrid reality." (de Souza e Silva, 2006) She has focused her research on the use of mobile media devices as social interfaces which reshape space. Obviously, hybrid space is not solely a technological construction. According to de Souza e Silva hybrid space is emerging explicitly as a social space created by social networks and interactions, which are developing simultaneously in physical and digital space. Based on de Souza e Silva's definition, hybrid space inherits properties from both worlds; it grows larger than the sum of its parts.

As mobile phone users we carry individual spaces, as described by Kopomaa and Townsend, with us everywhere. Although these individual spaces are first defined as private, as our personal area of freedom, nevertheless the surrounding physical and public reality is an inherent part of them. Personal memories about situations or meetings with friends, which may have happened in these technologically-enabled private spaces, are often still anchored, as memories, as to their physical location¹. Physical reality still continues its customary function as a reminder of past events and encounters; the only difference being that now the physical anchor point is no longer shared, but one event may have several "stages" located anywhere in the world².

In any case our perception concerning physical space is obviously under transformation. The amplified importance of individual spaces, as pockets of privacy within public space, is impacting on our developing relationship with our physical surroundings. When large parts of our lives and important events take place within technologically-enabled private spaces, it raises the question as to whether physical surroundings will eventually be converted into a mere backdrop for the alluring individual spaces. Or possibly, as many seem to believe, the era of ubiquitous computing (Weiser & Brown, 1996)³ will eventually remove the rigid separation of physical environment and virtual space.

INVISIBILITY: standard

Without being aware of the fact, the majority of us are already inhabitants of the hybrid spaces defined by de Souza e Silva through the use of mobile phones or other connected mobile devices. Even if our mobile phones are always on and we are constantly connected through them, the concept of hybrid space that we share with other connected bodies, and its wider possibilities, are easily left unnoticed. This could be claimed as the result of our standardized attitudes towards technology.

¹ Jussi Parikka has written about games on mobile devices and how they are "leaking" in a way, such that the player is constantly aware of the surrounding disturbances, especially when playing in public places. This has been used in newer mobile games as a feature; the game is capturing the everyday reality as a part of its concept. PARIKKA, J. (2003) Liike, paikka, havainto -mobiili kuvaruutu ja pelaamisen uudet ulottuvuudet. (Movement, place, perception -mobile screen and the new dimensions of gaming) *Widerscreen 2/2003*

² This has in some sense been true throughout the history of the telephone. However, with fixed phones that were always related to a place, the caller usually had an idea or mental image of the environment surrounding the receiver without being present there. With the use of mobile phones, the caller only has an idea about the person, not of the location.

³ Mark Weiser first articulated ubiquitous Computing in 1988 at the Computer Science Lab at Xerox PARC.

Technological devices are often solely scrutinized as to their functionality and usability. Our practice with them is still very much influenced by instrumental perspectives⁴. Mobile devices are commonly considered mainly as tools for pre-specified tasks, for example: SMS-messaging, phone calls, reading emails, and paying bills. The possibilities offered for the use of technological devices are also often standardized and restricted to specified functions. For example, the personalization of our private phones with unique phone covers, wallpapers, ringing tones and amulets readily creates a false idea of freedom. Though we all can apparently choose from within a wide range of computers, phones and other commodities, these are all still enveloped within larger technological systems. David Nye writes: "It is easier to select among many telephones than it is to do without one." (Nye, 2006)

Likewise in the current situation, hybrid space is only attainable by way of standardized interfaces such as mobile phones with specified functional possibilities. To be able to function or experience hybrid space differently is out of the reach of the average consumer.

ART: hybrid space

The development of wearable, small-footprint technologies, and wireless and mobile networks has impacted on the manifestation of various artistic projects using mobile and wearable devices. Artists have begun to expand the notion of hybrid space and its possibilities by exploring the limits and creating customized situations. These kinds of artistic works experiment with new perspectives that oppose the pre-fabricated standard perceptions, which neither offer possibilities for exploring the shifting notions concerning hybrid space, nor address critical notions concerning the ways we use technology. Yet, many of these artistic projects have a strong goal or task-oriented approach to hybrid space, such as in the form of a game or by sending messages from a mobile phone to a large display. An example of this would be the project Blinkenlights⁵ by Chaos Computer Club, in which one could play Pong or send SMS-messages onto a house-sized screen.

My (the author's) interest is focused on experiments and artistic works, which, in contrast to the functional approach to technology as a tool, often appear as awkward looking wearable devices and objects offering a more conceptual direction, rather than a strictly useful functionality. They are not designed for, or solely focused on the user's perspective, in which case they would be designed as an aid for or an extension of the user, and would commonly have a sleek or almost invisible appearance. These devices could have an absurd look, and can even be uncomfortable to wear. Their inherent playfulness in relation to technology, and humor or irony combined with an awkward appearance opposes the standardized views and (restricted) possibilities of commercial mobile devices. These kinds of works function as an essential and critical commentary questioning the direction and the development of mobile and wearable technologies.

EXAMPLE:

German artist Stephan Schulz's "Tin Drum"⁶ (2006) is a wearable physical drumming machine, which reads GPS data and translates this into drumming patterns. The artist writes that it is important to combine the virtual layer with a real world intervention in order to create a stronger connection between the two, and to use new technology as a catalyst for social interaction. In this work the user of the device becomes a public performer, functioning as a focus for public attention and as a juncture between the virtual and real layers of public space.

⁴ Johan Redström writes in the following way: "...though phenomenological, sociological and other studies have challenged and expanded our understanding of technology, practice still seems to be dominated by an instrumental perspective. Central to our understanding of technology still lies notions of use, the idea that technology is the means for achieving certain ends, often by amplifying the power of our actions." REDSTRÖM, J. (2005) On Technology as Material in Design. IN REDSTRÖM, M. REDSTRÖM, J. & MAZE, R. (Eds.) *IT + Textiles*. Edita Publishing Oy.

⁵ <http://www.blinkenlights.de/>

⁶ <http://www.maybevideodoes.de/sites/tindrum.html>

FIGURE: hybronaut

A person, or a body, coupled with a peculiar looking wearable device becomes a kind of space traveler, who is equipped to be able to exist within hybrid spaces. This figure, which I will call the hybronaut, aims to explore hybrid space, and its possibilities by producing a non-standardized perspective on this space, and by pointing to the restricted manners in which we are currently allowed to use hybrid spaces.

Kopomaa and Townsend have articulated the occurrence of individual private spaces, which are formed by a connectedness enabled by mobile devices. These individual spaces become noticeable mainly when we are using our mobile devices to perform specific tasks. At other times, the existence of our technologically connected world is largely imperceptible. In contrast the hybronaut is only able to exist within a continuously connected world; within a hybrid space. His/her equipment is specifically constructed for exploring, experiencing and observing hybrid space rather than existing as a properly functioning tool for performing certain tasks.

This, often bizarre, looking wearable device, which is an essential part of the hybronaut, raises curiosity through its visual appearance. This fosters interaction and communication with the public. We could say that the hybronaut is a user turned into a performer. The hybronaut carries his/her own (connected) world with him/her, pointing out to the public his/her private investigations concerning both connectedness and our shifting notions of space, presence, the real and the virtual.

In some way the hybronaut can be compared to a flaneur⁷. The appearance of the flaneur was influenced by the material circumstances of the city, for example the newly developed concept of department stores. In a similar manner the concept of hybrid space and even the figure of the hybronaut have appeared within the technological development of (commercially enabled) wireless and mobile networks. The flaneur, as well as the hybronaut, is a figure on the street, strolling around the city without any specific goal or destination, simply observing life; the only clear difference here is that the hybronaut is strolling and observing life within a hybrid space while the flaneur was enthralled by emergent urban life within the physical world.

CONCLUSION: artwork

In my artistic works, the hybronaut's equipment is constructed from standard technological components and already existent possibilities. However, the way these standard parts are linked together differs from that which is usually expected, or possibly even allowed for normal consumers. This method enables the hybronaut to experience hybrid space differently than from within standardized perspectives. These works aim at directing the focus away from the functionally oriented approach to hybrid space, 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.

HEART-DONOR by Beloff & Berger with Mitrunen (2007), is a wearable art work addressing our life in hybrid space. You can "wear" the hearts of your close network of selected persons on you, and observe the presence of these people in physical and virtual space. (Figure-HeartDonor)

The work takes its point of departure by rejecting the (common) concept of the differentiation of virtual (digital) and physical ("real") layers of the world. This work is specifically constructed for hybrid space. The work attempts to make the renewed concept of space visible and materially concrete in our everyday lives. 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 vest) for long-term everyday use.

⁷ The term flaneur was popularized by the poet C. Baudelaire and later theorized by W. Benjamin. Further on it has been written about, and used by various scholars.

One can collect 30 recordings of the heartbeats of friends and family in the HDvest. These heartbeats will be stored in 30 small lamps embedded on the front of the HDvest. The blinking heartbeats function as personal mementos of close people and friends. The heartbeats are combined with another concept related to the technological world. The default colour of a recorded heartbeat is green, but it changes to blink in red when the person (whose heartbeat is stored in the HDvest) goes online (with Skype). The "owner" of the HDvest can follow 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 be located geographically. The HDvest and its wearer reside continuously within hybrid space.

The form and design of the HDvest is inspired by the traditional life-vest. This technological version of the life-vest refers 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 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/>

Bibliography

- BARFIELD, W. & CAUDELL, T. (2001) Basic Concepts in Wearable Computers and Augmented Reality. *Fundamentals of Wearable Computers and Augmented Reality*. Lawrence Erlbaum Associates, Inc.
- BELOFF, L. (2006) When The Cables Leave, The Interfaces Arrive - immaterial networks and material interfaces. *Technoetic Arts: A Journal of Speculative Research*, Volume 4.3
- DE SOUZA E SILVA, A. (2006) From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces. *Space and Culture*, Sage Publications.
- DE SOUZA E SILVA, A. (2006) Re-Conceptualizing the Mobile Phone – From Telephone to Collective Interfaces. *Australian Journal of Emerging Technologies and Society*.
- GLEBER, A. (1999) *The Art of Taking A Walk; Flanerie, Literature, and Film in Weimar Culture*, Princeton, Princeton University Press.
- HUHTAMO, E. (2004) Pockets of Plenty: An Archaeology of Mobile Media
- KOPOMAA, T. (2000) *Kännykkä-yhteiskunnan synty; Tihentyvä arki, tiivistävä kaupunki, (The birth of mobile society)* Helsinki, Gaudeamus. Univeristy Press Finland.
- KOPOMAA, T. (2002) Kännykkä, paikkaan kiinnittyminen ja samanrytmisyys. (Mobile phone, attachment to place and synchronisation) <http://www.m-cult.net/mediumi/article.html>
- MANN, S. (2002) Mediated Reality with implementations for everyday life at presenceconnect.com. *Presence: Teleoperators and Virtual Environments*.
- NYE, D. (2006) *Technology Matters; Questions to Live with*, Cambridge, MIT Press.
- PARIKKA, J. (2003) Liike, paikka, havainto -mobiili kuvaruutu ja pelaamisen uudet ulottuvuudet. *Widerscreen*.
- REDSTRÖM, J. (2005) On Technology as Material in Design. IN REDSTRÖM, M., REDSTRÖM, J. & MAZE, R. (Eds.) *IT + Textiles*. Edita Publishing Oy
- TOWNSEND, A. (2001) Mobile communications in the 21st century city. IN BROWN, B. (Ed.) *The Wireless World: Social and Interactional Aspects of the Mobile Age*. Berlin, Springer-Verlag.

WEISER, M. & BROWN, J. S. (1996) The Coming Age of Calm Technology. *Xerox PARC*.
WODICZKO, K. (1997) Designing for the City of Strangers. *Critical Vehicles; Writings, Projects, interviews*. MIT Press.