A New Performativity : Wearables and Body-Devices

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ABSTRACT

In their relatively short history, wearables and body-devices have evolved from cyborg-like extensions and utilitarian solutions aimed at enhancing efficiency, to poetic representations and experiences that give form to the imagination through indirect and abstract transformations. These new body-artefacts, in particular those that directly consider the body's capacity for movement, afford a new kind of performativity that is as much experiential as it is representational. By engaging in an embodied, pre-verbal discourse such works encourage observer empathy in a way that shifts from traditional performance forms such as dance and theatre. Observer can be interactor and roles of performer and audience are blurred or no longer apply. This article examines the emergence of this new performativity. The works cited are examined in relation to Heideggerian notions of poeisis and exstasis, poeticisation and enchantment. An analysis of the evolution of wearables and body-devices in relation to their inherent performativity has been lacking. This article addresses this gap.

KEYWORDS

Performativity, poiesis, enchantment, transformables, body-devices

CHARTING THE ORIGINS

By charting the evolution of wearables and body devices from their cyborg-like beginnings through to contemporary art-design hybrids, we can track the emergence of a new performativity. Wearables and body-devices now engage people critically and imaginatively, through an embodied discourse, situated more often than not in the everyday. This article discusses what this might mean, and how it has occurred.

When people think of early wearables and body-devices they usually go immediately to the iconic images of Steve Mann wearing head-mounted displays (Mann 1980-). While Mann was not the first to be working in this area, and technologies, of course, don't have to be digital, these images remain an enduring reminder of the elision between "wearables", computers, body-devices and the cyborg, as best exemplified today perhaps by the work of artists such as Stelarc (Stelarc 1996 -) and Marcel.lí Antunez (Antunez 1998, 2003), or, as critically brought to mind by works such as Nicky Assmann's *Circuit Dress (Assmann 2008)*, or Noriko Yamaguchi's *Keiti Girl* (Yamaguchi 2004).

The term "Cyborg" was coined in 1960 to describe a human being augmented with technological "attachments"(Clynes 1995). The first wearable computers were typically computers and computer components worn on the body (Rhodes -1997). The people developing them were computer scientists and engineers, and the broader aesthetics of what they were making and presenting were rarely considered in any depth – development of the technology necessarily took precedence. Nonetheless, early images of scientists wearing computers are quite theatrical. They hook into images from science fiction, and connect to our collective dreams of the future as exemplified in Gibson's Neuromancer (Gibson 1984), the Terminator film series (Cameron 1984, 1991; Mostow 2003; McG 2009) and the film Minority Report (Spielberg 2002).

There are now too many examples of wearables and body-devices developed by computer scientists and engineers to mention them all. They still, predominantly, focus on technological development - enhancing functionality and increasing efficiency, and largely ignore broader aesthetic concerns. In recent years though, this has begun to shift as researchers in the field of Human Computer Interaction (HCI) acknowledge the importance of human values and emotions (Gaver 2002, 2003, 2006), as engineering and computer science dominated conferences such as the IEEE's International Symposium for Wearable Computing (IEEE 1997-)

begin to embrace "art" and "fashion" projects, and with the growing prominence of Interaction Design as a field. While all of this is encouraging, and acknowledges the important contribution that aesthetics can give to the experience of all facets of life, and while prominent companies such as Philips, IDEO, Levis, etc. are making significant efforts to make wearables and body-devices that engage our imagination, as McCarthy points out, the results are often not "enchanting" (McCarthy 2006).

I suggest that engagement with these works remains intellectual in many cases because it remains static, and it is through the dynamic of ongoing physical narrative that we experience embodied engagement. The primary concern of this article is how wearables and body-devices have led to the emergence of a new performativity. I believe this new performativity to be intimately linked with embodied, poetic responses to everyday situations. In the following sections I discuss what I mean by this, why I believe this is so and how I believe it has come about.

DEMOCRACY! - FROM THE LAB TO THE PEOPLE
In the early 1990's postgraduate courses such as Computer Related Design (CRD) at the Royal College of Art in London (now Design Interactions (RCA)) and ITP, the Interactive Telecommunications Program at New York University Tisch School of the Arts (NYU), gave students from disciplines other than computer science and engineering access to micro-computing in what can be seen as a radical democratisation of computing technologies. Both of these institutions taught Physical Computing – "an approach to learning how humans communicate through computers that starts by considering how humans express themselves physically" (Igoe). The technology was central to this enquiry, certainly, but the thinking was focused on human needs and desires, as well as human physicality. The result was an explosive and dynamic exploration of more creative and socially engaged applications of computing technology than anything previously (and arguably still) offered by the scientific research laboratories. Works could be rough and ready, prototyped in a matter of weeks, or highly developed and sophisticated – conceptually and aesthetically refined. They often examined radically different modes of engagement, as will be discussed in the examples below. Not all of the works were or are wearable, but there has been increasing interest in body worn devices, not just for dance, performance or fashion, but for other more experimental and exploratory forms including conceptual propositions and performance interventions.

THE BREADTH OF THE FIELD
Wearables and body-devices today are made by practitioners from a broad range of disciplines and backgrounds, and are informed by a vast range of viewpoints and concerns. They commonly engage with issues beyond fit, functionality and efficient operation to try to enchant people and engage them through their bodies and imaginations. They often do this through performed or performative scenarios grounded in everyday situations.

In general, they can be thought about and categorised in a number of ways:

- works that literally transfer non-body-based technology to the body, transferring button to sleeve, for example, hiding elements in pockets
- works that are closely aligned to traditional approaches to fashion, treating the body as a moving, biomechanically complex coathanger, whose purpose is to transport a body-based artwork, garment or device through space
- works that capitalize on the body's capacity for movement
- architectural explorations of the extended body space
- socially and critically engaged works
- conceptually challenging/stimulating works
- works destined for everyday life
- works destined for performance and dance
- works that sit in a hybrid space in-between art, design and everyday life
- works with an ongoing narrative
- one-liners – works that perhaps show technical prowess or conceptual acuity but may not be

engaging over time

- works that truly capture us, transport us, challenge the way we think about things beyond the immediacy of the work itself.

This schematisation is neither exhaustive, nor are the categories exclusive, but thinking about wearables and body-devices in this way can be useful to provide a framework for discussion. For the purpose of this article my interest is focused on: works that capitalize on the body's capacity for movement; socially and critically engaged works; conceptually challenging/stimulating works; works that sit in a hybrid space in-between art, design and everyday life; works with an ongoing narrative; and works that truly capture us, transport us, challenge the way we think about things beyond the immediacy of the work itself.

GIVING POETIC FORM TO THE IMAGINATION
Today we find a plethora of wearables and body-devices that embody what I call *poetic* representations and responses to our engagement with the world. The word *poetry* originates from poiesis, which means "making", "creating" or "producing" (Brown 2003). At its origin it was a verb, a word that embodies action and transformation, as well as ongoing narrative experience. Each of these fundamentals are grounded in the body. When Heidegger speaks of *poeisis* he speaks of threshold occasions – moments of *exstasis*, when something transforms from it's being as one thing into another (Heidegger 1962). This suggests an ongoing narrative enabled through an embodied transformation process. Stewart proposes that 'Poetic language' naturally affects the way narrative experiences unfold because it has a descriptive power that makes visible, as it shapes the way we perceive both the landscape of action, and our relationship to that landscape (Stewart 1993).

> If we consider poetry as a form of art in which language is used for its aesthetic and evocative qualities in addition to, or in lieu of, its ostensible meaning and transpose this directly onto body-worn devices and wearables, we can extrapolate the following:
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> Body-worn devices employ a wide range of languages such as form, texture, colour, time and movement; as well as fashion, technology, architecture, performance and interaction design. These languages can be variously employed for their aesthetic and evocative qualities in addition to, or in lieu of their ostensible meaning.
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> When discussing the poetics of a work I refer to a conscious employment of aesthetic and evocative qualities rather than any linguistically-based notions of meter or timbre. A deeper discussion of poetics in relation to wearables and body devices is provided elsewhere (Wilde, 2009). I will instead discuss here some works that embody these ideas in different ways to unpack what I mean by this new performativity, and link it to notions of enchantment.

Enchantment
McCarthy states that "when it comes to experiences such as enchantment feelings are as important as thoughts, sensation is as important as cognition, and emotional consciousness is as important as will." (McCarthy 2006). Bennett describes enchantment as being "both caught up and carried away". She suggests that the resulting disorientation is associated with a pleasurable sense of fullness and liveliness that charges attention and concentration. The combination of emotional attachment and a sense of something 'not yet understood' leaves us feeling disrupted but also attentive and curious (Bennett 2001). I suggest that an evolving, physically engaged narrative that gives poetic form to the imagination, that is grounded in the everyday yet is presented through performative means can be enchanting.

Performance
Susan Kozel asserts that performance can act as a catalyst for understanding wider social and cultural uses of digital technology, and that performative acts of sharing the body through our digital devices can foster a collaborative construction of new physical states and levels of conscious awareness (Kozel 2008). Performance, when grounded in the everyday, blurs contextual boundaries so enhances these qualities. Both

performer and observer can enter and experiment with pre-verbal relationships, and the observer can readily imagine inserting themselves directly into the narrative, of which they are already, tacitly, a part.

SOME TRANSFORMABLES

Assa Ashuach's *My Trousers*, transform a banal everyday item - a pair of jeans, in an invisible, so miraculous way, into a seat. In doing so they transform the experience of being on crowded public transport where there is inadequate seating into a cheeky and pleasurable, or at least satisfying experience that engages with the surrounding commuters by hooking into their desire for a seat, or their empathic understanding of this desire (Ashuach 2003). Joo Youn Paek's *Self-sustainable Chair*, gives us access over time to the transformation of a dress into a seat. As the wearer of the dress walks a large pocket at the rear inflates, once inflated the wearer can sit and, for example, read a book or make a telephone call. Once sat upon, the dress-chair begins deflating until it can no longer be used as a chair. In order to recreate the chair, the wearer must start walking again (Paek).

The cyclical nature of the relationship between dress and chair is clear and not complex, yet it is still wondrous, as, like jeans, dresses are not normally chairs. Eliding these two, seemingly unrelated articles through movement makes an elision between the stillness normally associated with being seated, and the act of being in motion. It connects to the collective desire for time to sit, reflect and relax while 'charging' through contemporary life, or the desire for small conveniences like a seat when making a phone call, or in the case of *My Trousers*, when on a crowded train, and it does so through physical engagement. This connection, with collective desires or imaginings through the body, allows the viewer to situate themself as a player within the presented narrative. Because the experience is situated in the performer's body, in the same environment as the observer (or an environment that the observer can commonly inhabit) - they can literally, viscerally imagine themselves within the action. This is very different to if the garment were to be presented as an abstract idea, without an embodied narrative.

For example *Jacket/armchair* from Moreno Ferrari's *Transformables* collection for C.P.Company (Ferrari 2001), is neither worn nor presented in a performed scenario, and remains disembodied – the observer engages with it intellectually rather than viscerally. In contrast, Hussein Chalayan's Autumn/Winter 2000 *After Words* collection (Evans et al. 2005), where seat covers become dresses and a wooden coffee table becomes a skirt is presented through a performed narrative. The situation is quite fantastic, and doesn't necessarily respond to a desire or need grounded in the everyday, yet it still seems to capture our imagination as we follow the unfolding narrative and are enchanted each time something unexpected transpires. With this work Chalayan opens up new areas of exploration as he elides fashion design with performance and architecture.

Mary Hale's *Monumental Helium-Inflatable, Wearable, Floating Body Mass* (Hale 2008), in which a pair of trousers inflate to release you from the pressures of gravity, takes visceral experience and embodied interaction into a completely fictional space. Yet observer can still empathise as the desire to be released from the pressures of gravity (i.e. life) is strong, and our ability to imagine what it must feel like when we see Hale wearing the *Body Mass* is afforded by the blissful look on her face as she floats in an impossible mass of air. The zero gravity and weightlessness afforded by *Body Mass* also connects to romantic associations and collective dreams of a brighter future associated with space travel, bringing us back, surprisingly, to the initial cyborg-like associations of early wearables and science fiction, but in a contemporary, abstracted and poetic way.

In a different kind of abstraction Di Mainstone andV2's *ShareWear* (Di Mainstone 2008) involves a pair of identical twins who dress each other in a series of modular objects to redefine their silhouettes and blur the boundaries between clothing, a sofa and lamps. The resulting outfits can connect to each other, and be interacted with, to illuminate in a number of different ways. The body is engaged in the construction process, and to effectuate the necessary displacement to trigger the different lighting effects, but there is no emotional or visceral engagement on the part of the performers. This work has little to do with everyday desires on

the surface, yet the concatenation of everyday objects and actions gives us something to hold onto, to relate to, to ground what we are observing in personal experience, so, despite the abstracted nature of the twins' engagement, the unfolding narrative is still intriguing because of the unexpected yet strangely logical outcomes as the object-dresses are built and operated. Unlike previous works though, the observer does not place themselves in the *ShareWear* narrative. The quality of the twins' engagement seems key to this, as does the distancing of context from the observer. The meaning or motivation behind the performers' actions distances the observer as there seems to be no emotional or sensual engagement with which to connect.

MOVEMENT AS A TRIGGER FOR THE IMAGINATION

Leissler's *Sole-on*-ice is a pair of sandals that can be placed in the freezer to develop thick ice-blocks on their sole to become a composite 'shoe/frozen surface' object for skating (Leissler 2007). Once the ice is melts, they have to be put back in the freezer, so the process can begin again. Similar to *Self-sustaining Chair*, the transformation process of *Sole-on*-ice is simple and cyclical, yet it is also enchanting. It connects to reminiscent dreams of childhood and also fairy-tales. Bettelheim says that a fairy tale's enchantment depends on the child's not quite knowing why he or she is delighted by it (Bettelheim 1973). I suggest that embodied engagement is key.

Grace Kim's *Twirl Skirt* (Kim 2005) is another work that reconnects us with our childhood – a simple yet dynamic example of how movement can inspire and captivate. *Twirl Skirt* is a skirt with an accelerometer in the waistband and three electro-luminescent panels that light up in response the wearer's acceleration. Forty year old women put the skirt on and spin like they haven't done since they were eight years old. The work is unquestionably enchanting.

A more fantastical example is *hipDisk*, a self-contained wearable sonic output system for performance and play that exploits changing relationships between torso and hip to actuate simple tones. (Wilde, 2008) The *hipDisk* provides a startlingly different view of the body, challenges traditional representational aesthetics and provokes new ways of moving. The resulting shifts in perspective afford new ways of thinking about the body and movement, as well as sound production and composition, and provokes creation and reflection upon new modes and patterns of bodily experience. The interface allows us to enter and experiment with pre-verbal relationships to space and sound and renders accessible our gestural engagement with them, in an ongoing process. All of these things, facilitated by the interaction between body-movement, interface, and the effects of technology, combine to embody a poetic extension of the dynamic moving form.

Finally, Riita Ikonen's work, which anthropomorphises snowflakes, leaves and nylon, to place their embodied fantastical forms in everyday situations (Ikonen 2007, 2007-, 2005) imbues inanimate objects with human emotions to encourage empathic engagement. In *Human Nylon* Ikonen situates herself as 'nylon' in its various forms, in various points along the product's lifecycle. *Snowflake* is a costume that turns her into a stranded human snowflake to bring attention to the recent lack of snow in Finland at Christmas time. *Bird and Leaf* reflects on the artist's sentimental yearning to 'get back to nature'. A yearning that is easily recognisable.

CONCLUSION: A PERFORMATIVE PRE-VERBAL DISCOURSE

The works cited are neither clearly art, nor design, nor performance, yet somehow blur the artificial boundaries that often separate such disciplines. Whether a work is embedded in the everyday or not, the performative nature of the works' presentation – the embodied revelation of an experiential narrative – seems to engender an empathic connection in the observer different to that experienced through traditional forms of performance. The wearers of the artefacts are commonly part of the same unfolding narrative as the observers, though they embody their responses to the narrative in a different, highly poetic way. Doing so connects to collective desires – to go places but also sometimes to stop and pass time in a reflective activity; to engage in playful distractions, or collective dreams; to 'step out of' everyday life into a more embodied, poetic existence. This new performativity seems an important development afforded by wearables and body-devices, which, if taken on board by scientists and technologists, could result in radical developments in the field.

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