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INTEGRATING NEW MEDIA INTO SPATIAL PERCEPTION:  
A LAYERED STRUCTURE OF REPRESENTATION

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Abstract: The paper explores the adaptation of the self into space with new media technologies. Adaptation in the urban milieu happens as a special kind of information transference of social values, reforming new representational aesthetic standards. Representation may be explained as a sequence of layers applied upon the body. The first layer of representation is the skin, whereas dress is next. Moving out from the body towards space, the wall “dresses” space and is also the primary element of spatial definition. With the new technological devices, the wall may be seen as a “screen interface” between space and the self and an active membrane of communication between them. Copyright © 2002 USTARTH

Keywords: Cyborg, New Media, Immersive Environments, Architecture

"Through radio, TV and the computer, we are already entering a global theater in which the entire world is a Happening. Our whole cultural habitat, which we once viewed as a mere container of people, is being transformed by these media and by space satellites into a living organism. ...(Modern awareness) is once more becoming integral and inclusive, as the entire human family is sealed to a single universal membrane."1  

Marshals McLuhan


The cyborg would define its body and functions through its relation to new media,
especially with the ways the new technological devices have been incorporated into its system. Staying faithful to such a premise, the present paper attempts to redefine space by its relation to new media, not as a mere container of activities, but as a by-product of the emerging cyber-culture; in other words, to integrate new media into our general spatial perception and also map their attributes and physical presence as constituent elements of space.

The cyborg occupies space as it wears distinct layers of representation, extending from its own body towards space: from its skin, out to clothing, furniture, the house and the outer spatial spheres and public appearances. The new technological devices may occupy places somewhere between clothing and space. In neighbouring relation, the wall emerges as the main spatial medium. Traditionally, the wall has functioned as a fixed spatial divider, also imposing a set of polarities between inside and outside, private and public, closed and open. Such a pattern might be broken if the wall is redefined in relation to new media; but first, the wall has to be systematized into the layered sequence of representations of the cyborg.

**Layers of Representation**

**The Skin.** The first layer in the sequence of representation is the skin. The skin holds the bodily organs and parts together, being the physical boundary between the inner body and the outer environment. It has the double role to hold together the organic parts of life, and also to symbolize that life, as it represents both our interiority and our externalities. Roger Caillois analyzes the representational role of the skin in nature. The colouring of the skin imitates motifs found in the natural environment. Caillois makes the observation that in the realm of the insects, the objective for skin colouring is not a defensive reaction, as many would argue. Predators are not at all fooled by the sameness of form or colour: they eat crickets that mingle with the foliage of oak trees, or weevils that resemble small stones. Conversely, some species that are inedible, and would thus have nothing to fear, are also mimetic. Caillois concludes, "this is an 'epiphenomenon' whose defensive utility appears to be null. ... The primary goal is fascination. The eye is the vehicle of fascination in the whole animal kingdom, including human." In "primitive" behaviours there is an overwhelming tendency to imitate, combined with the belief in the efficacy of such an imitation. The end of the imitation process would appear to be the complete assimilation to the surroundings. Caillois refers to *The Temptation of Saint Anthony* described by Gustave Flaubert as a generalized spectacle of mimicry. The scene captures man's continuous conflict with evil—in this case represented by nature—to which the hermit succumbs (fig.1). As Caillois notes, such a tendency to imitate has been transferred and is still quite strong to the "civilized" man. The urban environment should not be perceived as an asset of aesthetic patterns that are ready to use, but as a source of information, ideas and ideologies that may be inscribed onto the human in subtler ways. The film *The Pillow Book* by Peter Greenaway explores such an idea. The skin is represented as writing and reading surface. The narrative is about a young Japanese woman, Nagiko, who derives the most carnal pleasure by having her body written upon, often while reading (fig.2).

5 Caillois describes further his scenario as this: "life seems to lose ground, blurring in its retreat the frontier between the organism and the milieu and expanding to the same degree the limits within which, according to Pythagoras, we are allowed to know, as we should, that nature is everywhere the same. ... P(Pl)ants are now no longer distinguished from animals ... Insects identical with rose petals adorn a bush ... And then plants are confused with stones. Rocks look like brains, stalactites like breasts, veins of iron like tapestries adorned with figures." As he sees the three realms of nature merging into each other, Anthony in his turn suffers the lure of material space: he wants to split himself thoroughly, to be in everything, to penetrate each atom, to descend to the bottom of matter, to be matter." Caillois, R., "Mimicry and Legendary Psychasthenia", p.71.
body and the pleasures of the reading/writing experience: the moment pleasure is created, the same experience elevates to an intellectual one. In The Pillow Book the pleasure shifts beyond the genders, from woman-to-man to man-to-man, as Jerome, Nagiko's calligrapher-lover, becomes also the lover of his male publisher (fig.3). The relationship between skin and text remains reciprocal. Although the text represents the body upon which it is written, it belongs neither to it, nor to its skin. Greenaway demonstrates such a view later in the film. After Jerome's death, his male lover peals off the skin from the corpse in a ritualized process that turns the written-on skin to an object of worship, being separated from the body. From now on, the skin, detached from its corpse, only belongs to the text that still lives.

Covering the skin: dress as text. Clothing is the next layer of representation. For Roland Barthes, clothing belongs to the system of fashion, with the purpose to envelop the human body for protection, modesty and adornment. In the online exhibition of the Issey Miyake autumn/winter 2002-2003 collection, the body is represented through the intermittent skin flashing between two articles of clothing (fig.4). The dress evokes a ritual of a delaying process of unveiling, also stimulating desire. At the same time, the dress mediates between the body and the urban context (fig.5), as it represents both. The figures are projected in front of plan drawings and city lights. The dresses are in general monotone colors, being similar to the ones found in the city. Monotone causes that the parts of the dress are no longer clearly recognizable. What stands out the most of the figure is its outline.

Buildings and dressed figures are being reduced to malleable garment outlines, mutually showing their relation towards forming the urban context. Therefore, fashion's role upon the body may be explained by Caillois' notion of imitation in nature: much as the insects use mimicry techniques to resemble with natural environment, so does fashion, being the medium of assimilation and fascination among humans and also the city.

For Barthes, fashion is not an immediate projection of surrounding motifs; instead it develops an elaborate code of significations into the language of its own text. The fashion text translates images of the city onto layers of garments covering the body. The transition of fashion to the fashion text is not an innocent one. As the dress projects the body and the city, fashion creates several representational images of both. In the Barbara Bui autumn/winter 2002-3 collection the human figure is partially covered by a blurry glass (fig.6), half-hiding/half-revealing itself from its duplicate. In another example, the female model appears disguised in manlike apparel (fig.7). Her hat casts shadow on her face as if she were wearing a mask. The whole figure casts shadow on the background wall. Figure and its shadows become equally significant. With their twofold impressions, the figures recreate the dualism between the self and its representation. The figure exists alongside its

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6 Barthes compares the pleasures of the body to those of the text: "Does the text have human form, is it a figure, an anagram of the body?" Barthes addresses the conjunction between the body and the text to our erotic body, whereby the pleasures of the body and the pleasures of the text are equally erotic. Body and text constitute an intimate boudoir record that creates desire. Barthes speaks about the erotic text of the body and the erotic body of the text as an unending list of bits of meanings in ways that may at first appear strange and unfamiliar but that may produce jouissance. Barthes, R., The Pleasure of the Text, (Richard Miller Trans.), New York, 1975, p.51.

7 David Pascoe argues, "The text written on the body of a lover is a simple representation of the desire to use the skin as a writing surface, ... to consider that the body should be retreated as a book to be written on, to make explicit the cliché, 'I can read you like a book." Pascoe, D., Peter Greenaway: Museums and Moving Images, Reaction Books, Great Britain, 1997, p.163.

8 "The text does not shrink from presenting the inevitable signs of age - the wrinkled flesh, the pronounced veins, the enfeebled pectoral muscles, the grey hair. It has made an elderly unclothed body a pertinent and positive subject for depiction." ibid., p.168.


10 Online source: http://www.isseymiyake.com

11 "Fashion is an elaborate mediated substance; a simulacrum of the city and the real body within its form." Barthes, R., The Fashion System, Foreword, p.xi.

12 Online source: http://www.barbarabui.fr
duplication through the glass and of its shadow. The duplicate suggests what fashion actually does: the image of the self is no longer the self itself, but a constructed one.

In the transition from the self to its image, clothing initiates processes of theatrical transformation. In her project Off-the-wall, the artist Margret Wibmer comments upon such a process as she is wearing-unwearing a rubber-suit (fig.8). The suit is inserted between the body and the public. ... It functions as a second skin, a protective layer, a sealer and a wrapping; ... a membrane of communication and separation. In a related approach, Barbara Bui, in the autumn/winter 1999-2000 collection, presents the same models wearing different apparels, positioned in front of the urban context, as if one were able to present itself through multiple images in a single moment (fig.9). With its clothing, the body contributes to the composition of the urban context; they imitate and amplify each other, constituting elaborate feedback loops.

In a further installation, Wibmer attempts to break down the fixed boundaries between body and space. The artist records herself in short visual and audio clips as she is wearing the same suit. The installation room has actually been an immersive physical and virtual environment: as the visitors walk along the room, highly sensitive cameras and microphones are picking movements and sound frequency signals. The signals activate projections of the artist's recorded clips on the walls of the room. Human-generated signals enact a back and forth interplay between the installation and the visitors. Off-the-wall initiates an organic relationship between body and space: the body operates like the mouse of the computer: walking along diagonal axes, or making small movements, will cause a wide range of sound and image effects in the three-dimensional installation. A unified system of humans, spatial elements and technological devices in equal existence and reciprocity is being created, all acting as "information-processing devices."

Dressing space: wall-surface as interface. The wall is the main architectural symbolic element of spatial definition. In the project Aegis Hymposurface, the group deCOi envisions the wall as an "elastic" membrane that holds information about the surrounding activities. Sound signals are captured by sensors and translated into a new code that is now...
read by a highly performative digital control system and recodified into dynamic forms. The wall is responsive in real-time to surrounding forces (fig.10).  

In another approach, for the project Fecund City-scapes, a design team from MIT (John E. Fernandez, Lydia Kallipoliti, Alexandros Tsamis, Alexandra M. Sinisterra, Yannis Zavolias and assistant Vana Tentokali) perceives the wall as an active interface that inscribes the interaction between humans and space onto its shape and colour. In Athens, there is an ongoing excavation process for the extension of the subway network. The excavations have revealed fragmented, discontinuous traces of past historical periods. A layered pile as a palimpsest of the different historical periods is presented, as the terrain of the ground is cut-sectioned. (fig.11).

The proposed structure is an event-recording device. It registers activity onto itself, indicating an active version of the palimpsest. The installation is highly responsive to the visitors, altering its shape and skin according to the flow of activities. The visitor presses buttons and inflates activity pods that were compressed under the floor. The activity pods push and reshape the outer surface, which is flexible. The other side of the installation is made of sensitive thermochromic film that adjusts its colour to the changes of temperature. Several of these structures are positioned at existing urban voids close to the subway exits, following the subway network (fig.12, 13). The network initiates a dual navigation of the urban space. Physical navigation occurs as the visitor travels through the subway system. Virtual navigation occurs as the visitor inflates the activity pods to receive information about the city, its historical sites, the Olympic Games and other cultural activities. The visitor immerses into a game-like experience. The structure and the visitor interact, being parts of a unified system. Without the visitor, the structure is inert. Conversely, without the inflation of the pods, the visitor is left without information and options.

In Times Square, New York, new media devices cover the street walls (figs.14-15). Monitors, signs, ads and billboards are sources of information continuously. The wall’s main functional use is no longer to represent a spatial limit, but to sustain and host whole systems of information. The effect is even stronger during the night, as any materialized perception of the urban environment is replaced by the momentary impressions of lights and screen announcements. Most often, the sources of information do not present any of the use of the spaces behind the walls they are attached to: the placement of the ads of Coca Cola, also of fashion clothes and brands is not an indication that the buildings behind them host related activities inside.  

18 Online source: http://www.hyposurface.com
20 A palimpsest refers to a manuscript – usually written on papyrus or parchment – on which more than one text have been written with the earlier writing semi-erased and still visible. Online source: http://www.wordnet.com. The use of the term in the current context is metaphorical and suggests the reading of different historical periods layered on top of one another, as they leave historical traces.
21 Mary McLeod notes that new technology alters the wall’s significance and it reforms completely its new code of appearance. “The wall is the field of fundamentally disunified series of images and interconnections, disparate flows,
Cyberspace may be described in relation to the cyborg: the cyborg links together, in fragmentary and arbitrary ways, disparate social phenomena, activities, processes and relations, physical, as well as virtual. This is a complex symbiotic relationship, in which neither the cyborg, nor Cyberspace may be viewed as autonomous units. Caillois applied nature’s theory of mimicry onto humans in order to describe a special kind of psychasthenia. In the present case, Caillois would diagnose "convulsive possession of depersonalization by assimilation" for both the cyborg and Cyberspace. The cyborg and Cyberspace would mutually enter into the psychology of psychasthenia, and more specifically of legendary psychasthenia, if we agree to use this name for the disturbance in the relations above between personality and space.

The wall becomes the screen interface that fashions the public spaces of commerce and consumption. Joan Ocman relates the wall’s new perception to other media that are less physical and more ephemeral, where public opinion and consciousness are formed – the television, the films, the print media, the computer and the Internet. With extended implementations of new media technologies into space, the new metropolitan body would also be reshaped, with its parts being – Haraway would argue – the "bionic components" of the cyborg and Cyberspace. Through continuous interactions, the cyborg would become more and more "urbanized" into Cyberspace. Conversely, energies, events or entities, and spaces, brought together or drawn apart in more or less temporary alignments. McLeod, M., “Undressing Architecture: Fashion, Gender, and Modernity,” in Architecture in Fashion, Princeton Architectural Press, Princeton, 1994, p.90.


23 Haraway’s online interview concludes, "These interactions of humans and machines have produced both. It is not humans that produced the machines ... even in those areas of direct human inventions." Online source: http://www.egs.edu/faculty/donnaharaway.htm

Barthes also argues that "(This human) body is, so to speak, organically/biologically/naturally 'incomplete'; it is indeterminate, amorphous, a series of uncoordinated potentialities which require social triggering, ordering and long-term 'administration.' This body is a concrete, material, animate organization of flesh, organs, nerves, muscles, and skeletal structure which are given a unity, cohesiveness, and organization only through their psychical and social inscription as the surface and raw materials of an integrated and cohesive totality." Grosz, E., "Bodies - Cities," in Sexuality & Space, p.244.


26 Ibid., p.72.