

EXTERNALIZING CONSCIOUSNESS

MEDITATION ON THE WORK OF MONIKA FLEISCHMANN & WOLFGANG STRAUSS

by [Derrick de KERCKHOVE](#)

PORTRAIT OF THE ARTIST AS A COUPLE

In public mentions, Monika comes first, in conversations too. Wolfgang stays in the background. Purposely, it seems. At first, I thought it was because he spoke less English than Monika. Then I sensed that both are working deliberately at bringing down the conditioned reflexes of their culture regarding the gender roles. They work as a team, like a few other famous couples in virtual art and criticism. What is valuable about Monika and Wolfgang is that they show that artists can work intimately in pairs. The fact is, when examining their work, it is genuinely difficult to single out what belongs to one and what to the other. This helps to bring down some of the gender barriers and helps us to develop the kind of social attitude needed for tomorrow's communities. [Fleischmann](#) and [Strauss](#) are artists who explore the edge of reality, fully aware of the fact that what is only virtual today will probably be real tomorrow.

THE SHAPE OF CONSCIOUSNESS

In many ways, it seems as if the purpose of so much of today's media development is not only to converge on and off line, but also to emerge as the content and perhaps even the form of private consciousness. In [Home of the Brain](#), [Fleischmann](#) and [Strauss](#)' first experimentation with fully fledged VR for art, what you see is the externalization of what is normally contained within the mind, namely the ability to move in an imaginary space occupied by thoughts (in this piece, those of [Paul Virilio](#), [Villem Flusser](#), [Joseph Weizenbaum](#) and [Marvin Minsky](#)'s). Imagination, like calculation, is a mental skill. It is one among many that have been subjected to a constant process of externalization, first *on* a screen, all the way from TV to multi-media, now *in* the screen with goggles and CAVEs (Computer-Assisted-Virtual-Environment). As the contents and the processes of our minds are being poured into these technologies, it is a good thing to have artists take the responsibility to explore the consequences. There are at least three stages for a major shift or change of consciousness to go through.

EXTERNALIZATION

The first is externalization. The Greek invented theatre to externalize the psychological effects of the alphabet, thereby showing a model of a private mind and its content, the drama of life lived at the symbolical level. This external model was subsequently internalized in the form of novels. The experience of the spectator in front of drama educated his imagination to take the shape of drama when reading a novel. The best example of this development is Cervantes' Don Quixote whose mind is so completely possessed by the contents of chivalrous mediaeval romances that he fails to recognize the difference between what is real and what is only imagined. This is a perfect example of an *internal* virtuality. But with VR a reverse process of *externalization* is taking place. McLuhan suggested that "After having extended our limbs and our senses in our electronic nervous system, it is but a short step to also export our consciousness" (Understanding Media, 1963). He was thereby predicting virtual reality and Second Life.

One of the major psychological changes attending the virtualization of human experience is the change of direction of our mind's eye from *within* the private mind of the reader to *without* the body of anyone interacting with anything. The virtual in that sense is no different than cinema or television, but it puts an extra demand on the technology that it be "real-time", that is that it respond as quickly to the hand as the mind responds to the thought, with the same level of pertinence. There is an unconscious demand latent in the externalization of our mental skills, that they afford us the same level of freedom of movement that we obtain in the privacy of our own imaginings. The externalization of consciousness requires more rather than less bodily interaction with the contents of imagination now outside the brain. As [Fleischmann](#) and [Strauss](#) vigorously emphasize: "We are turning the theory on its head that man is losing his body to technology. In

our opinion, the interactive media are supporting the multisensory mechanisms of the body and are thus extending man's space for play and action."

This reversing aspect of VR with respect to theatre was also observed in Brenda Laurel's classic analysis of *Computer as Theatre* (1991) and it affects not only the user but also the spectator. About, [Home of the Brain, Fleischmann and Strauss](#) say: *"While the observer is only the onlooker, this "looking" is a kind of movement. It embodies "active observation". From a certain moment when the observer becomes immersed in the action, his "passive onlooking" is replaced by "active observation". The observer discovers the he - and not the artist - is the one creating the situation. When the situation changes and the observer becomes a player, he suddenly begins to identify himself with the situation. Observation becomes more than merely consumption. In this moment consumption ceases. This is all the more true in [interactive scenarios](#) when the [observer participates](#) in the game and can intervene in it. In 1990 we endeavour to construct Alice's Wonderland. With virtual reality goggles and gloves, the body is exposed to new spatial experiences. The body is the interface between the interior and the exterior, between reality and virtual reality.*

The body, indeed, is a reality that Fleischmann and Strauss understand far better than the endless succession of those sour critics who claim that the technology is robbing us of everything from our body to our minds to our very existence. Contrary to most critics and opinion-makers, [Fleischmann](#) and [Strauss](#) believe that the virtual is not here to replace the "real", nor to displace "the body", but to augment both and restore our senses, the first of which is the sense of balance. Referring to [Virtual Balance](#), they explain: *"Like Hermes the celestial messenger, the observer navigates as a "Skywriter" using "virtual balance" and the metamorphosis of digital landscapes. To do this, he uses neither mouse, joystick nor data glove. He simply has to move his body's centre of gravity accordingly to allow him to fly upwards or downwards, to the right or to the left. Unlike a joystick or mouse which reduces man to minimal reflex actions, "Virtual Balance" requires the coordinated use of the entire body and its perception. Neither time optimisation nor disjointed gestures are required, but rather an interplay of the senses."*

MATERIALIZATION

The second stage is materialization. Our thoughts and the shape of the consciousness that shapes them eventually become projected in the concrete reality of physical space. But it takes time. In the old Greco-Roman culture, it took several hundred years before formal architecture, say that of the theatre or the school or the private house, matured into the material reflection of the typical western -alphabetic- mode of consciousness. The same mode and its many forms were gleefully retrieved with print technologies in the Renaissance. The materiality of our sensory lives now requires from digital technology something more concrete than what we can imagine in our minds. It may be that, in order to become really useful, virtuality will need some form of permanence or at least some measure of reliability, as we can see develop in the virtual worlds on line now growing on the Internet. Thus the architecture of the Internet could perhaps be described as a kind of materialization of the digital. We talk about the digital as if it were truly "immaterial". That is about as clever as our common sense pretence that the air is "empty", or that space is "neutral", or the medieval assumption that "nature abhors vacuum". There is little that is not material in digital stuff. It goes through hardware and responds to the laws of physics and it effects matter.

In a physics of its own, in what Fleischmann and Strauss call "mixed reality", the virtual space calls for the reality of time, be it "real-time" or historical, diachronic passage of time. *CyberCity Berlin*, was one of the first moments of contact between the actual and the virtual, along with *T-Vision*, also developed at Art + Com. Probing through the history of a given part of Berlin over the course of its recent but receding tragic history, the installation allows to navigate time as well as space, and virtual as well as photographic visualizations. This is a vertical kind of exploration of time, as going deeper and lower in buildings reveals the underground of their history. Another installation by Fleischmann and Strauss updates some of the oldest techniques of memory and adapts them to the new possibilities afforded by VR and total surround technologies. In particular, *"Murmuring Fields presents a model for an electronic stage. Here Mixed Reality is like a room furnished with data in a multi-storied box for overlapping spaces of polar consistency. The notion of the room stands for physical interaction space. Data-furniture is an embodiment of digital information allocated to a real object. Data-furniture connects the experience of mnemotechnics and cognitive science to the interface"*. This is a subtle replay of the oldest method of mnemotechnics

known to Greek Antiquity, that of the poet Simonides of Ceos (mid 6th century BC) who used the image of theatre as a concrete example of a memory field, actors as thematic categories, and stage furniture imagined within that space as markers for given elements to remember during the delivery of a public discourse.

In more recent work by Fleischmann and Strauss, a renewed emphasis on time presents simultaneity in 3D, that is, both horizontally with events and videos emerging and stretching laterally, and vertically as in *Media Flow* that provides a multi-layered, in-depth approach to real-time. "*Energy Passages is an artistic installation in public space that generates linguistic space of the city in form of a data flow. Hundreds of catchwords taken from current newspaper appear via RSS feeds in a projected „information flow“. They are spoken by artificial computer voices. As soon as passers-by select individual words, thematically related networks of terms start to perform in this flow. Thus text is detached from its linear context and it is staged as a media reading in urban space.* The simultaneous presentation of so many sources reminds me of WB Yeats' poetic theme of "the emotion of multitude". Images such as *Media Flow* or *Energy Passage* are much more powerful to evoke a strong sense of multitude than a photography of a huge crowd. The reason is, of course, that the crowd is all in one place, whereas Media Flow is a crowd of spaces at the same moment in time.

INTERNALIZATION

The third, and perhaps the last stage, is internalization. This one is clearly evident in the silent reading of our novels for which we simply internalize the theatrical stage of what we see in real life. We rebuild in the privacy of our mind the gestures and stories of the characters we read about. The question addressed by Fleischmann and Strauss is what do we interiorize and how do we internalize it from the experience of interactivity? This is a tough one but we see the beginning of an answer in [Liquid Views](#) and [Rigid Waves](#), two interactive pieces which probe the sense of one's selfhood. We have a self that we have inherited from the alphabetic culture. It was severely threatened by TV, but beefed up by the PC. The question is what does that self become in interaction, not with machines alone, but with people via machines? The self in Liquid Views is not threatened by digitization, only reflected by yet another type of lens. In many ways, one could claim that all these powers at the tip of our fingers, in the movement of our hips, actually augment rather than diminish the self.

For example, the fact that whatever is externalized in virtual environments is shareable, gives a new, rather ambiguous status to the self. Two or more people can take part in VR. That makes each one incompletely subjective and incompletely objective. Fleischmann and Strauss might put it another way: "*The user interacts with the virtual scenario, displacing, changing and manipulating it in order to test it for realism. He can also retrieve information from the computer that works invisibly in the background. The objects and activities themselves become the inputs and outputs for this environment. There is no longer a clearly perceivable interface between the user and the system.*" The new problematic of selfhood is not that it is vanishing, but rather it is that it is finally approaching a radically new situation, that of potentially combining with other selves, not in amorous but standard perceptual, cognitive and emotional associations.

Thus, there is no longer a clear distinction between the extensions of the selves thus extended and outered. Another example is when any number of people share a real-time virtual world on-line, such as an alphaworld or Second Life. Each one has a private point-of-view but this POV relates to a single common environment showing up on a screen that is in the same focal position for everybody. Is that a "common mind"? A common imagination? What exactly remains of "my mind" in the moment of attention to that screen? Something like a form or many forms of shared consciousness must be posited at some point in the artistic reflection. It may be that, at some remove, what we call today "extra-sensorial perception" will become common sense.

"We are developing a photographic pattern of thinking"

The internalization stage in Fleischmann and Strauss is realized in their on-line work that begins to give an answer to the question raised above. What is this new interiority made of? Netzspannung is built like a vast mental structure. There, in *Netzspannung* or *Semantic Map*, hypertextuality dominates the cognitive field. The emphasis is on navigation in a complex but very clearly defined and articulated database. Perhaps because the best, if not the only way to present large arrays of data on a screen is by keywords,

addresses to the data, our minds have almost ceased to contain narratives, but are now occupied with addresses. This is the era of the tag, the cloud, the total surround of information and the extension of our cognition in the augmented reality of the Internet.

Thus Fleischmann and Strauss question the spatial constraints of the legacy of the Renaissance as well as the divine right of the self. Both space and self are concurrent and collaborative forms of mental representation, part and parcel of the typically western psycho-sensorial synthesis. The self positions itself by reference to a 3-D reality. However, while conventional perspective and trompe-l'oeil as well as holography today always keep the self away from the spectacle (trompe-l'oeil means to "fool the eye" into believing that it can appreciate the depth of a 2-D representation without the need to touch the painting), VR and all interactivity involve the self, suck it in the spectacle and into action, so to speak. Virtual Reality is an excellent technology to simulate other people's, and even other creatures, mental experiences. Tamas Waliczky, for example, has explored the visual perspective of a four-year old in his unforgettable piece called *The Garden*. Constitutionally, VR must always present the rudiments of a coherent psycho-sensorial synthesis, by which I mean the combination of sensory biases and mental skills typical of one culture or one generation.

In [Fleischmann](#) and [Strauss](#), what we are witnessing is the art of people who have understood that something really serious is happening when our literate consciousness is put outside our minds but with other people's thoughts in it. As they judge: "*The game with reality remains the most important theme when working with virtual sets.*" Like the great novelists of old, they are explorers and builders of consciousness. It is likely that Fleischmann and Strauss have taken us through several stages of psycho-technological transformation and will continue to do so. They are predicting something akin to the full internalization of the digital technologies both within personal psychology and in the immediate environment: *In the future Mixed Reality applications will be integrated in everyday life as touch-less, invisible or ambient immaterial interfaces. Therefore we have an interest to experiment with new technologies from an artistic point of view.*

[Derrick de Kerckhove](#), Former Director of The McLuhan Program in Culture and Technology, University of Toronto,