Wiring the Flesh
- towards the limits and possibilities of the virtual body
By Stahl Stenslie, 1996.

“I, I feel so real”
Moby

At the end of the millennium, the body has turned into a schizoid corpus. It is on the one hand a single, unitary, physical object with a life span of approximately 70 years, and on the other hand it has done the quantum jump into a transcendental, multiple self of mediated realities. The question is no longer what or who I am, but all that I can be.

The body of cyberspace is both an old and a new one. It is old with respect to the fantastical aspects projectable into the qualities of an ideal body - this we know from any kind of fantasy fiction. On the other hand it is radically new through its personification within the consensual reality of interactive, computer constructed environments.

In my work concerning the virtual body I wish to do the “tabula rasa”, i.e., re_define and explore the body within the context of new media. I see the body as including personality as a construction. The body as we have come to know it does not longer exist; new technologies allow us to perceive and experience it in radically new ways.

The body of the future depends more upon context, presentation and abstraction than ever before. The emerging replicant techno_body is continuously resampling itself at hyper speed, disintegrating and recombining itself more according to principles of lust than to principles of necessity. The cyb_erotic is the new libido.

On the one hand I can not avoid being overwhelmed with a certain euphoria thinking of all one could possibly do in the brave, new world of cyberspace. On the other it is not hard to annihilate every optimism if one was to criticize the subject on an empirical basis. Except for text-based Virtual Reality (VR), the field of new media is more built on hype than on experiential realities, but then again, it does bring forth the cerebral pleasures i.e., concepts and ideas we all desire.

The works I describe below try to expand upon the present aesthetical and technical limits of computer-technology by combining “old” elements in new ways. They are neither the ultimate nor the final step, but they are important steps in the process of building the new_body.

WIRED FLESH #1: The cyberSM project

When first presented, the cyberSM project was the only functioning, explicit cybersex system available. It is a real-time, multi-sensory communication system for two participants. The project was a first attempt to solve the problem of how to establish tele-tactile communication. The first link took place in the fall of 1993, inter-connecting participants in Paris and Cologne. To this date, more than 100 participants have been involved in testing the devices.
The goal of cyberSM has been twofold, initially it wanted to expand upon the narrow bandwidth of present communication/VR systems, and secondly it wanted to create a particular kind of experiential environment uncommon to VR. As the title implies, the project was primarily concerned with fetishism and the ambient sensation of pleasure and pain. Its world-design was that of sado_masochism, incorporating elements such as digitized 3D objects of pierced, fetish-decorated bodies and heavy-duty rubber outfits with electrical stimulation ñ amongst others.

**Tele-tactility**

One of the main achievements of the project has resulted in allowing the participants to physically stimulate ñ i.e. touch ñ one another remotely. This was made possible through the use of sensoric suits, weared by the participants. In line with the world-design of cyberSM these suits were constructed using different sorts of material, such as rubber and latex, as well as different kinds of sensoric stimulators/effectors, mounted both inside and outside the outfit. The gear was placed on the erogenous zones of the body, e.g. on the more sensitive parts of the limbs, the breasts, the anal and genitals. The main effector were different kinds of mechanical vibrators, some of which extended themselves from the back, between the legs and up towards the breasts. Other effectors were electrical stimulators and heat pads. The electrical shockers had a max. effect of approx. 600 V, but they could also be lowered to induce a not-quite-so painful stimuli. I have experimented with two kinds of heat inducers; regular heat pads ñ where heat is generated through current ñ and peltier elements. With the latter I managed to develop some interesting tactile sensations by switching between warmth and coldness. However, for all the effectors of the first sensoric-suit system one could say that their effects are more spectacular and intrusive rather than fine and subtle. Anyway, the suits were not designed to convey sweet caressing, but the shock of the otherís corporal presence. The stimuli sufficed to cause sexual sensations ó technically seen even to the point of an orgasm.

Although the suits are eye-catching, their design is the product of pure functionality. Faced with the problem of having to make suits that would fit any body size, I decided to build a flexible, one-size-fits-all, modular system of sensory belts. (This functioned extremely well ñ all until a heavy-weight Russian reporter from Pravda ripped the one control belt.) The main difference in the male and female version of the suit lies in the genital stimuli. Analog to the physical constitution of the sexes, the one effector was made protruding and the other intruding.

**The body bank**

Other than being a play with the sensation of physical tele-presence, the project allowed for the building and exchange of complex, 3-dimensional Virtual Identities (VIDs). Before connecting, the participants have to build their visual ego from a bank of synthetic, 3-dimensional bodies. This body-bank comprises a large selection of upper and lower body-parts, thus allowing the users to build a variety of complex, sexual body constructs. These bodies are all navigable, meaning one can rotate them, zoom in and out, as well as “touching” them with a mouse-click. In general, the bodies of the body bank have been chosen due to their particular looks and histories rather than fashionable concepts of beauty.
Functionality of cyberSM

Having built their virtual personality, the participants can connect and exchange their visual VIDs. From then on the exchanged bodies serve as visual interfaces for the sensoric suits. Your body selection now appears on my screen and when I click on its various touch zones I will release stimuli in your suit. The game of the system is built on finding out what stimuli on the real, remote body is being released by touching what part of the virtual body. Additional to being able to release specific vibrators in the suit of the other, the participants can send whole programs of “touches” or even record touch sequences. cyberSM is a fatal communication system in that the participants no longer have control over what happens to their own bodies after connecting. They have rendered themselves hurtful to the actions of the other.

Virtual Identities of cyberSM

The body bank allows for the creation of a wide variety of virtual appearances, identities and entities. One can for example choose to represent oneself as the opposite gender or in the shape of a transsexual. Altogether the body-bank of the first system made more than 400 body combinations possible.

These body constructs did influence the communication process in significant ways. Similarly to their relation to real bodies the participants usually felt attraction, indifference or distaste towards the individual body combinations. Exactly how people reacted is ņ as always ņ a matter of taste and preference.

Your virtual representation turns communication not only into a play with words and visuals, but also into a play with identity, corporeality and sexuality.

Another interesting aspect observed in the process of tele-tactile communication is the intimate, yet anonymous relation between the participants. I am hot-wired to your body, we’re plugged together in short circuit, but there is no obligations for anything else than the immediate attachment. The connection is very much process-oriented; real looks and identities become trivial facts. Each participant is granted a certain freedom under the mask of chosen representation. As someone has remarked, there is no duty to eat breakfast together the next morning ņ for better for worse... One must be careful not to compare cyberSM, or any other of the tele-tactile communication systems, to the joy of good old copulation. It is not a matter of having dead sex with Elvis, but expanding upon present possibilities of perception/sensation.

The Liquid Body

“Will it ever be the same again?”
(song heard on the radio)

In cyberspace we are confronted with differently structured environments that challenge both our cognition and perception as we know it from the “real” world.
Since the advent of the Internet, the old modernist kind of perception of the self as a unitary, unique, static and singular embodiment is now yielding to a model of our being as a multiple personality. The emerging, digital body—"the icon for our personality"—of cyberspace has strong liquid aspects. The "I" is becoming a relational entity. For what is the I anyway? Except an infinite number of social relations and mental connections?

Particularly interesting to me, is how these virtual bodies influence our behavior. What do I do, how do I act, and I in what kind of body? How does my virtual body influence my perception? And, how is my behavior related to my virtual representation?

Most people operate with (at least) two personalities in their daily life; one being the public (Dr. Jekyll) and the other being the private (Mr. Hyde). This corresponds to the number of places one usually frequents, which for most of us means home and work. One of the observances that one immediately makes out on the Net is the extensive use of handles, i.e. nicknames for our virtual representations/persona. There is a noticeable tendency to create a different handle/virtual body for each Use/Newsgroup or MUD (virtual community) one is a member of. This results in the development of multiple personalities, each one adapted to specific uses/purposes. A common swap of the virtual body is the change of gender. Out on the Net there is a significantly higher percentage of female personalities operating than physical (real) women logged on. This gender transition is quite attractive to many men since women get more attention on the Net—a situation caused by the overall lack of female representation. Cyberspace offers a lot more hideouts and communication spaces than real life, each allowing for and attracting other parts of the personality.

As a result of the on-line, real time living in virtual realities we are now experiencing a shift away from the previous static models of the self. We are moving away from the physical addressing of the physical person and the personality to a multi-layered, flexible, non-consistent model of the (virtual) body as a carrier of identity and individuality. The body of the digital age already has great resemblance to quantum theorems, but it won't end with that. The body of the future is the schizoid body. It is the moody, liquid expression of multiple ME's. When slipping into the electronic body of cyberspace, one is dressing in the cloth of possibilities, mutating into alternate personalities.

When we play with our virtual bodies, we are playing with the multiple personality disorder. But, don't worry, in cyberspace we are all patients and doctors at the same time. Therapy never ends.

No need for consistency? The separation between the physical corpus and the psychologically constituted personality is confirmed in cyberspace. I don't pledge for the wired couch potato, the square-eyed, VR consuming zombie, I just wanna be my own creator... The dichotomy of cyberspace is that I cannot change my own withborn, physical body as radically as its matrix of personalities. This possible cause-for-frustration is easier to do away with than one thinks. Adjusting to the post-human notion of "what I am is what I make myself into", the perception of one's physical body changes homogeneous to one's mutating personality. I have got only one real body, but disparate ways of perceiving it.

The issue of the singular body touches the existential problem of death and decay, an
inescapable issue in spite of the shiny, perpetual glory of the byte.

The body of the future, I think, will adopt to the strong schizophrenic-like fabric of cyber-space, and to an understanding of the “I” as a multiple self with multiple perceptive bodies.

**WIRED FLESH #2: The Inter_Skin project**

Re_thinking tele-communication

Whereas the first cyberSM project used a visual interface to influence and control the remote environment, the functionality of the third generation suits shifts the emphasis away from the computer screen as mediator between the participants to the body itself. In the Inter_Skin project, the body becomes the interface for communication between the participants through the use of “intelligent” touch suits. These suits become an “interskin” to convey, exchange and receive information. They represent a way of re_thinking communication and interface technology, channeling the concentration away from the object-oriented (the screen) towards the subject-oriented (the body).

System design

In the Inter_Skin project both participants wear a sensoric outfit that is capable of both transmitting and receiving different multi-sensoric stimuli. The communication system concentrates on the transmission and receiving of sensual contact. By touching my own body I simultaneously forward a touch to my recipient. The strength of the transmitted stimuli depends on the duration of the self-touch. The longer I impress myself, the stronger stimuli you will feel. The effectors of the suits were custom-made micro-vibrators, placed on various acupunctural zones.

Additional to the tactile aspects, I communicate with my accomplice through voice and a videophone. It is the combination of the three stimuli that makes up the Inter_Skin system, but it is the touch that literally brings sense into the communication play. However, receiving and sending corporal stimuli alone very soon becomes mechanical and estranging. Voice and video contact are therefore used as means to a) interpret the touch and b) provide feedback to the actions taken.

The suits are attached to Macintosh computers and can run over any kind of computer network.

**Aspects of Inter_Skin**

Some of the interesting aspects of the Inter_Skin project are a) the auto-erotic stimulation necessary to communicate, and b) the feeling of a third, shared virtual body.

a) The auto-erotic stimulation.

The fact that I must touch my own body in order to send (tactile) information implies several significant factors for the communication. First of all I must do to myself what I want my
accomplice to feel. This makes my own body to a self referential object for the communication. There is no way to forget myself or to conceal the actions I take. If I touch my genitals, you will feel that I touch them. In such a one-to-one channeling of the stimuli a direct, instantaneous, almost intimidating form of communication arises.

It is also possible to redirect the impulses recorded by the suits, e.g. in such a way that a touch of the arm becomes a touch of the genitals. In the first connection, however, the sensoric wear was wired "one-to-one", without redirection of the stimuli. The auto-erotic, self-stimulating aspects of such a tactile system re-routs communication to take place not only between two (or more) participants, but also between me and my own body. My sensuous experience with my own skin becomes concurrently an interface for the communication both to you as well as to me. This is also a more feminine approach to the process of communication; proximity rather than mechanical actions.

b) The shared, virtual corpus

There is a third body emerging in the communication process of the Inter_Skin project; the shared, virtual corpus.

Sharing sensations communicated through auto-erotic touch creates a third abstract, virtual body hovering in a virtual space, its existence constituted through the sensuous dialogue of the participants. Through the participants exchange of tactile experience it is as if “I” am to experience “your” body and vice versa, the sum of which can be interpreted as being a shared body of communicated sensations.

In an extreme case, with a more developed and intrusive system, this allows for a transmutation of the receiving accomplice into the body of the sending accomplice, i.e., I sense through and with your body. It is also possible to record the sensations of a person and replay them at a later time. Relative to the visions of William Gibson, the Inter_Skin system much resembles an early version of the SIM-STIMs (simulated stimulation) of his novel Neuromancer.

Inter_Skin is a sensual communication link, challenging the concepts of eroticism, adding a missing sense to electronic communication.

**Wired Flesh #3: The senso_couch**

[photograph only]

**Wired Flesh #4: The bio_machine**

The bio_machine is a techno_organic interface wiring the user to the machine, creating a cyborg unit, self-sufficient in its sensory loop.

In the bio_machine project, the participant communicates with a software-based virtual personality, interacting with it at points-of-decisions, enabling an unlimited number of possible tactile, auditive and visual output combinations.
Synthetic flesh

The sensory equipment built into the bio_machine is a modified version of the Inter_Skin suits. It wires the body directly to the computer, re-skinning it with synthetic flesh. The system creates a closed loop between man and machine; the sensoric suit carried by the participant transmits heat and pressure data to the machine which, in return, analyses the data and outputs auditive, visual and sensation-stimuli to the human. The stimulation of the human and body-controlled computer reciprocally controls the course of events. The human is paired with the machine, much unlike the other projects where the computer is only a conveyor of information.

The bio_machine environment

The environment of the bio_machine is a relational data bank of sounds, visual and control data. These data are sampled depending on the course of navigation through it.

[CAPTIONS]

This reflective, non-intrusive prototype was presented in the “Du + You” exhibition, curated by Carsten Höller at Gallery Schipper & Krome, 1994.

The prototype bio_machine system was presented at Gallery Schipper & Krome during Art Cologne 94.