

"... The greater part of the net is capitalism as usual. It is a site for repressive order, for the financial business of capital, and for excessive consumption. While a small part of the net may be used for humanistic purposes and to resist authoritarian structure, its overall function is anything but humanistic. In the same way that we would not consider an unregulated bohemian neighbourhood to be representative of a city, we must also not assume that our own small free zone domains are representative of the digital empire. Nor can we trust our futures to the empty promises of a seducer that has no love in its heart."

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Wetware: Bodies in the Digital Domain



Touch: Wetware, UbiCom and Nanotech

JULIANNE PIERCE

"The boundaries between the subject, if not the body, and the 'rest of the world' are undergoing a radical reconfiguration, brought about in part through the mediation of technology".

Allucquere Rosanne Stone

from Will the Real Body Please Stand Up? Boundary Stories about Virtual Cultures

The subjects of this paper are most probably users of the Internet or readers of *Wired* and *GeekGirl* - who are already engaging in the formation of cyber subjectivity. As a computer user I am interested in the relationship between the user and the computer, and especially what sort of subjectivities are being acquired or learned by the computer itself. I am interested in the relationship between the wetware and the hardware, and what will happen to computers as they get smaller and smarter - when we will no longer touch computers, but they will touch us - from the inside.

To think of technology and, in particular, computation, is to think of hard tactile surfaces. It is to think of a tangible, object-based relationship between the subject and her machine. She (the 'user') sits in front of a sedentary object (the 'computer') and interacts with it using a keyboard and mouse. She touches the inside of the computer through the tips of her fingers and sees the results through her eyes. The computer becomes her agency of subjectivity as she translates ideas and thoughts through a processing unit embedded within the concealed interior of the machine.

Programmers and computer artists have in common a desire to go inside the machine. Programmers understand the machine as ones and zeroes, strings of code which output as graphic and textual material. These ones and zeroes are the organs of the computer, the circulatory system which pumps information through the networks of wires and command processors. The artist manipulates these tiny digits and creates a reflection of her own subjectivity. The computer as agency is seductive and powerful, as the ones and zeroes transform and manipulate subjectivity outputting as an altered state. In the techno-imagination of the late twentieth century, there is a desire to go beyond that surface - to imagine the computer as a soft permeable membrane which the user can merge with and pass through. The desire to merge with the machine is in fact a contemporary pre-occupation. In this fantasy the computer becomes liquid and translucent, the user moves beyond the interlace and enters the machine. The computer is a body. It is (well almost) a lover. The obsession with virtual worlds and the proliferation of text-based on-line meeting spaces is an extension (or part of) wishing to enter the computer. The fantasy of touch becomes much more powerful when the user visualises entering the computer and feels it from the inside. Like a lover, the computer becomes an object of lust - hard and dry on the outside, wet and warm on the

inside. The computer is about to enter us and return our touch.

As Allucquere Rosanne Stone suggests, "The boundaries between the subject, if not the body, and the 'rest of the world' are undergoing a radical reconfiguration". In light of this, it is interesting to explore how subjectivity may be shifting due to the impacts of technology, and how existing boundaries between the subject and the body are undergoing a change. Contemporary critical theory has dealt extensively with the idea of subject, destabilising humanist notions of the 'individual' self, to see subjectivity as determined through language and cultural discourses. As with all historical shifts in culture, new subjectivities have emerged, informed by the various cultural influences pertaining to that time. With the current emergence of the technological society, there seems to be an obsession with what sort of subjectivity will emerge in tandem with developments and ideologies of the time.

A certain subjectivity seems mapped out for us already. The influence of Gibson's *Neuromancer* has been phenomenal in informing a certain cyber subjectivity - whether in the future we will be net cowboys jacking into virtual worlds and speaking a bastardised cyber language is pure speculation - but the impact of the literary imagination in informing subjectivity is relevant to this discussion. Perhaps one cannot be too cynical about the impact of cyber-fiction, as literary works throughout our history have either chronicled or impacted on the emerging subjectivity of the time. Gibson and other writers such as Neal Stephenson in *Snow Crash* adopt the rhetoric of the time and expand it into a futuristic landscape. These writers explore the subject of cyberculture from both an ironical and playful position. Ironical because it is fiction which extends and imagines what the future could be like based on contemporary projections of that future. Playful because language and narrative is manipulated into a hyperstate informed by the current explosion of cyberspeak. Both of these writers imagine what cyberspace may be like in the next century, built upon the foundations which are fuelling the imagination of Generation X. The following is a quote from *Snow Crash*:

"As Hiro approaches the Street, he sees two young couples ... He is not seeing real people, of course... The people are pieces of software called avatars... The couples coming off the monorail can't afford to have custom avatars made and don't know how to write their own. They have to buy off-the-shelf avatars... One of the girls has a pretty nice one... The girl is a Brandy. Her date is a Clint... When white-trash high school girls are going on a date in the Metaverse, they invariably run down to the computer-games section of the local Wal-Mart and buy a copy of Brandy. The user can select three breast sizes: improbable, impossible, and ludicrous. Brandy has a limited repertoire of facial expressions: cute and pouty; cute and sultry; perky and interested; smiling and receptive; cute and spacy. Her eyelashes are half an inch long... When a Brandy flutters her eyelashes, you can almost feel the breeze".

In the world of *Snow Crash* and in Stephenson's parody of cyberspace - 'the Metaverse' - a hierarchy of subjectivity exists. At the top of this hierarchy are the programmers who are able to build and manipulate their own characters. And down at the bottom are everyday computer users who, when they jack into 'the Metaverse', must use custom made avatars. Those that do not have sophisticated programming skills are relegated to purchasing their online subjectivities from the shop-shelf. The myth that online personas transcend class, race and gender in cyberspace is just that a myth - for the social and cultural hierarchy replicates, if not enhances social reality.

At the same time however, programmer or not, 'the Metaverse' is a fantastical and seductive fictional world. It is like magic, the ultimate fulfilment of the desire to escape the body and recreate yourself in any form or shape you desire. But of course the body does not go away - this lump of flesh remains, ready to be moulded into identities informed by online cyber activity. Already this merging has begun, as net junkies take on their online personalities in real life. They are feeding themselves into the computer, churning their identity around and reassembling it as it comes back at them from the terminal. The body in a way becomes a repository for downloading digital information and what happens to you online can affect your real life persona.

Interaction is the physical concretisation of a desire to escape the flatness and merge into the created system. It is the sense in which the 'spectator' is more than a participant, but becomes both participant in and creator of the simulation. In brief, it is the sense of unlimited power which the disembodied simulation produces, and the different ways in which socialization has led those always-embodied participants confronted with the sign of unlimited power to respond.

As a regular MOO (Multi-user object oriented domain) user, I find that what happens to me online does impact on my everyday life. At times it is great fun but at times the hierarchy, which exists in virtual communities, can be quite intimidating. In the virtual community of LambdaMoo - probably the most well known and highly visited MOO - a very definite hierarchy exists with programmers at the top and 'newbies' at the bottom. The advance programmers take great delight in manipulating and 'spoofing' new players it is almost like an initiation into a secret club - where if you pass the first test you are admitted. One of my nastiest experiences was to be shot by another character and then teleported out. I was in a room with several other people having a discussion and another player didn't like what I was saying - he warned me that he would do something to me but before I could respond he had pulled out a gun, shot me, spilt my blood all over the floor and then removed me to another room. If it that stage I had better programming skills I could've retaliated and done something just as evil to him.

The interesting thing for me though was how it made me feel in real life. Even though it was my virtual persona that had been shot, I felt angry and hurt at this violation of my space and character. It felt like a violent and antisocial act, where a character wielded power over me by the use of his superior computer knowledge. It was in LambdaMoo that the infamous 'rape in cyberspace' occurred, and I can understand now how this could've happened. By a character exerting complicated programming skills, another character can be manipulated and 'attacked' through the words and actions of another player.

My experiences on the Net have not made me nervous of 'surfing the net'. Rather I have attempted to become a part of this floating world and now have my own programming bit on LambdaMoo. I believe that is important to embrace new technologies, learn how to use them, and then manipulate them for our own use. The rhetoric of the information age is both technophobic and technomaniac - and they operate together. As we strive to embrace the rhetoric of the future, there is also fear at how this future will affect our lives. This rhetoric is surely touching many people, creating a certain desire and expectation, and at the same time a great degree of uncertainty. An inherent element of technophobia is the loss

of identity - that technology will somehow disempower the individual.

In an ironical note however, the technological age hammers the last nails in the coffin of modernism and propels us towards a post-human future. In this chaotic and crazy late-twentieth century world, we can no longer talk of the unified self, and must, I believe, muck up, play around and hack any notion of a monolithic coherent identity. So, as the human becomes post, computers become smart. Artificial Intelligence (AI) is programmed and the computer begins to learn. But how smart will they get and how fast? There's probably no point in asking: they will get very smart and very soon. Smart computers and artificial intelligence will eventually be all around us - in our homes, in the streets, and inside of us. Tiny little micro-sized nano-robots will live (like miniature Terminators) in our bodies, cruising for viruses and disease. My research unfortunately hasn't extended so far as to know what they actually do when they track down the offending organisms - whether they are able to kill them or if they just go to your brain and tell you to go the doctor - or perhaps they are connected to the agent in your telephone and can instruct your phone's agent to ring your doctor's agent to make an appointment. (Agents are artificial intelligences which never sleep - they live in computers foraging out information and act on behalf of the computer user). Another form of AI which will most probably permeate our daily existence is ubiquitous computing. Rich Gold, a researcher at Parc Xerox in Silicon Valley says of ubiquitous computing, "In the ubiquitous computing world the computation becomes embedded, gets forced into the surface of the phenomenal space, becomes tacit, where you act upon it and work with it without thinking about it as computation - there's lots of it and embedded in our daily social life, so that you do not have turn away from your life when you begin to use computation...Ubiquitous computing objects and environments are sensuous, they feel the world, they're reactive, they talk to you, they're communicative, they're tacit and they're colonising".

In this scenario, the computer is no longer an isolated object, but is a part of things - or rather becomes things. A fridge will be a computer and a computer will be a fridge. The nature of interactivity as we know it now is obsolete - we no longer interact with computers, - they interact with us. They monitor us, feed us, know what we like and when we want it, know what we watch on television, set the VCR to tape our favourite programs and undoubtedly a whole lot of other things. The computer user will have no power over the computer, will no longer touch the computer to command it - it will react to us through much less tactile means - it will respond to our voices and our pheromones. It will sense our moods and probably talk to us.

So in this ubiquitous computing world, the computer is no longer a passive receptor, its agency is transforming and shifting as the machine takes on identity - but what will this identity be? When the computer begins to make decisions, will it formulate it's own identity -will it create it's own subjectivity? Will it be like that ubiquitous all-seeing computer HAL, moody and jealous, silent and brooding? Or will the ubicom's personality be programmable to suit the mood of its human mistress. In Rich Gold's vision, the computer becomes an active part of our everyday lives. Human subjectivity will be informed by our relationship to our computers, and in turn the identity of the computer will take on characteristics of its co-habitator and undoubtedly modify them.