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21A.850J / STS.484J The Anthropology of Cybercultures  
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## Student A

I'm digesting (ha! what a living-body metaphor) Vivian Sobchack's vivid paper... hope to write more in the morning - it was definitely interesting and engaging.

But till I do, I wanted to share a couple of video-art works - both of which I have been thinking for several weeks now as very much related to our material, and after reading "Beating the Meat" it seems like this is probably the right moment.

These works are by a friend, Nira Pereg, and were presented in several places in Europe and Israel -

1. [Digiwounds](#) - a loose simulation of self inflicted digital amputations. The work strongly echoes the esthetics of popular computer games and is supposed to function as digital (blood) fountain.
2. [G-Spotting](#) - While using the urban landscape as a chart of the female body, the work touches on the themes of surveillance, modern weaponry and pornography

Tech note: unfortunately, it may not work well with Firefox. The bloatware known as QuickTime (or at least a quicktime plugin) is required.

## Student B

**Wiener, N. (1966) God and Golem Inc. Cambridge, MA: MIT Press, pp. 71-95.**

I read two essays or chapters in Norbert Wiener's /God and Golem Inc./. Not having read much work on cybernetics and by Wiener I was curious to see what would await me. And I wasn't disappointed because the chapters are riddled with grand generalizations and sweeping statements about society, people, bodies, and machines. I really enjoyed some pencil markings made by previous shocked readers.

In essay VI, Wiener starts by asking the question how we can assign tasks to humans and machines to match their abilities respectively ("Render unto man the things which are man's and unto the computer the things which are the computer's." p.73). Machines (he only uses the term machines and not computers) are good at automatization while humans are good at operations to use his terms. He marvels at the small size of the human brain—compared to the “skyscraper”-sized set of transistor circuits needed to emulate it—which can “handle vague ideas, as yet imperfectly defined” (p.73). Machines cannot “be programmed” using poems, novels or paintings. This notion of programming recurs throughout (and was of particular interest to a previous reader as the photos show) as the primary requirement for any system whether human or machine or hybrid.

In his attempt to describe joint human-machine systems, he turns to prostheses on the premise that both machines and bodies generate “nervous signals” and can thus be patched together much like Sobchack ironically describes it in the beginning of her essay. In Wiener's words:

*“This result (in reference to a hand-prosthesis designed in Russia) is facilitated by the circumstance that the same nervous signal which was effective in producing a muscular contraction before the amputation will still be effective in controlling the motor moving the artificial hand.” (p.75)*

Together, the artificial limb and the human are “a system of mixed nature, involving both human and mechanical parts” (p.76). In this context, I will recount a recent conversation with a friend who recounted a lecture in [Hugh Herr’s lab](#) which builds prosthetic limbs. The lecturer described how limbs are connected to nerves in order to control the prosthetic. In the early days when Wiener was writing, actual wires were routed under the skin from specific muscles groups to other parts of the body. An electrical signal powered by an additional battery would then send a signal to the muscle which would trigger. This procedure was very invasive, required lots of surgery and the wires would corrode and break over time. Not the seamless electrical plug-and-play connection Wiener implies. Today, there are roughly three groups of techniques that are used to either sense the nerves or muscles fibers around the nerves. (Apparently muscles generate electrical charges on the order of micro Volts while the rest of our tissues produces charges on the order of milli Volts. As a result, sensing technologies often receive confounding signals because of all the noise caused by the surrounding tissue.) First, there are cuffs that can be placed around a nerve ending, but these are subject to lots of noise as described in parentheses. Second, doctors can cut the nerve, insert a sensing mesh, and allow the nerve to regrow through the mesh. This technique has been successful in cats, but not in humans because the nerves don’t tend to regrow as well. Stem cell research of course promises to assist with nerve growth. Third, nerve-endings can be redirected or inserted into no longer needed muscle tissues to amplify their signals. For example, a patient lost his arm and no longer needed his pec muscles. The doctors subdivided the pec muscle into four parts, inserted nerve endings into the muscle tissue and then injected small sensors that transmit wirelessly to the prosthetic limb into the muscle tissue. The patient controls his modified pec muscle to control four degrees of freedom in the artificial limb. In light of Sobchack’s article, I was fascinated by the complexity and invasiveness of all these procedures that really do not augment, but simply try to restore functionality. Many amputee patients do not want to benefit from this research because they are already traumatized and the last thing they want is to return to the hospital.

In the hybridization of human and machine, Wiener does not address any of the complexities implied by physically linking humans and machines. It’s merely an exchange of electrical signals. And therefore, he easily jumps to learning systems and how human-machine interchanges can be established there. His domain examples are translation, medical diagnoses, invention, and military devices because they require some automatization and some operational judgment calls. Over time, machines would learn by interaction with human “critics” and thus the human’s role would shift over the course of several iterative cycles.

In essay VII, Wiener addresses the social sciences. In particular, he is interested in showing that the social sciences are far less predictable and contained to provide good

ecosystems for exploring the potential of cybernetic ideas. Therefore, engineering and biology are much better suited for testing his ideas about predictability and so on. He explains this fact in particular by using the body whose “physiological structures, unlike society as a whole, have changed very little since the Stone Age,…” (p.92). Still, he argues that his cybernetic theories related to a single body will eventually extend to the body politic as a whole.

Here again he does not address how communication travels from one body to another. For Wiener, there is no need to explain the differences of transmitting from mind to mind vs. within one mind. And in any case, all exchanges can be described as transmissions that elicit some form of routine or program. One of Sobchack’s points is very well taken then when she writes that the body is a “material subject that experiences its own objectivity, that has the capacity to bleed and suffer and hurt for others because it can sense its own possibilities for suffering and pain” (p.213).

## **Student C**

I agree that pain is a great disillusioning force, more so than I normally would, because I have been sick for the last couple weeks. Even with a relatively trivial condition like a cold, it definitely incapacitated me in multiple ways, and I am still not feeling myself.

After 3 days in bed, I couldn't stand being stuck in the same spot any more and needed a change of scene badly. I had a strong and vivid urge to move myself from the bed to the couch. It was revealing to see how such seemingly small problem completely took over my mind for those 24 hours. I can't imagine what it'd be like to be hospitalized for months or years, that would definitely change the perception on my self, my abilities and what matters to me. When it comes to permanent changes to my body such as amputation or prosthesis, I definitely have no clue what that would do to me. I admit all of this more humbly because I am still sick and that makes me more receptive to the idea of forced change in self image and perception due to physical condition of my body.

I find it striking that the author needed to bring the "meat" or "wetware" to the durability and strength level of the prosthetics... I am also shocked that the author feels more attractive with the prosthetics from the consequent weight loss... and that rather than accepting herself as is, she feels that she should make herself over. I had never thought of either of these consequences, but it all sounds plausible.

So I agree on the statement that abstracting and de-personalizing statement like "on the body" may be dangerous, and that "if we were to survive the next century, we must counter the discourses that decontextualize our body." But I also think such judgment should be made rather on a case-by-case basis with more granularity, consideration and rigor, so that we don't dismiss all ideas that relate to our body space.

I just presented a paper at the CHI conference this Monday regarding wearable modules through which you receive massages from strangers over the web, which some audience members deemed "creepy" and a violation of their personal body space, while many other

members of the audience were excited about the possibility of massively networked haptic devices.

Although my modules are attached to the inside of your clothing rather than being directly attached to your skin and therefore are as temporary as wearing a bluetooth headset rather than getting a tattoo or implant, the idea of having something moving on your body, or a device controlled by other people near your skin, immediately scared some people. With more time perhaps, I could have emphasized and clarified how my modules are not meant to be as invasive as some audience members might have imagined. But I still suspect that the concept might have been misunderstood or miscategorized by some of the people in the audience.

I was never turned on by the movie *Crash*, and I agree that technologists can be irresponsible when it comes to understanding the impact of modification onto our bodies. But I also think the logic shouldn't be used to dismiss other interesting and sound ideas that are merely related to our body space.

## **Student D**

That Sobchack, herself a techno-body because of cancer, refuses to become the disembodied form that Baudrillard celebrates (objectifies) but “never lived as a subject,” and instead argues that it is a false consciousness is a compelling argument. I tend to agree with her that a “fetishized fascination” with seemingly limitless technologies and the invulnerable and immortal body (transhumanism?). For Sobchack, being present in a “body that experiences its own objectivity” generates something she calls moral stance. Beyond the clear power dynamics embedded in her analysis, I am curious about her reliance on a body with the “capacity to bleed and suffer and hurt for others because it can sense its own possibilities for suffering and pain.” I find it tempting to assume that such a mutual vulnerability (what might be considered ‘openness’ in a computing system?) might ensure a moral stance but in fact perhaps Sobchack’s critique suffers from a reliance on a perceived universal morality. Perhaps Sobchack’s work suffers from a necessary lack of detail that would sufficiently capture the nuance of the techno-body. For example, if we consider the rise of the medicalized body – the body protestors on hunger strikes who bring doctors to monitor their condition suggest a different techno-body than that of the torture victims who, according to recent reports, were closely monitored by doctors through their ordeals at the hands of their interrogators. Though neither suggests an immortal body, each suggests a different construction of the body in relation to technology and the machine. In particular, the protester’s body suggests that Sobchack’s simplistic characterization that technologies of communication and perception “objectifies our thoughts and desires” and diminishes our subjective awareness but might in fact function to heighten (a certain type of) awareness of ourselves.

Moreover, Downey, Dumit and Williams’ attempts to situate a cyborg anthropology that focuses the boundary between machine and body by suggesting a decentering of the body in favor of an “argument that human subjects and subjectivity are crucially as much a

function of machines, machine relations, and information transfers as they are machine producers and operators.” In this light, to consider the body of the protestor we must consider the doctor (and associated medical knowledge) and the medical technologies themselves, and explicitly considers the agency we must attribute to the technologies themselves and the ways in which “machines come to adjudicate boundaries on realms of knowledge and competence, insanities, pathologies, and normalcies.”

Sobchack does a good job of updating the ways in which Haraway’s earlier euphoria toward technology was tempered over time – how has cyborg anthropology deepened and changed since 1995?

## Student E

While Latour’s critique of post-modernism was addressed mainly at its lack of concern with “nature” and “the social” (Latour, 1993), Sobchack’s is addressed at its lack of concern with the body. Baudrillard’s reading of Ballard’s, “Crash”, Sobchack argues, deprives it from its fundamentally moral intentionality and –willfully, she accuses- puts it to the service of the disembodiment postmodernism purports via technophilic rhetoric. For Baudrillard the erotic is confined to “sensual thought” and “psychic experience”, in a parable of what would be post-modern obsession with discourse. In *Beating the Meat / Surviving the Text* Sobchack aims at drawing a critique of postmodernism’s obsession with discourse (Sobchack, 1995). For Latour, in the post-modern stance “nothing has value; everything is a reflection, a simulacrum, a floating sign; and that very weakness, they say, may save us from the invasion of technologies, sciences, reasons.” (Latour, 1993, p. 131) In Latour’s proposition of post-modernism discourse is the only subject, and technology is implicitly defined as “extra-human”. While Latour doesn’t use the word body (much less Sobchack’s construction “lived-body”), its significant absence is implied. For Sobchack

*“(…) One of the consequences of our high-tech millenarianism is that the moral material and significance of the lived body is elided or disavowed, not only by the delusional liberatory rhetoric of technophiles who long to become either ‘pure’ electronic information or self-repairing cyborgs like Schwarzenegger’s Terminator, but also through the liberatory poetry of cultural formalists like Baudrillard who long to escape the loved-body and its limitations and write it off (quite literally) as just another sign of its times.” (p.210)*

That’s the diagnosis. Pain as a means to re-connect with the body is Sobchack’s prescription for Baudrillard. However cruel, the idea of pain as a revelatory reconciliation with the body, exemplified in Sobchack’s account of her prosthesis, reminded me of Aldo Rossi’s [“Cimitero di Modena”](#). Rossi is a famous post-modern architectural “hero”, famous both for his built work and for having formulated theories that reinstated the historical and cultural dimensions of the city in urban and architectural studies. The “Cimitero di Modena” (Modena’s Cemetery), one of his most celebrated works, was conceived while the architect recovered from a –very painful- car accident. The plan, (he explains in his “Scientific Autobiography) is reminiscent of a bone-structure (Rossi,

1984). The anecdote proves that “post-modern men” can feel the body too.

Latour, B. (1993). *We have never been modern*. Cambridge: Harvard University Press.

Rossi, A. (1984). *Scientific Autobiography*. Cambridge: MIT Press.

Sobchack, V. (1995). *Beating the Meat / Surviving the Text*. *Body and Society* , 205-214.

### **Student A – Yiftach Nagar**

Every time I tell my wife that we should seriously worry about space colonization, to ensure the survival of humans (whatever THAT means), she says we should worry about the hungry and poor in Africa and India first. To which I always answer that, yes, of course we should do that, but we shouldn't neglect human-race long time survival and focus just on the short term. When the sun goes out, we better be ready, or else, all of us, rich and poor alike, are going to oblivion. For me, the idea of my own demise (I know I've written this already, not sure if that was here or elsewhere), while not entirely denied, is still something that I try to suppress as I find it impossible to deal with. So other than taking some technical steps such as having a life insurance (another step aimed at the fickle idea of having control of the future survival of – if not my flesh, then at least some part of my existence), I really try not to think of it too much.

Cyborgism is another way of trying to deal with our frailness and our mortality. If I read her correctly, Sobchack, relying on Haraway, calls us to abandon delusions of denying our mortality by going the cyborg way, and, further, I think she draws meaning for life by defining life through death. She seems to me to actually draw some (sadistic?) joy of poking Haraway's quote to our face: “we really \*do\* die... the earth really \*is\* finite...”. Well, yes. We really do die. In masses, every day. And the earth really is finite for all that we know. But I can't find a reason to celebrate it. She writes: “I have not forgotten the limitations and finitude and naked capacities of my flesh, nor, more importantly do I desire to escape them. They are, after all, what ground the concrete gravity and value of my life”. To me, the limitations and finitude and naked capacities of my flesh are definitely not the defining features of my living. I do not draw my *jouissance*, as Sobchack suggests of Baudrillard, merely from semiotic and textual play. But I think that by focusing on the numbness of her still prosthesis, Sobchack has some logical flaw. What if her prosthesis was equipped with nerves which would be connected to her brain? She could then feel the touch of silk of her sexy lingerie, or the hands or tongue that touches it and draw her pleasure.

She talks about bringing Baudrillard to his senses (I liked the pun) and says that pain would remind him that “he doesn't just \*have\* a body, but that he \*is\* his body”. Is he indeed?

Was it Baudrillard's body that provoked her so much as to sit her flesh and devote hours, maybe days, to write her paper? Or was it just ideas that were conceived in his (wet, I agree) brain, then textualized, then broadcast into noosphere?

### **Student F – Nadya Peek**

First I wanted to share one of my favourite little mockumentaries on what happens when you end up with too many screws, plates and wire in your body:

cameowood. "Metalosis Maligna - An Extraordinary Disease." November 7, 2006. YouTube. Accessed November 30, 2009. <http://www.youtube.com/watch?v=TtXMyAOop3s>

The movie is the graduation project of Floris Kaayk from the Academie St. Joost in Breda, the Netherlands.

Earlier last month I actually went to the talk by Manfred Clynes at Harvard. The talk was advertised as "come see the man who has fanmail from Albert Einstein!". In his short paper with Kline, he coins the term cyborg by suggesting the different ways it would be more efficient to deal with the body in a space ship. This includes some extent of suspended animation, tubes for food/waste, and a full other array of creepy stuff. He does not in any way go into how that would at all affect the user emotionally, but under the heading "Psycho-Physiological Problems" writes about how to keep the astronaut awake, alert, its muscles exercised and the body protected from (electromagnetic) radiation. This (very old) paper was in strong contrast with the talk he gave, which was about how to interpret the having of different emotions. In particular Clynes stressed how it was important that 'children of today' must learn to distinguish between sex and love and anger and hate. He told some pretty amusing anecdotes about how his contemporaries in neurology and computer science thought he was going batty for researching emotion, except for Marvin Minsky.

However, the research he was doing with emotion has nothing to do with the emotional well being of a cyborg, but with the universal emotional interpretation of various famous composers. In Sobchack's paper, it becomes clear that becoming comfortable with a hard and soft body is no obvious process. I can imagine also, that for those people who have material prostheses, not the metaphorical prostheses which are often written about, the literature can be very insulting. Right now it is still not that case that when you receive a prosthesis from your health insurance, that that prosthesis becomes yours. Your arm remains property of your healthcare provider, and must be returned upon death. Opening or otherwise tinkering with it would result in void of warranty and breaching of contract. That is such a foreign concept to me, as not to have full power to control your own arm! There are some projects like the Open Prosthesis Project which aim to make open source prosthesis so that people can make and do whatever they like with their own limbs.

Last week I went to a grad arts forum on the topic of Appendage. There the discussion was often on body augmentation and the difference between performative extensions and functional extensions. But the extensions considered were not limited to hairstyle or fingernail colour, but included things such as your driveway, your mailbox and the trees in your garden as body extensions. I would sometimes like to argue that these things are not just extensions, but core to the body. With a topic like appendage, it seems logical that you are appending to a core. However, what then can we consider the body's core, and how do we consider the core differently from the extensions? Sherry Turkle writes about tethering, and creating connections between bodies by means of devices like phones. I mostly think of my laptop and my phone as part of my body, because without them I feel amputated. Since they are part of me, I believe I should have full control over them, and should not have terms dictated by Apple or AT&T. I think this qualifies me for what Turkle considers pathological, but I'm ok with that.

## Student G

Amazing woman! It's interesting to see how a person can finally see the real difference of having an object-body [the body that we have], lived-body [the body that we are] and eventually, techno-body [the body that we could be]. This experience made Sobchack have a right to say that other people such as Baudrillard who don't have such privilege, do not have a right to judge a story like *Crash*.

*Pain* is the first Sobchack encounter to the absence of wet-ware, as many people would have. But I didn't expect the statement --from an amputated person -- that *Pleasure* is actually the term she used in experiencing her prosthesis. [p.207]

What struck me most from Sobchack's essay was her elaboration with Kathleen Woodward articles that implied: along with the history of human kind, the process of achieving various tools and technologies always parallel with the process of immaterializing the body itself. As what Sobchack called 'to beat the meat'.

Sobchack brought a really good sense of how technology and desire intersect each other. After reading this particular passage, I couldn't help but to wonder: might this very technological institute have some works that doesn't extending the body outward or inward direction? But instead, on the equilibrium of internalization and externalization of the body. Maybe in Design, sciences, basic sciences? I couldn't find it. Even a social science, such as politics, are continuously trying to extend the notion of body into its larger scale. To gain a mass of bodies from the society into a single one that could be an organization, institution or nation.

Yet, I think it will be interesting to hear some counter-arguments to this essay. It's unfortunate for me not having a chance to read *Crash*, the novel she used to attack Baudrillard.