Week 8 – The Internet of Things

Response to group 1 (by group 6: John, Marc, Sjoerd)

Group 1 provides an excellent summary that provides a clear overview of the author's key ideas and concepts throughout the chapters. They didn't leave much out. I'd like to elaborate on the last chapter. After the reading and doing some research I found the website of DIFR: the Dutch Interdisciplinary Forum of RFID http://www.difr.nl/. Van Kranenburg is personally involved in this project, which want to inform consumers about the RFID tags that are around them or on items that they buy; in vicinity. They research what they call the 'trustparadox' which applies to the trust that citizens have to put in their environment, while at the same time the government is accentuating the unsafety of public spaces, which according to them is an important matter while locative GPS/wifi/Bluetooth services are commonly used in these spaces. This paradox is also described in the response, but it wasn't clear that the author is very concerned with the matter of privacy. The last illustration demonstrates a concept of DIFR of using the mobile phone to inform consumers/citizens about the privacy policy of the nearby RFID tags, which implies the use of 'open/independent' technology to enhance the ability to 'trust' their environment .

If he holds the phone close to a product in a shop containing an RFID tag, the phone will read the tag number from the tag. It will then query (over the Internet, either through GPRS, UMTS or WiFi) the backoffice to retrieve the privacy policy corresponding to the tag number. It will then match the tag policy with the consumer policy, and present the result of the match to the consumer on the display of the mobile phone in an intuitive and appealing manner.

Group 1 (generally) underlines the fear of Van Kranenburg, but I think they should have underlined his optimism much more instead. Van Kranenburg obviously believes that 'technology' could be used constructively in an 'open' manner for individuals to (regain) control (of) their environment and protect their privacy (or *privacies).* 'The city of trust' is an important concept for Van Kranenburg, because he argues that we can and probably should take initiatives to 'build' the trust around us.

Van Krananberg's piece is notable in the the paths he takes to navigate the seemingly inevitable networking of physicality. By grounding his discussion in the city of glass/city of control duality, he illuminates the edge of the cliff where we find ourselves dancing at the edge, a blurred line in the development of control technologies that bring saliva to the lips of the directors of corporations. Beyond this demarcation, if we don't actively engage in seeking its opposite, lies the city of control. The example of iWatch in Los Angeles is poignant, but not so much perhaps as the 'Internet Eyes' game (http://www.dailymail.co.uk/news/article-1218225/Internet-game-awards-points-people-spotting-crimes-CCTV-cameras-branded-snoopers-paradise.html) in which not only store owners but players themselves pay to participate in the opportunity to catch criminals in the act. Crimes reported can lead to financial rewards. The entire assemblage from the ubiquitous CCTVs to the Web 2.0 interface fits perfectly into the reality TV voyeur culture. Only this time with a dash of the lottery. This inter-breeding of control tech (usually and fearfully considered as a tool of the totalitarian state) with market and marketing (and lottery), that is: capital, is perhaps the juxtaposed opposite of the Bricolab/RepRap impulse.

Speaking of Bricolab/RepRap, I thought it unfortunate that van Kranenberg did not draw the simply line between the Homebrew Computing Club and Brazilian metarecycling, let alone

the development of self-assembling machines. Self-assembling machines can be programmed to make themselves again on a smaller scale, with the potential to evolve nano-scale versions that can then construct whatever the available raw materials (and digital plans) allow. As what could be called a Universal Drexler Machine in the same way a computer is a Universal Turing Machine, such an evolution would signal for the physical world what the computer has for information: absolute capacity for processing. The Homebrew Computing Club sought to achieve affordable, personal use Universal Turing Machines to circumvent the possibility that such technology would only lie with governmental/corporate interests. I believe the same could be said for RepRap. Despite the founder's assertion that producing the RepRap will eventually boil down to the cost of the raw materials, to say that access to such raw materials does not ultimately lie with the whims of moneyed interests is unrealistic.

The group gives an extensive overview of the key points of Van Kranenburg's 'The Internet of Things'. Concerning the discussion about data and the epistemology of this term, I would be interested in if the group also finds the pencil to be a part of the Techné or to be blended in as 'just there' (or 'just is'). One could argue that the pen is, though manufactured, not really a mediated tool opposed to the screen that mediates written text into a digital form. Does 'mediated' equal 'technology', is it inherent to the tool that's discussed? I'm wondering how the response group would react to this topic.

Also, in chapter 3 (meta-recycling and opensource projects), in the part "Kranenberg gives two specific examples of products that are here to stay", I don't really see how the given examples do imply any sustainability. I do think the cases of the RePrap and the Bricophone are much more iconic (in a self-regulating fashion) to what the author's trying to point out; the political aspects of modern technology, and the production-modification activities. I think, what is overlooked in this perspective, what kind of society is made out of these DIY-projects. Will it be freed from a City of Control just because the 'Big Brother' is not clearly presented by commerce or by the state, is here the question about ethics irrelevant since it's opensource nature? So, is the political dimension entirely vanished with the Bricophone? I'd say it's not, since not everyone who can look into the code (and so to the underlying designer ethics) would be able to understand them, especially in these third world environments, these questions about literacy might pop up.

For the last chapter, I agree that the author sometimes get carried away. Then again, I don't see how he supposedly is ignoring 'sheer facts', the given outline is besides critical also concrete about ethical and political implications of the data implementations, that somehow (and sometime) shall have it's effect when AmI development is being realized. The RFID Guardian, or other firewall-like applications would bring some nuance in the fears of the Internet of Things, as he clearly puts out as well, but the overall message here is to be cautious about production policies. Again, I'd be interested in the overlooked 'facts' about the current implementations.

Response to group 2 (by group 6: John, Marc, Sjoerd)

Group 2 provides a excellent overview of Hayles keyideas. I think it’s good to point out the connection with Kruegers’ conclusive statement in ‘Responsive environments’: “What is perhaps has been obscured is that these concepts are the results of the personal need to understand and express the essence of the computer in humanistic terms” is arguably aligned with Hayles call for a debate on ethical principles that is set in motion by a likely future that is

increasingly entwined with intelligent machines. Hayles article provides a perspective where we can shape the future of our 'being' by looking at the indistinguishability of the humans and 'intelligent machines'. I'd like to argue that thereby she addresses a rather endogenous way of looking at the future. Van Kranenburg is also concerned with the future of ethical principles but takes a more exogenic perspective where the technology around us tends to disappear (through Ambient Intelligence enviroments) and at the same time is heavily influencing us. A question for discussion might be: As pervasive computing/ambient intelligence is well under-way, how should we exactly approach the ethical debate which Hayles is calling for?

As Hayles is clearly concerned with ethics, it is important to wonder why her discussion does not include the concerns raised in Gunkel and Hawhee's "Virtual Alterity." The feedback loops that she elucidates between humans and AI (so linguistically close to AmI, eh?) imply an interesting re-positioning of the main dilemna in "Virtual Alterity":

If ethics are anthropocentric, and the anthropocentric is a function of human-machine interaction, won't an anthropocentric ethics inevitably include the machine in its understandings?

Yet that question is refuted by traditional responses to alterity. War is always justified through alteric juxtaposition: us versus them. The ethics of warring cultures disappear to each other—war can only be waged against the immoral, or *those that don't have a right to their own justifications*. The point is, humans are all too able to blind themselves to the circumstances in others. This point lies at the center of "Virtual Alterity" and is unfortunately the least poignantly developed angle from which Hayles delivers her approach. Her painstaking explanations of the capabilities of machines to exceed the expectations of their programming is betrayed by her inability to consider 'embodiment' as a possibility outside the human context. Running parallel to her unintelligible critique (or was it simply perfectly comprehensible description?) of the use of intelligent machines as a reference point for understanding the constraining factors of the human 'programming' substrate is a tacit rejection of any possibility that an intelligence embedded in the gross product of infinitely small autonomous processes embedded within circuitry might have some constitutional awareness of their medium.

Does the fact that Brooks' experiments never contain a "central representation" of the world in any way imply that the robots themselves are not operating on an assumption that they do indeed have such a central representation at their disposal? Humans are notoriously tortured by the question of their ontological origins, never quite sure of what idea could possibly hold the entire confused mess of reality together. The tendency to centralize representation is embodied by organized (swarm) structures such as religions (entrenched and emerging alike), political/social/economic/ecological ideologies, and embedded narratives/representations (the culture imprinted into the operation of the human through restricting either total conceptual or total actualizing capacities). From the examples Hayles cites I find nothing to imply that artificial intelligences do not actively attempt to construct a central representation through the various inputs of its existence. Within the substrate of a collective assemblage of autonomously acting modules of circuitry cognition may appear as a struggle to make sense of the world. Such a constitutional similarity to humans, who share the same struggle of 'making sense of the composite', does seem to support the theory that artifical intelligence(s) can teach humanity about its own intelligence(s).