21A.850J / STS.484J The Anthropology of Cybercultures
Spring 2009

Student A

Using "Technosociograms"

I was interested in Newman's use of a "technosociogram" which combines "sociograms" with "technograms" (see footnote 10, reference to Latour 1987) to capture social and material aspects of her actor-network. For her, the diagram simultaneously represents social connections and material-technical connections. Her description of the use of this representation (both in general and in particular) left me with several questions: Is the representation of the social connections explicit or implicit? What are the implications of an implicit representation of the social connections? When are there conflicts among the actual social ties and the technical representation? What about the purposeful vagueness of the technical representation in relation to the social reality?

Open for Interpretation: Advantages of Vague Representations

The last question is closely related to her dynamic notion of the ethnographic site as something which is constantly in flux: "…the site of corporate networked technology development as the dynamic and negotiated assembly and re-assembly of actors and design issues, in relation to the shifting conditions under which the project is being undertaken." (Newman, p.243) And her analysis of the use of whiteboard drawings reinforces the importance of using diagrammatic technical representations as vehicles for reshaping social connections on the fly without necessarily naming them. Newman describes these "techniques of virtuality" during her analysis of the debates which ensue between the middle ware developers and the services/vendors: "…from the point of view of the ethnographic study of technology development, design issues arise in and as the negotiation, or designers' projection (Wieckert 1995), of future relations within the network." (Newman, p.247) She reiterates this point in her conclusion as the "(…) central question of reading "technical" discourses and representations as proposals, or imaginings, of technosocial relations, mediated in particular ways by the system-under-design." (Newman, p.256) [On a side note: Newman's conception feels very different to papers in organization science where organizational structures (the social) play a central role in explaining outcomes in the development of new technical systems.]

Representing the Sociomaterial

I'm interested in how these topics relate to Suchman's description of sociomaterial: "The effects are created through the particular possibilities provided by an artful integration of persons, objects, spaces, fantasies, remembered experiences, and technologies to evoke and explore an emblematically human encounter but not to replicate it" (Suchman 2007, pp.280-281).

I've attached a very simple diagram that I made (for Wanda's class actually) in an attempt to capture the jumbled nature of technical/material reality and social reality. This diagram was inspired by an earlier version which I've also attached. I aimed to capture the interactions among people – spaces – systems/technologies in the representation

which elicited a very negative response from a sociologist on my committee. He thought the cyclical representation implied a much too organized and limited set of channels for the myriad links between people, spaces and technologies. I tend to agree with him in hindsight and can't help thinking whether I'd spent too much time looking at more engineering-systems representations. [On a related note from Suchman on the state of the technical in HCI and computing research in general: "Far from being excluded, "the technical" in regimes of research and development is centered, whereas "the social" is separated out and relegated to the margins. It is the privileged machine in this context that creates its marginalized human others." (Suchman 2007, pp.269-270)] Representation, map-making and diagramming are central themes in architecture and design. And as Newman notes these representations always capture one point of view. What then is their role in analysis and then in synthesis in research on the border line between social science and technical/design research? And how does this question differ from the use of graphics in social science in general? (Link to a blog a friend writes called Graphic Sociology.)

PS: One question in relation to the Born article I had was about the interesting contrast between Born's focus on IRCAM's highly unstable/in flux software and Newman's corporate experience of the "system-under-design" (p.252). Even though software in the latter setting is intended for very secure, stable applications it seems to have the same dynamism that IRCAM's programs had.

social material sociomaterial
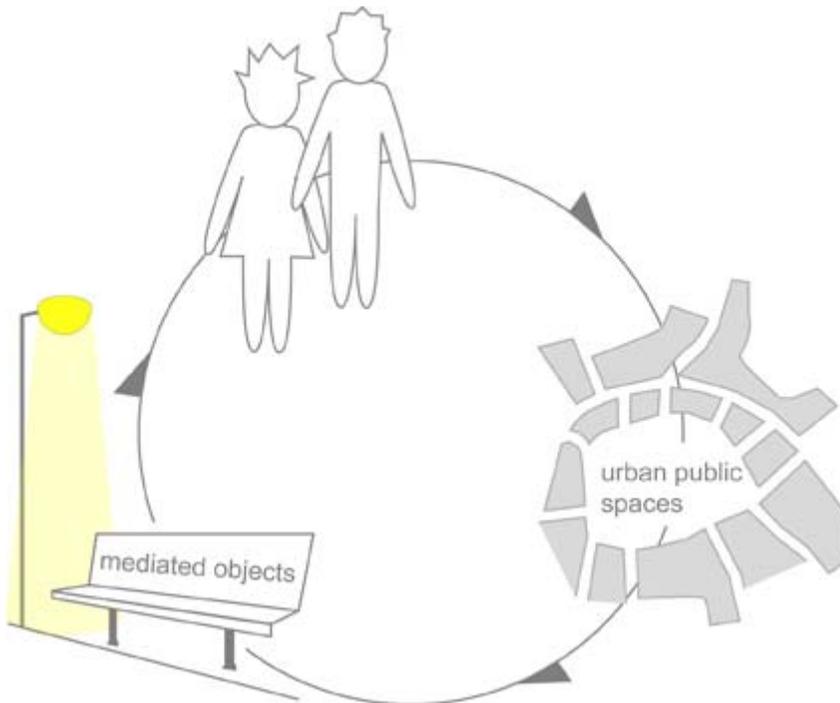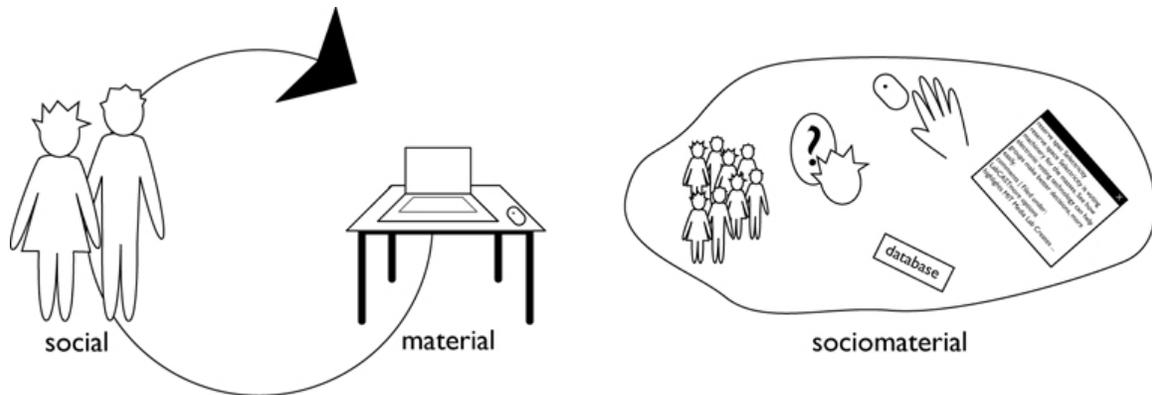
Student B

I found Born's article insightful, as it fleshes out issues of technology production that exceed the legal frameworks we use to think about authorship and property rights. Born recognizes that the ways in which authorship is construed in IP, one, as the moral right of the creator over his/her work, and two the diffuse nature of an endeavor like software design and development as "technical writing", as an insufficient binary. In both cases, she argues, the fundamental nature of the process of software creation may be overlooked, and she examines the software development culture at IRCAM, a French research center on music and acoustics, as a way to approach the politics and micro-politics of software-making. Born discusses how mechanisms of resistance to ownership develop spontaneously, including researcher's tendency not to finish or document the code as a way to retain "social control" on it, and resist its commodification; also, as a way to obtain or maintain status in the many unspoken hierarchies and rivalries of research work.

I wonder to what extent the collective nature that is often attributed to software development -by virtue of its digital quality as copiable objects- is not transferrable also to other digital practices. I am thinking of digital design models, or even design scripts, in an architecture firm. Having worked in a team of computational specialists in a large corporate firm I experienced similar manifestations of resistance, and it was visible that the professional standing of (we) specialists often resided in their ability to decode their own work. Attempts to make these models and scripts more accessible by means of a normative is seen by the modelers/scripters as an intrusion, and their impenetrability (of the scripts and models) is used in this case, as well, as a means to mark a territory of professional competencies and influence (with all the sensitive political implications this has). Of course the discourse differs from the actual practice, and in meetings the work of the group would be presented as transparent and organized (making it look easy is part of the allure), but this was not the case in reality. I would argue that what Born discusses as an attribute of software creation may apply to other digitally-based practices, perhaps is common to all digital practices because of their, as I mentioned, copiable nature. One of the interesting results that Born notes is an increased sense of embodiment of knowledge as a way to resist the commodification (and therefore loss of control) of the work. In a way it could be seen as a resistance to codification, and perhaps, a hidden -preindustrial, arcane- fear of automation?

Note: The idea of collectivity that is often emphasized in software development is a result of its copiable nature, but other, pre-digital, practices that are not necessarily seen as collective, may display similar characteristics. The idea of an individual creator, which still seems to be a fundamental part of the IP discussion, may be a worhy subject of debate...

Student D

Regarding documentation and knowledge embodied in persons mentioned in Born's article:

Documentation at Microsoft was very much as we described in class: "someone's job" -- typically a contract technical writer's. However at IDEO, a consulting firm, there were a few distinctive attitudes toward documentation and knowledge management that were quite different from what one would normally think of, and in many ways, smart attitudes.

1. Beautifully packaged and storytold deliverables... frozen

Whenever we can, we pushed for a PDF deliverable as opposed to PowerPoint deliverables. A format that is frozen and will not be modified by the client later. Reasons being 1) we want an evidence of our work as we were contractually bound to deliver certain things, 2) we want to keep the integrity and quality of our work, so frozen format like PDF or movies prevents the work from being bastardized by someone in the client organization later. Of course, we'd oblige if the client needed a PowerPoint version, but generally PDF was much more preferred.

IDEO preferred presenting the deliverables at the IDEO office, in a set up room, with a good storyteller present. Rather than delivering a dry artifact, IDEO tried to deliver the mood/sensitivity around a concept and sense of change. Therefore, narrated movies were used more and more often. It was more important to get the client personnel present in that room to buy into the idea and attitude, rather than the details.

2. Replace documentation with relationships

The more IDEO moved toward vision and strategy firm from a product design firm, what mattered was to make the key members of the client organization buy into the direction and frame of mind we proposed. So beautiful packaging of the deliverables and storytelling them -- setting the tone and voice -- was more valued than documenting the details of the designs we did. Once the clients buy into the idea, they will want more.

Once you hand over some interactive demo of new website/mobile service, there is a pretty low chance that the client will come back wanting details of the prototype. But when those people in the client organization who bought into the general direction we proposed get promoted or have a chance, they actually come back for a whole new project. A large portion of IDEO's revenue comes from retainer clients.

3. No "knowledge management" system

When I led groups of visitors to tour IDEO studios, one of the frequent questions was about "knowledge management" -- how does IDEO retain its knowledge and skills?

There were two canned answers for that question. First is to point at the "Tech Box" -- each IDEO office keeps a drawer tower of interesting materials and mechanisms that are collected by everyone, tagged and databased. Second answer was that we don't employ a system, but we believe in the knowledge embodied in the people, as IDEO hired an eclectic mix of people. And that it was permitted for everyone to spam everyone else with random questions, like "how do I find a butterfly observatory?" "do you brush teeth in the shower? why?" "anyone know about the therapeutic aspects of lights?" etc.

I think above attitudes I described above is in line with the general trend about intellectual property in the industry:

Ideas are free, but the service is not. Rather than valuing the details of the designs or visuals we created, we want you to like how we can catalyze changes and improvements to your portfolio. Let's do a $60K workshop before we sign on to do a $400K LCD monitor design work. If you like what you see at the workshop, we know you will come back for three more $400K projects. Similarly at the Media Lab, we surrender the IP in exchange for the rights to continue working on cool things and maintain a brand.

The sum (organization) is bigger than its parts (individuals). People at the Media Lab or IDEO aren't particularly geniuses. It's the place that creates the magic, the cross pollination, professional courtesy and mutual respect. This is also why the client/sponsor organizations will never be able to replicate us in-house. They will have to keep paying to have us around.

Student E

Intellectual Property and Standards are two of my enemies! I didn't write a response on time for class yesterday, but I'm going to add some of my ideas and thoughts on the readings here anyway.

It's not that I think that we can develop and design new technology without the abstractions that standards afford. The standards are necessary for interoperability but also to be able to develop larger technologies that use the parts the standards define as modules. The problem that I have with a lot of standards is that they come about in exactly the way described by Newman-- thought up by a lot of the parties who have interests beyond creating the lightest, most elegant standard. Sometimes standards can be made by parties that do not have the financial interests that a lot of software and hardware companies (and now increasingly also wetware companies) and that allows a different perspective on the problem you need to solve. However, nowadays what I'm mostly seeing is large companies making their own standards which include their patented

hardware and trying to drown out the competition (like Blu-ray vs HD DVD). To be able to satisfy a standard, you need to have your product certified, a process that for hardware often costs tens of thousands of dollars. Without certifying your wireless object with 802.11, it can then be considered illegal to have it connecting to any network at all.

In the open-source-ish community there is currently a slightly different approach to increase data portability by means of standardised server-side authentication, standardised user ids and logins, and standardised ways of using social networks (OpenSocial platform instead of the Facebook platform, OAuth for API authentication, OpenID for user logins passwords, etc.) which is being led by a group of people who are all active in different start ups in Silicon Valley and the Bay Area. The creation of the standard is not being used for monetary gain in the start ups themselves, but standard is then used as an attraction to potential investors in the start up.

It could be argued that to satisfy a standard like 802.11 you need hundreds of thousands of dollars in hardware testing equipment, so that the tens of thousands of dollars necessary for the certification test is only secondary. However, there is another thing problematic about these standards beyond the contexts in which they are invented. There is not a continuous re-evaluation of their necessity and effectiveness. Once a standard is in place it is considered a black box that can be modularly deployed, which is the point of the standard in the first place. But sometimes, especially in hardware, there are more efficient ways you can engineer devices than just snapping a series of independent modules together. For the prototype I think it is great that plug and play works the way it does, but a revisitation of the fundamental engineering of an artefact is a crucial step in the design process I think is often forgotten due to lack of necessity. Because it is often not considered unreasonable by users who have constant access to electricity that they have to charge their mobile phones every 12 hours, and it can seem like bluetooth is the only normal way to enable short range wireless communication.

With regards to Born's article I agree with what Student X pointed out in class. There is a large amount of literature relating to the creation and maintenance of intellectual property that Born does not cite at all. Beyond that though, I feel like Born does not really consider what would happen if places like IRCAM would register and patent all their intellectual property.