

ASIS&T 2010 PLENARY SESSION

Restoring Information's Body

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ABSTRACT

As plenary speaker for the ASIS&T 2010 Annual Meeting, Lucy Suchman based her presentation on a reference by author N. Katherine Hayles asserting that information has lost its body. Efforts to restore information's body must recognize the references and context of the information to bring the information back to a point of meaning. In exploring the importance of context for meaningful information, Suchman drew comparisons to the human work behind information, the agent critical to initiate an action, the work meaningful through indirect interactions with an object at a distance. She made further parallels to conversations with a disembodied head, remote control warfare and robotic health care – all interactions with machines, but with humans as invisible agents. Communications research, Suchman indicated, must be mindful of the connection between information and its body in order to fully understand information content.

KEYWORDS

meetings
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Information has lost its body, according to N. Katherine Hayles' 1999 book, *How We Became Posthuman* [1]. Lucy Suchman, plenary speaker at the 2010 ASIS&T Annual Meeting, used that thought in titling her speech, "Restoring Information's Body."

Suchman, a professor of sociology and co-director of the Centre for Science Studies at Lancaster University, began her presentation with a slide of a performance art project called *Standard Time* (www.standard-time.com/index2_en.php), in which a group of workers in hard hats appear and reappear every minute for 24 hours to alter a representation of a digital clock to reflect the accurate time. Through the enactment of the passage of time, represented by the changing clock, we get a sense of materiality and labor in our thinking about information artifacts, which is what she wanted to discuss.

Suchman referenced a 1993 Geoffrey Bowker paper [2] that included a photo from a 1953 cybernetics conference which showed only two women: Margaret Mead and Janet Freed, the conference's administrative assistant (to whom Suchman returned at the end of her talk, as a figure of invisible work). Cyberneticians predicted a new age in which Darwin's placement of humanity among animals would be replaced by cyberneticists' placing humans among machines.

A 1999 book by Bruno Latour [3] featured an image of a scientist in the field holding a collection of plants she would bring back to the laboratory for analysis. Suchman asked, "What makes this collection a reference sample and not a bouquet?" The distinction makes sense, she said, only if we locate it in its context. She quoted Latour [3, p. 32]: "We always forget that the word *reference* comes from the Latin *referre*, to bring back." Attending to the material practices through which chains of reference get made is one way to get information's body back.

Suchman showed an image of Jack Ruby aiming his gun at Lee Harvey Oswald. The National Rifle Association says the problem isn't guns; it's the way people use them: "Guns don't kill people; people kill people." Latour writes [3, p. 179], "You are different with a gun in your hand; the gun is different with you holding it." Neither subject nor object is fixed. They become something else. We need to be thinking about these configurations. Suchman said this idea inspired her 2007 book, *Human-Machine Reconfigurations* [4].

She outlined the idea of reconfiguration: the "figural" – metaphorical – made up of associations that give rise to new meanings. Technologies may be considered "materialized figurations," according to Donna Haraway [5]. Persons and things are configured, which leads to the question of reconfiguration, or how they may be figured together differently.

Suchman showed a photo of work at an airlines operations room in the 1980s, where she and her colleagues at Xerox PARC were considering the relationships between work and technology. Everyone in the room was working together quite closely, but all of the work in the room was about things going on somewhere else. They were concerned with getting airplanes out of airport gates on time. They used computers, a whiteboard, cameras viewing airport gates and radios. She described how workers in the operations room were able to assemble information resources into a working system. She also outlined how a civil engineer combined her intimate knowledge of a tricky highway interchange with information about the interchange's context to understand their relationship. Multiple embodied ways of knowing, Suchman said, inform information systems like the operations room.

In *Acting in Anaesthesia* [6] Dawn Goodwin argued that, in anesthesia, you take the capacities in the body of the patient and transfer them out to a complex network of machines and people; the work of an anesthetist is to maintain the system during the course of the surgery. At the end of the surgery, the anesthetist's job is to reintegrate the system with the patient. We think of the patient as being asleep during surgery, but actually the patient is an integral part of the process, Suchman said.

Suchman then discussed a topic related to her interest in humans interacting with machines. Performance artist Stelarc created a "Prosthetic Head" a few years ago; Suchman had a conversation with it in March of

2003. She showed a video clip of the conversation. The viewer sees a participant walk into a dark gallery, one wall of which features an enormous image of a head. The participant can interact with the head through a keyboard on a podium. In this case, Suchman was the participant; Stelarc himself stood next to her, coaching her interactions with the head. The head said it believed in reductionism and asked her if she believed in it too. When she responded that she wasn't sure, it asked if there were anything it could do to make up her mind. She asked if it thought robots should have emotions. It replied, "That depends on what you mean by thinking." What constitutes this exchange, Suchman said, is not the actions of the head or her queries. It's the whole configuration, all parts working together to create something interesting and intelligible. She asked, "What's the unit of intelligibility? How has intelligibility been created?"

Suchman also talked about one of her emerging projects: Warfare and Healthcare: Action at a Distance and Bodies in Contact. She related the story of a man in Canada who is AWOL from the U.S. army. Trained in helicopter combat, he fled to Canada because he would be ordered, when deployed in



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Iraq, to break down the doors of Iraqi homes to search for insurgents. Asked if he were more likely to engage in combat from a helicopter, he answered, “You have to understand; I was raised on video games.” So war at a distance is more acceptable to him than war up close.

There are new forms of remote control warfare. Drone aircraft conducting our wars represent the intersection of military and games, Suchman said. Formerly used for spying, drones and remotely controlled robots now are armed with explosives and can fire weapons. There are troubling questions about target acquisition and discrimination among human beings.

For health care for the elderly, there are call centers and robotics. Will we be cared for by robots? They’re very popular in Japan, Suchman said. She

also discussed a robot cat in the Netherlands that is designed to remind people to take their medicine. But one patient wanted the robot to address the lack of a swimming pool in the facility – beyond the ken of the robot.

Suchman concluded with a memorial reference to Susan Leigh Star, who died in March. [Star was honored posthumously at the Annual Meeting with the 2010 ASIS&T Research Award.] Star said in 1991 [7, p.276], “The deletion of the work from the formal model leads to the need for articulation work, which is also invisible to the model.” Star also talked about “invisible work and silenced dialogues in knowledge presentation.” Suchman concluded by saying she hoped her talk helped recover some of information’s body and that this continues to be a vital area for communications research. ■

Resources Mentioned in the Article

- [1] Hayles, N. K. (1999). *How we became posthuman: Virtual bodies in cybernetics, literature, and informatics*. Chicago: University of Chicago.
- [2] Bowker, G. (1993). How to be universal: Some cybernetics strategies, 1943-70. *Social Studies of Science* 23 (1), 107-127.
- [3] Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies*. Cambridge, MA: Harvard.
- [4] Suchman, L. A. (2007). *Human-machine reconfigurations: Plans and situated actions*. New York: Cambridge.
- [5] Haraway, D. (1997). *Modest_Witness@Second_Millennium.FemaleMan_Meets_OncoMouse: Feminism and technoscience*. New York: Routledge.
- [6] Goodwin, D. (2009). *Acting in anaesthesia: Ethnographic encounters with patients, practitioners and medical technologies*. New York: Cambridge.
- [7] Star, S. L. (1991). The sociology of the invisible: The primacy of Work in the writings of Anselm Strauss. In D. Maines (Ed.), *Social organization and social process: Essays in honor of Anselm Strauss* (pp. 265-283). Hawthorne, NY: de Gruyter.