STS.001 Reading Response, 2/10/03 (example)
Shane Hamilton

I know exactly what technology is; I use it every day. I have a computer, a connection to the Internet, a mobile phone, several CD and MP3 players, and I wake up every morning between October and April according to Eastern Standard Time. "Wait a minute," some of you are probably thinking to yourselves right now. "Of course MP3s and mobile phones are technologies, but Eastern Standard Time? It's not a machine, it doesn't use electricity—it's not even a *thing* in any material sense!"

But I think Standard Time does fit several of the definitions of "technology" that we encountered in this week's readings. Langdon Winner's idea that technologies are "ways of building order in our world" (12) certainly applies to Standard Time. Without a set of universally agreed-upon time zones, our world would be quite chaotic. If everyone in the world set their clocks to 12pm when the sun rose to its zenith (as they did before time zones were invented by railroad executives in the 1880s), people in Boston trying to record a television show aired at 8pm, New York City time, would always set their VCRs 20 to 30 minutes too early, depending on the time of year. Standard Time would also be a technology according to Leo Marx. He argues that the term "technology" is a 19th- and 20th-century abstraction referring not only to physical artifacts, but also to the role of organizations, capital, and politics in making those artifacts socially useful. Standard Time cannot be touched and it does not do any work in the physicists' sense of "force applied over distance." Nonetheless, it has enormous influence on our daily lives, and its effectiveness depends entirely on large-scale social organizations, such as the newspapers who tell us when to switch our clocks forward one hour in spring.

Even after reading Winner's and Marx's essays, however, some of you will still tend to think that "technology" means something very different from Standard Time. I think this is partly a result of the fact that, as Ruth Schwartz Cowan argues, people have many different ideas about what technology is, and those ideas are "ofttimes surprising" and always changing (203). Even academics who study the history of technology cannot agree on what the term means. Langdon Winner writes that technologies

are ways of building order, while Donald MacKenzie argues that order is only sometimes the result of technological change. Cowan maintains that technologies are tools that have no power unless they are put to use by people to control their environment; Winner argues that technologies are not merely tools that get wielded by people, but can have their own ability to control the environment irrespective of use. Leo Marx thinks that "technology" is a word whose meaning has primarily been decided by famous authors like Thomas Carlyle or Thorstein Veblen; Donald MacKenzie argues that the meaning of any particular "technology" is primarily constructed by negotiations between producers and users, not writers.

In short, there is a great deal of confusion about what the term "technology" means. I encounter this all the time when I meet new people and tell them that I study the history of technology. The other night, for instance, a young woman looked at me quizzically and said, "But there is no such thing as technology before the 1960s, so how can you study its history?" I assumed that she thought "technology" was a synonym for "computers," as many people do these days, but what she apparently believed was that the term refers to innovation. For some reason that remains unclear to me, she thought innovation had only begun in the 1960s. Automobiles, railroads, even nuclear weapons all came before 1960, so according to this young woman, they are not technologies. To me this is downright bizarre. Everyone seems to have their own ideas about what is and what is not technology, and those ideas rarely match up with my own.

This leaves me with one really big question. If nobody can agree on what technology is, how can we possibly study it? Furthermore, *why* should we study it? Wouldn't historians be better off sticking to politics, leaving studies of technology to the engineers who really do know what technology means? Of course, I do not think so. All of the authors we read this week, despite their disagreements, agree that technologies *are* political—they are used by people to shape their relations with each other and to the natural world. Technology, whatever else it may be, is the stuff of good history.