

soundings issue 3 Summer 1996

# Keyboard cowboys and dial cowgirls

Kirsten Notten

*Technological heroes are usually masculine. Kirsten Notten is searching for ways to create microwave amazons and dial cowgirls.*

Space. The final frontier. These are the voyages of the Starship Enterprise. Its continuing mission: to explore strange worlds, to find new lives and new civilisations, to boldly go where no one has gone before.

The well-known opening sentence of *Star Trek, the next generation* expresses a belief in modern science and technology. In the television series, we see the promises that accompany this belief: technology' has made it possible to cut ourselves loose from the shackles of the limitations of the earth, with her scarcity, injustice and inequality; the various races and species live in peace and harmony on the Starship Enterprise; the evil only comes from the outside, from the war-hungry Romulans or unknown creatures. The travellers themselves live, besides some cute quarrels, in friendship, prosperity and peace. Technology' appears here as a way to overcome earthly restrictions and problems.

The technological project emerges as one big adventure in *Star Trek*. Columbus and Captain Picard are the heroes who show us that discovering new worlds with the aid of technological gadgets is in itself attractive and meaningful, and creates identities. The heroism conceals the political and ethical dimension of gathering such knowledge. Captain Picard is an explorer, not a politician or a missionary.

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His task consists of avoiding responsibilities. And it is the dream of every scientist and every engineer to search for knowledge and experiment with the possibilities of technology as an adventure, while forgetting the political dimension. The popularity of *Star Trek* teaches us the attraction of this dream.

*Star Wars* is a popular science fiction movie in which other fantasies about technologies are presented. The bad guys here are the ones who use the fancy technology. The heroes disdain technology - it would corrupt their pure, masculine heroism. Harrison Ford - 'Han Solo' - flies the *deux-chevaux* spaceships by fits and starts, as if they could crash any minute. And from an old hermit Luke learns to trust the power of the universe instead of technology. The authenticity of the heroes appears untouched by technological decadence. Technology is not an instrument to conquer evil but a destructive force. *Star Wars* is thus a different icon of modernity from *Star Trek*. Modern times do not only offer promising technologies, they have also given us Chernobyl, the greenhouse effect and experiments with embryos.

*Star Trek* and *Star Wars* represent two distinct visions about technology. In *Star Trek* technology is an instrument for the salvation of the human race from the earthly. Its users are heroes. Whereas, in *Star Wars*, technology appears as a devastating, demonic force. The heroes are the ones who can withstand and defeat its seduction.

Both visions, by positioning evil outside human interaction and linking it to technology, are equally apolitical. The evil is disposed of by technological progress in *Star Trek*, while the evil in *Star Wars* is found in technological progress. But both visions neglect the problems of human interactions accompanied by technology. Racism and sexism, for example, can not be 'solved' by technology; neither are they purely the result of technological progress. In addition, in both stories heroes are represented as autonomous subjects, clearly distinguished from the other as technology in *Star Wars*, and the other as earthly restrictions in *Star Trek*. These oppositions around the technological heroes are reinforced by gender. The heroes whom we encounter are men. Symbolic meanings constituting their identities, like separation and loneliness, are masculine. And hero fantasies are boys' dreams. The hero is masculine.

We learn from science fiction that our fascination for and fear of technology is linked to its power to create heroes. I love heroes. I would like to give everybody the opportunity to have the pleasure of identifying with the empowering images of technological heroes. But I do not like the apolitical, autonomous, masculine image

of heroes. We need a better heroism if we want to learn to live in a technological society, to cope with contemporary technological problems and to tackle the fear of and fascination for technology.

### **Cyborgs as heroines (f/m)**

Donna Haraway is a biologist, feminist and philosopher of science. She tells stories from the practice of high-technological scientific research in biology to offer new concepts, images and metaphors. She makes no clear distinction between science fiction and the stories of scientists, fictions of science. Both types of stories present images to understand the complex relationships between organisms and other beings in a techno-scientific society.

She tells two stories from biology about the immune system. She utilises the immune system as a metaphor to understand our relationships. In the first story, T-cells are the heroes who protect the body against strange elements which can make the body sick, and fight a fierce battle for the purity of the self. Here immunity is invulnerability and pureness. In the other story, the immune system is depicted as a complex communication system, with several centres and peripheries where ongoing negotiations take place on the boundary between self and other: 'Immunity can also be conceived in terms of the semi-permeable self able to engage with others (human and non-human, inner and outer).'<sup>1</sup>

Donna Haraway prefers the second story because it leaves the separation between self and other behind and offers instead a continual interaction between different elements, in which the boundaries between self and other, or between own and alien, are constructed and changed. As an alternative to the vision of the world as a battlefield, which we remember from science fiction movies, she offers a communication metaphysics. She prefers to see the world as an ongoing communication process rather than as a battlefield because the battlefield metaphysics implies a hierarchy in the separation between self and other. And this dualistic mode of thinking resulted in oppression of the ones who were marked as the other, such as women, black people and nature. The pure, autonomous self, the T-cell or Captain Picard, could act as if it had nothing to do with the consequences of its actions and could thereby ignore the oppression. On the other

1. Donna Haraway, Simians, *Cyborgs, and Women: The Reinvention of Nature*, Free Association Books, 1991, p255).

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hand, in a communication metaphysics everybody knows that she is responsible for the boundaries which are being drawn. Everybody takes part in the practice of establishing boundaries and forming the world, so everybody is responsible for the boundaries. The meaning of heroism changes in the second story of communication metaphysics. Heroism no longer means establishing an identity by conquering the

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other and ignoring the consequences of these actions, but consists of taking part in the action, and being responsible in the practice of interaction and communication.

Haraway uses the heroic status of techno-scientific practice to shift the meaning of heroism.

She redraws the boundaries of high tech to incorporate women into the heroic charisma of technology. The lives of black women, who make microchips in poor working conditions in Silicon Valley, are part of our high tech world of computers. Bicycles and telephones are products of the same complex production processes as jet engines and satellites. Our usual daily environment is a high-tech world. Women's lives are as much infected with technologies as men's. Haraway disintegrates another boundary, namely the boundary of sexual difference, which is as constructed, contested and arbitrary as other boundaries. Her subjects are not women and men, but cyborgs, technological organisms. Cyborgs are her heroines (f/m).

**H**owever, this new boundary of high technology, with the heroic, attractive status of the cyborgs, also evokes a problem. The activities of cyborgs can only be valued *because of* their connection with contemporary technologies. But are women using the telephone the same cyborgs as internet surfers? Dial cowgirls do not have the same attraction as keyboard cowboys. However high-tech nappies may be, because of the use of material sciences, chemical processes and complex distribution systems for producing them, changing nappies remains as unattractive as ever. Some connections with high tech are not as visible and open to appreciation as others. And my scepticism about the heroic status of high technology grows when I see that a lot of activities done by women are hard to describe as high-tech. Washing with a washing machine that functions by means of fuzzy logic, and text writing in WP 5.1, do not flourish as cyborg activities in the same way as tinkering with a car or building your own website. Here we have the problem of a communication metaphysics; how the boundary is

drawn between thrilling high tech and plain common technology.

### **The loss of heroism**

Cynthia Cockburn and Susan Ormrod are two sociologists who tell the story of the development of the microwave in Great Britain.<sup>2</sup> At first it was sold in so-called brown goods stores or electronic outlets, where it was placed next to video cameras and stereo equipment. Its users' manual, design and the accompanying sales strategies suggested that you were dealing with very complicated technology. Young, dynamic, adventurous men were supposed to buy it. It was a gadget, one of the toys for the boys.

However, the microwave went through a metamorphosis from male jewellery into a handy, boring, female cooking instrument. This metamorphosis took place because of the economic depression of the 1980s, the competition of another gadget, the camcorder, and alarming stories about microbes in badly heated meals. The microwave was thereafter praised as a fulfilling cooking instrument which was able to heat, roast and grill. From then on it was sold in whitegoods stores together with household appliances, which have the family as their target group. In general, this meant that women incorporated the microwave into their cooking practices. The users' manual and directions were made very simple, because the designers and marketeers presumed that women were afraid of technology.

Again we hear a story, not science fiction or a scientific account this time, but a story from the design, marketing and users world - another type of story which makes other aspects of the world visible and in which heroism is tarnished. The microwave user was a hero as long as the operating instructions were unreadable, its usage was frivolous and the user was masculine. The heroism of the microwave was the result of design and marketing strategies. Captain Picards are being made. As soon as the microwave was entrenched in existing cooking practices, it lost its power to create heroes. The microwave was tamed in the production and consumption processes into a cooking instrument, and women became its users.

**S**usan Ormrod and Cynthia Cockburn show in their story that the meaning and the function of the microwave are the results of designers, commercial people, radio waves, microbes and gender meanings. They demonstrate Haraway's communication metaphysics around the microwave, the complex

2- C. Cockburn & S. Ormrod, *Gender and Technology in die Making*, Sage Publications, 1993.

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practice in which many actors construct the meaning of the microwave. First the microwave was created as a high-tech, heroic gadget. Later on it became a low-tech, elevated frying pan. The gender differences were an important structuring principle in this development, as well as being influenced by it. Tamed technology brings its routine connotation to the activities in which it is being used, and common activities radiate a boring meaning to the technologies in these activities. Although meanings are rearranged and boundaries were redrawn in the microwave development, the gender differences, with their higher valuation of the masculine side, remain annoyingly stable. Technological competences and caring responsibilities change in content, but not in gender, in this example of a communication metaphysics. Gender is used to construct a difference between high and low tech, in this case between a brown and a white microwave.

**H**araway's project to incorporate women into the realm of high tech is a difficult task if high tech is constructed along gender lines. High tech is partly constructed precisely *by* excluding women. It is therefore necessary to rearrange the way high tech gets its meaning, in a way which might include women in the technological realm. The attraction of high tech and its power to create heroes are partly due to its masculine image. Haraway reinforces this hierarchy of values by using high tech to make women into cyborgs and heroines (f/m). To give female activities a revaluation, the boundaries between high and low tech along gender lines should be dismantled. Dial cowgirls also deserve their heroic epos.

Our fascination for and fear of technology are partly derived from its power to create heroes. If we want a better world in which heroines (f/m) can play around and take responsibility for their technological actions, we need to redraw some boundaries and arrange the world in another way. The borderlines between being a hero and taking responsibility, between high and low tech, and between feminine and masculine, need some tinkering with. Donna Haraway shows us how heroes can be responsible and how women can be cyborgs. But her project depends on the connection of high tech and masculinity. Susan Onnrod and Cynthia Cockburn show how this connection is produced in a communication metaphysics. I love heroes, especially responsible ones who are sometimes female. We need an awful lot of epics on microwave amazons and dial cowgirls no longer to be disposed of as alien by the immune system of our techno-society. Look around and see them working and playing with technology.