

# Ascribing Gender from Domestic Technologies

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## ABSTRACT

This paper presents part of an on-going doctoral research and addresses the issue of material culture by contemplating how the social category of gender is deployed when giving meanings to domestic technologies. More precisely, it asks *what kind of gendered identities people ascribe from domestic technologies, and how these gender divisions are constituted*. First I introduce the theoretical concepts of technology and gender, material culture, and script, which are followed by description of the data. Subsequently I analyse how people ascribe gendered meanings from material technologies and how these meanings are constructed with three types of discourses: expertise, appearance and sound, and anthropomorphism. Finally I conclude with the overall picture of gendered domestic technology and discuss how the analysis could be elaborated in the future.

## Keywords

Domestic technology, gender, script

## INTRODUCTION

In an age of increasing amounts of different technical artefacts both in the home and outside, it is important to study what kinds of roles these mundane gadgets play in our everyday lives, and more importantly, how the rich array of relationships between people and technical devices can be understood in domestic environments.

This paper presents part of on-going doctoral thesis research and addresses the issue of material culture by contemplating how the social and cultural category of gender is deployed in the assessing and understanding of domestic technologies. More precisely, I ask *what kind of gendered identities people ascribe from domestic technologies, and in what terms these gender divisions are constituted?* In the beginning of the paper I introduce briefly the concepts of technology and gender, material culture, and script, which are followed by a short description of the data. My main task subsequently is to analyse how people ascribe gendered meanings from material technologies, and how these meanings are constructed. Finally, I will conclude with the overall picture of gendered material technology and ponder how my analysis could be advanced in the future.



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## TECHNOLOGY AND GENDER, MATERIAL CULTURE STUDIES, AND SCRIPT

I deploy the idea of the social construction of technology and maintain that processes of technology and gender are mutually co-produced: no party is primary, but both co-exist and demand one another. As Faulkner [9] argues "gender and technology are seen as co-produced. Here a parallel is drawn between social construction of gender and the social construction of technology, in which each are seen as performed and processual in character, rather than given and unchanging". In other words, technology not just affects gender relations and identities, but also gender has an impact on technologies, their development and design. Consequently, it is possible to create gender sensitive technology, but how it is used by whom and when, and what are the final causes, can not be forecasted since users with different gender identities have an ability to modify artefacts to suit their purposes. This alteration, in turn, affects the technology, the ways it is designed, and more importantly, what is considered worthwhile to be designed.

Research questions in this paper are broadly based on the notion of material culture. I maintain that objects and artefacts are a central part of our everyday lives and surrounding culture. Firstly, they affect our mundane activities through their physical appearance by having an ability to restrict or enable our actions. Furthermore, objects do not only have visible, physical essence, but they are able to create, mediate and sustain different meanings which are linked to wider patterns of surrounding culture. [For example 2, 3, 5, 6, 14, 15, 16, 24.] I also argue that this physicality and symbolism of materiality forms a part of people's possible social identities and actual practices: what we feel we are or would like to be, do and can do, are largely affected and mediated by different material objects.

A further theoretical core of my approach is based on the notion of inscription and de-scription by Akrich [1; see also 28 for the notion of user configuration], and an idea of gender script deployed by van Oost [25] and Rommes et al. [23]. Following Akrich's [1] idea, I think that designers inscribe their ideas of the world in technical devices (intentionally or not), and users read those "codes", or ascribe as the vocabulary in Science and Technology Studies (STS) suggests, through their own capabilities and former experiences. This means that not all people

perceive and ascribe same gadgets the same way, and this reading process may be quite different to what designers had expected.

Ellen van Oost [25, see also 23] uses “gender script” as an analytical tool in her article about materialized gender. Gender script could be seen as a similar concept to Akrich’s inscript and de-script, since van Oost [25] writes that “Gender script refers to the representations an artifact’s designers have or construct of gender relations and gender identities – representations that they then inscribe into the materiality of that artefact”. However, while my analysis has its point of departure in the idea that designers do inscribe gender in their products, I will not analyse designers’ intentions and actions, but my focus will be on an active user who ascribe devices’ gender scripts in different ways.

#### DATA

The data of the study were gathered with an internet survey (n = 405) in which people were asked to divide different domestic technologies<sup>1</sup> to "mostly feminine", "mostly masculine" or "gender neutral". The grounds for the division were not determined as the respondents were advised to use their own associations and justify their answers with their own words.

I adopted the idea of an on-line survey from Oudshoorn et al. [20] who organised an exhibition on gendered artifacts in which they introduced highly gendered objects such as Barbie dolls and Destroyers, and also gender neutral design, for example jeans and Dr. Martens boots. Alongside with the exhibition the researchers conducted a survey in which the visitors were asked to divide different objects into "mostly masculine", "mostly feminine", or "neutral". As expected, people did see objects as gendered, and most devices were viewed as being predominantly masculine or neutral. Interestingly only two of the technologies, typewriters and microwave ovens, were consistently attributed as being more feminine. However, there were also respondents who declined to see gender in objects, marked them all as neutral, and commented that it was a question of principle to treat material culture neutrally.

My survey was launched in October 2007 by e-mailing it to twenty friends, the mailing lists of staff and Masters students of the Department of Sociology and Social Psychology in University of Tampere, and the mailing list of *Teknologianet*<sup>2</sup>. To my surprise, the survey received plenty of interest and comments, and the number of

<sup>1</sup> Technologies in the survey were: microwave oven, TV, hairdryer, computer, refrigerator, radio, washing machine, VHS player, DVD player, coffeemaker, and stereo equipment.

<sup>2</sup> Finnish society for people working in technology-related fields such as research and design.

responses reached over four hundred in the three weeks following the launch.

In this paper I concentrate on a descriptive analysis of the survey and an analysis of the open answers in which the respondents justified their choices. In order to conduct more elaborated quantitative procedures in the future, the respondents were asked to give background information at the start of the survey. It is worth noticing that the data of 405 respondents were biased in terms of gender, age, education, and income, as over two third of respondents were women, the median age was strongly situated between 25 and 40 years, half of the respondents had a higher degree from university or polytechnic, and nearly half of the respondents’ income was between 20 000 and 50 000 euros per year. The data does not represent, thus, an overall population in Finland, but is a sample of middle-class, well-educated adults.

#### ASCORBING GENDER

##### Do gadgets have gender?

It is commonly argued in feminist technology studies that machines and other technical objects are regarded as masculine in Western cultures. While technology is associated with objectivity, knowledge, and hardness, with all of the things customarily affiliated with masculine qualities, women are more associated with sensuality, social relationships, nurturing etc. [for example 13, 26, 27.]

**Table 1. Gender of domestic technologies (n = 405)**

	More masculine %	More feminine %	Gender neutral %
<b>The most neutral</b>			
Radio	14,6	11,6	73,8
Microwave oven	18,8	4,9	70,1
Refrigerator	18,3	12,3	69,4
Coffee maker	9,9	30,6	59,5
<b>The most feminine</b>			
Hairdryer	1,7	91,4	6,9
Washing machine	7,7	64,0	28,4
<b>The most masculine</b>			
Stereo equipment	58,5	3,7	37,8
Computer	52,6	2,5	44,9
Television	49,1	4,9	45,9
VHS player	42,7	7,2	50,1
DVD player	40,2	8,9	50,9

In my data, all the addressed technologies were seen as somewhat gendered. In Table 1. the distribution is shown gadget by gadget.

As table 1 shows, the most commonly gendered objects were hairdryer and washing machine, both of which were considered rather unanimously feminine. Stereo equipment, computer, VHS player, and DVD player were also seen in a gendered light as the majority of the respondents regarded them to be more masculine. The most neutral devices, in turn, were radio, microwave oven, refrigerator, and coffee maker, respectively.

However, these figures are not that unequivocal since many of the respondents still deployed the gender division despite marking the gadget as neutral. For example, when asking about the gender status of a radio, one male respondent (ID10) clarified that a "car radio is more masculine, and radio in the workplace is more feminine". Further, he elaborated that "there are clearly masculine and clearly feminine models in stereo equipment", although his general answer in that case was also gender neutral.

In terms of computers, the main factor connected with gender was its portability. Many respondents assessed computers as gender neutral but still argued in the text space that it "depends on the computer. Desk top is more masculine, whereas lap top is more feminine" (woman ID17). Despite the generally gender neutral nature of refrigerators, the gender dichotomy became evident in a peaceful coexistence of genders inside the device. One male (ID9), for instance, described how "beer (man) and salads (woman) are next to each other in the trays of a refrigerator".

### How do gadgets have gender?

Figures presented above demonstrate that people are able to deploy the social category of gender in terms of material devices. However, as such those plain numbers do not highlight *how* a specific gadget is gendered. To obtain a more detailed and subtle understanding of this social nature of technologies, we must turn to contemplate more deeply the open answers in which the respondents elaborated their choices. This inquiry shows that there are three discursive methods through which people ascribe gender from technologies: expertise discourse, appearance and sound discourse, and anthropomorphism discourse.

#### *Expertise discourse*

The first means to give gendered meaning to an object was through an expertise discourse in which it was common to ponder *who understands the gadget better*, that is, who maintain, updates, and counsels others to use the device? Not so unexpectedly, almost all of the devices in this cluster were considered masculine<sup>3</sup>. Computers, VHS

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<sup>3</sup> This masculine discourse of expertise was rather commonly used in the data, which is not very surprising since it has been noticed in feminist technology studies

players and DVD players were especially categorised by expertness. In terms of the VHS player, expertise was indicated through an ability to program the device. With the words of the male respondent (ID15): "In case of a VHS player, there is this myth that only a male having PhD in technology knows how to timer the device". In addition, if the respondent did not consider the computer to be masculine, she/he commonly made clear that their situation was a deviant one. As one female respondent (ID75) recounted after marking the computer as feminine, "I think we are an anomaly in this case because I work with computer all the time at home, and my husband works somewhere else. He needs a computer only occasionally. It is me who also takes care of installations etc." The only domestic technology in which women were commonly given a role of specialist was the washing machine. Especially men were keen to point out with a hint of humour and self deprecation that, for example, "it is that mystic device that only women can use" (Male ID41), or "it is that miraculous gadget into which you tuck socks and then they come out clean" (Male ID16).

In expertise talk the gender division was justified also by *who is considered to be more interested* in the device in question. Stereo equipment, strongly associated with masculinity, was depicted particularly through men's enthusiasm, and this was often considered silly or an extension of one's manhood. In the words of one male respondent (ID 41): "Stereos are a device which is part of a masculine armament race. The sturdier the bass, the bigger the balls".

Further, *the newness of technology* affected the perceived gender of technologies and in this way also expertise, since the newer and more complicated the device, the more masculine it was regarded. Particularly the concept of hi-fi was affiliated with men, as one female respondent's (ID14) answer for stereo equipment indicates: "Stereo equipment reminds me of the enthusiastic hi-fi amateurs, who are all men"<sup>4</sup>.

Combining the overall idea of masculine expertise, it was rather unexpected that both men and women respondents evaluated that manly devices are difficult, or even impossible to use, and feminine technology was given praise since it was considered to be practical and simple. For example, one female respondent (ID19) marked both VHS player and DVD player as masculine and explained: "These [VHS players] can be diabolically hard to use

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that technical competence is usually connected to men [for example 17, 21]

<sup>4</sup> The masculine nature of "hifisters" is noticed commonly also by stereo hobbyist themselves who call a conflict in a family caused by their technical hobby "a wife acceptance factor" (commonly abbreviated as WAF).

because programming has been executed with men's logic", and "These too [DVD players] have inconceivable complications, so these are men's products".

#### *Appearance and sound discourse*

Interestingly, another commonly-used way to divide technology into masculine and feminine categories was *by their appearance*. Firstly, manly gadgets were described to be big, black, and angular, that is, box-shaped. For example, one female respondent (ID11) argued about a microwave oven that "it has features of both masculine and feminine; cooking is feminine, but an appearance (that is box-like) is masculine. The other female (ID31) gave a subtle account about computer's gender by elaborating:

The ordinary table computer is more masculine to me, but the laptop is more feminine. Maybe the lightness of the laptop and its small size makes it more feminine, whereas table computers' big size and multi-element structure feels more masculine. Overall the use of computer is gender neutral, although modes of use may vary in terms of gender.

Worth noticing is that the same association of lightness and femininity was seen also in new, flat television screens. Many respondents explicated that albeit televisions in general are more masculine, the newer flat models reflect femininity. To quote one female respondent's (ID68) answer: "Television is a big, technical looking box. Flat screens are moving towards a more feminine way".

In accordance with the appearance, a *gadget's sound* also was considered important in dividing masculine and feminine technologies. An opinion frequently expressed was that the louder the noise, the more masculine the device. For example, stereo equipment sometimes got ascribed its masculine nature through volume. Furthermore, a coffee maker also received its feminine character through its voice which was depicted as "snuffling" (Male ID67), or "percolating" and "babbling" (Female ID40). The usual notion was that the sound of feminine devices is more continuous and stable in comparison to masculine technologies with their more distracting and outrageous noise.

The same kind of notion of gendered appearance of material objects is also detected by Kirkham & Attfield [10] who write about the "pervasiveness, persistence and power as well as usefulness of binary oppositions" and argue that:

they (binary oppositions) play a part in the gender differentiation of many objects, particularly in relation to colour and size. In our society today, the main visual oppositions which cluster around that of male/female include dark/light, pink/blue and large/small, although others such as

geometric/organic, smooth/rough and hard/soft also apply.

As the gendered discourse of appearance implies, technologies are not just neutral tools to achieve a goal. Further, what technologies look like is not an indifferent matter and their appearance is not merely an issue of aesthetics, but has also practical consequences as a certain gendered image of the device implies also who is intended to use the gadget and how it is used.

#### *Anthropomorphism discourse*

Finally, perhaps the most obvious way to divide domestic technologies into genders was to think *who uses them more often*. The most feminine devices, the hairdryer and washing machine, were given their significance particularly according to their expected user. The gendered status of a washing machine was so strong that if a respondent marked it to be a gender neutral object, she/he usually still mentioned the common feminine image of the machine in an open answer. For example, one male respondent (ID15) explained that "although in our house it is a man who washes the laundry, there are also other customs". One of the female respondents (ID31) also elaborated: "In my opinion doing laundry is gender neutral. Using a washing machine is not bound to a certain gender in my inner circle, although in the traditional division of labour women has been responsible for laundry."

Another, more prominent example of anthropomorphism was seen as "*the touch of place*", and yet again, this feature was notable when talking about feminine devices. For example, one male respondent (ID 298) unravelled the microwave oven's gender identity as follows: "you put something inside it and it is associates with the kitchen which is still associated with a woman who fiddles in the kitchen".

Given the substantial feminine nature of this discourse, it could be asked if feminine contact differs from masculine. Is it more resilient and effective, leaving a more permanent mark in the object it touches, while the masculine character of devices is more likely to be achieved through inner or outer qualities of the device, that is, through newness or an appearance. Feminine touch was depicted as being so forceful that it also operates indirectly through the surrounding space: devices situated in the kitchen - which is considered to be a feminine area in the home - are therefore seen as feminine. Accordingly, a woman does not even need to touch the gadget to make it gendered; it is merely her imagined presence in the space that is sufficient to mediate a feminine identity to a device.

In this discourse technology is considered to be an extension of humanity in the way that if a gendered human touches the device by using it, or is present in the same room, the device becomes gendered in a certain way. This is an interesting result since in Western cultures there has

been a strong tendency to distinguish humans and materiality, culture and nature, from each other, and this classification has also been hierarchical as humans are constantly raised over substance [for example 11, 12, 18, 19, 22].

**CONCLUSION**

**Table 2. Summary of masculine and feminine attributes of domestic technologies**

Attribute	Masculine	Feminine
<b>Appearance</b>	Big, angular, black, static, ugly, many buttons and indicators	Rounded corners, portable, beautiful, light colours, simple looking
<b>Usability</b>	Hard to use, requires expertise	Easy to use, if requires expertise it is common sense
<b>Technicality</b>	Lot of technique	Simple technique
<b>Sound</b>	Noisy, aggressive	Silent, percolating
<b>Rate of Novelty</b>	New innovation	Old and familiar, archaic
<b>Use</b>	Entertainment, status improvement	Cleaning, cooking, cosmetic care

In table 2. all the gendered features of technologies introduced in the previous chapter are summarised. In this stereotypical and dichotomised classification masculine and feminine devices seem to be distinguished quite strongly from each other, and as a practical consequence they do not seem to leave much of an agency for people using them. For example, men are considered to use technologies mainly for entertainment purposes or as status improvement, while women are taking care of the household and themselves by doing chores and using technologies for cosmetic care. To continue, women do not understand complicated technologies and prefer older and simpler “push-the-button” devices, while men are interested in novelties and are capable to compile, use, maintain, and fix complicated gadgets. Further again, women are physically smaller built, sensitive creatures, and have their eyes on beauty as feminine gadgets are light, carefully designed, silent, and pretty, whereas men are more robust and associated with noise and ugly, un-designed black boxes. In conclusion, feminine gadgets represent the body (nurture, make-up, eating and cooking) and human-centredness (simple and beautiful gadgets). Masculinity in technology, in turn, denotes rationality; intellectual capabilities and technical expertise.

The masculine nature of technologies is, as stated before, widely noticed in feminist research. However, the truth may not be this black and white if an on-line survey’s open answers are dug a little deeper. Further inspection reveals that alongside these traditional images of male providers and housewives, respondents mentioned also a rich array of other gendered and sexualised positions consisting for example of metrosexual men, old men/women, and gay men/women. Gender images did not strictly follow the traditional division of man versus woman, since, for example, in some cases older men (or old-fashioned men) were considered to have lower value than “ordinary” men. Thus, being a man or a woman, or a man-like or woman-like device, did not solely determine hierarchical status, but gender was ascribed in a wider context containing people of different ages and sexuality, and different places in which the device is used.

By saying this I do not want to deny that women may feel (or are) oppressed in many technology-related issues, and this inequality was seen also in my data when some female respondents criticised the state of things in their lives and in the world. However, it is also worth noticing that masculinity was not just preferred or considered better in this data, as femininity in technologies was quite often seen to be more finished, designed and beautiful, and to be easier to use. Again, although women’s technical competence is often hidden or not acknowledged at all [for example 4, 7], feminine expertise was somehow noticed in my survey; although usually in terms of feminine gadgets, but sometimes also in terms of computing.

**DISCUSSION AND FURTHER SCOPE OF ANALYSIS**

In the end the analysis seems to provide more questions than simple answers, and the results are quite vague. Although the analysis may help to understand the ways in which people classify technologies, and it proves that devices are not just instrumental tools but are embedded in the social lives of people and can be applied a gendered status, it seems to me that gender alone is not adequate to describe the social identities given to different technologies. Age in particular tends to intertwine with gender in many answers, and this dimension operates in two levels. To begin with, it is an attribute attached to the device in its own terms and becomes most obvious in the case of novelty. For example, a VHS player is considered to be old and robust technology, and its “not-so-fancy” gendered image of an old man is entwined with these technical features. But it is not only the newness or obsolescence of the technology that age refers to, but also an age of the average user, that is, a user to whom a respondent envisions a device to be addressed. Stereo equipment, for example, was frequently depicted as more masculine because of an image of young men trying to impress others with their massive sound systems. In what follows is an enmeshing of human and object, social and material. In other words, gadgets are given gendered and aged meanings occasionally in their own terms, but

sometimes it is the user, whether an imagined or real one, who mediates these meanings to the device.

What also attracted my attention in the analysis was the notion of the relationship between technology and people. The survey is based on the idea of a reciprocal relationship between technology and people, that is, there is one device which a person is in a relationship with, and both of the parties are able to communicate and affect another. However, in the course of the analysis this setting turned out to be too straightforward, and it became apparent that there are also other relations having an effect on possible social statuses of both devices and people, such as those between technology-technology, and people-technologies (not just one device). As a result, one device is a part of the bigger structure of many devices, and following a structuralist thinking of goods [8] it acquires its meaning also in terms of this broader context. For example, a VHS player was several times compared to a DVD player, and the refrigerator was mentioned in terms of other kitchen appliances, and their gender identities also were affected by this grouping. To extend the scheme and consider all the domestic technologies, the main division was usually made between brown goods and white goods; those aimed to entertain, and those intended to save time. When a certain device was classified under either category, it was then compared to other devices of that kind and the status was given according to this two-stepped process of thinking.

To achieve more subtle understanding of social identities of devices, my next analytical step will broaden the focus of gender with age and with the structuralist understanding of technologies. In other words, future analytical actions will not just be about one dimension of identity - gender in this case - but about social reproduction of identity that entails different dimensions of social categories.

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