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9

Materialized Gender: How Shavers Configure the Users' Femininity and Masculinity

Ellen van Oost

The relation between gender and the material environment, the day-to-day objects that surround us, has recently enjoyed growing interest in the fields of cultural studies, gender studies, and social studies of technology (Horowitz and Mohun 1998; Rothschild 1999; Sparke 1996; Cockburn and Ormrod 1993; Cockburn and Fürst-Dilic 1994; Kirkham 1996; Lie and Sørensen 1996; Oudshoorn 1996; van Oost 1995). These studies contribute—each in its own way—to insight into the complexity and the myriad ways in which gender and material objects are related and mutually constitute each other.

In this field there is a considerable body of work focusing on the processes of how material objects acquire gendered meaning. These studies, especially in the domestic sphere, have analyzed the way men and women accommodate and appropriate new technology in their daily life. A study of gender and the telephone, for instance, found that telephone use became for women a way of expressing their femininity (Rakow 1992). But the appropriation of the telephone by female users not only (re)shaped femininity, but also the telephone itself was being reshaped (Martin 1991). The telephone, originally designed and marketed as a business communication tool, was gradually transformed into to a more general instrument of social communication in the private domain. The main insight to be gained from the type of gender and technology studies that focuses on the use of technology, is that the domestication of new technology is a process of mutual adaptation in which both gender and technology are being (re)shaped.

The gendered meaning given to a technical artifact is often diverse and dependent on the specific use context. For example, different groups have been found to attribute different and often conflicting meanings to computers (Lie 1996; van Oost 2000). Some groups of men constructed the computer as a complex and difficult technology. In this

case the skills required to control it became a new way of expressing masculinity. Other groups, however, associated computers with routine office work performed principally by women; the groups did not attribute a high status to computers.

The use context is evidently an important locus in which material objects can function as symbols expressing a gendered meaning. The appropriation of material goods into one's daily life is an important way in which individuals construct their gendered identity. However, the use context is not the only place where objects acquire a gendered connotation. Producers, too, develop and market their products bearing in mind the values and symbols they see as central to the targeted consumer group. A Siemens manager (cited in Verbeek 2000: 12) formulated it this way: "We don't sell appliances, but a lifestyle." Producers know—more than anyone —that it is at the "consumption junction" that success or failure of their product will be manifested (Cowan 1987).

Advertising is an important locus for linking an object to a specific consumer group (Hubak 1996; Kirkham 1996). By creating links between the advertised object and (sub)culturally accepted masculine or feminine symbols, advertisers hope to seduce the targeted group to buy the product. At the same time they actually construct gender and the means to perform gender.

This chapter, however, will focus primarily on the analysis of the objects themselves and the way the gender of the envisioned user influenced the material design of the object. Chabaud-Rychter (1994) was one of the first to study the different ways women users were brought into the design process of consumer appliances. She analyzed the construction of women users as the results of a twofold strategy of designers that aims both at learning about them and at shaping them. I will use the concept of gender script to illuminate how gendered user representations are an inextricably part of designing artifacts. As such artifacts are not neutral objects that only acquire a gendered connotation in advertising or in use; to a certain extent they "guide" the process of giving meaning.

The objects that are central to my study are Philips electric shavers. Shavers are interesting for a gender script analysis because the development of shavers dichotomized into shavers for men and shavers for women. The multinational company Philips is the most important player in the market of electric shavers. Philips was founded in The Netherlands in the late nineteenth century as a manufacturer of incandescent lamps. In the first half of the twentieth century, the company grew into one of the largest multinationals in the area of electrical (later

electronic) products. Philips was one of the first producers of electric shavers and has been the market leader in electric shaving appliances for more than 40 years.

Gender Script as Analytic Tool

The inscription of the designers' projected user—or more generally formulated the envisioned use situation—has become an important theme in technology studies. Woolgar (1991) analyzed the design process as a struggle to configure—that is, to define, enable, and constrain—the user. Akrich (1992, 1995) introduced the concept of "script" to make visible how designers' representations of users shape technological development, and how subsequently the artifact shapes the users' environment. Designers construct—explicitly or implicitly—images of users "with specific tastes, competences, motives, aspirations, political prejudices, etc." and inscribe these representations in the technical content of the new artifact (Akrich 1992: 208). As a result, artifacts contain a script and this script prescribes (in a more or less coercive manner) what users have to do (or not do) to produce the envisioned functioning of the technological artifact.

Akrich's script approach has been extended to include gender analysis by introducing the concept of "gender script" (van Oost 1995; Oudshoorn 1996; Rommes et al. 1999; Rommes 2002). "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 artifact. Like gender itself, which is defined as a multi-level process, gender scripts function on an individual and a symbolic level, reflecting and constructing gender identities, and on a structural level, reflecting and constructing gender differences in the division of labor. An illustrative example of the latter is given by Hofmann (1996), who found the asymmetrical labor relation between female secretaries and their male bosses reflected in the software structure of the early dedicated word processors.

Gender can be an explicit or an implicit element in the design process. When products are designed for either female or male consumers, gendering is often an explicit process. Existing or even stereotyped images of projected gender identities are transformed into design specifications that are in accordance with cultural symbols of masculinity or femininity. Penny Sparke (1996) provided an extensive elaboration on such cultural symbols in *As Long as It's Pink: The Sexual Politics of Taste.*

Gender scripts can also result from implicit processes. Many objects and artifacts are designed for "everybody," with no specific user group in mind. However, recent studies have shown that in those cases in which designers develop artifacts for "everybody" they often unconsciously base their design choices on a one-sided, male user image (Rommes et al. 1999, 2002). Designers and engineers—mostly men[1]—often use the so-called I-methodology, implying that they see themselves as the potential user, thus creating a gender bias toward male-dominated symbols and competencies. Furthermore, designers often test their products in their own—usually male-dominated—environment. In such cases, the user representation that designers generate is one-sided, emphasizing the characteristics of the designers themselves and neglecting the diversity of the envisioned user group. Configuring the user as "everybody" in practice often leads to a product that is biased toward young, white, well-educated male users, reflecting the composition of the designer's own group (Oudshoorn et al., forthcoming).

Objects, thus, can be perceived as actors that can direct meaning themselves (Akrich 1992; Latour 1997). The use of objects with a gender script often implies a maintaining or reinforcing of prevailing gender definitions. The gender scripts of early dedicated word processors tend to reinforce existing gender inequalities in labor relations. The preferences, competencies and interests of the designers themselves, which served as guidelines in design, may inhibit other social groups (elderly, ethnic, female, poorly educated) from using the artifact.

Clearly the impact of the gender script is neither determined by the artifact nor stable. Gender is an analytical category, the content of which is constantly being negotiated, and objects with inscribed gender relations are actors in these negotiation processes. Obviously, scripts cannot determine the behavior of users, their attribution of meaning or the way they use the object to construct their identity, as this would lead to the pitfall of technological determinism. Users don't have to accept the script, it is possible for them to reject or adapt it. Gender scripts do not force users to construct specific gender identities, but scripts surely act invitingly and/or inhibitingly (Verbeek 2000: 191).

In this chapter, a comparison of the design trajectories of two analogous devices (the Philishave for men and the Ladyshave for women) is used as a method to render visible the gender script of shavers—that is, the inscribed representations of the male and the female consumers. The analysis on the level of artifacts is primarily based on the materials (photographs and product information) collected by Bram Porrey, member

of the Dutch Philishave Collector Group.[2] Secondary literature on the historical development of shaving technology (Baudet 1986; Derks et al. 1996; Porrey 1998) is used to contextualize the development of the diverse models.

The Shaping of Electric Shavers

The first electric shavers were developed in the 1920s in the context of the search for safe shaving technology (Baudet 1986). With the traditional straight razor, used by barbers, bloodbaths could only be prevented by experienced hands. A number of individuals were instrumental in the development of the safety razor in the second half of the nineteenth century. But it was the invention of disposable razor blades by King Camp Gillette in 1903 that led to the development of the most successful safety razors in the first half of the twentieth century (Derks et al. 1996). The success of the safety razor stimulated the shift of the shaving location from the barbershop to the home. This shift is characteristic for the much wider development of the consumer society in which the home has become the central unit of consumption (Lubar 1998). Although the safety razor was safe in use, the changing of blades was responsible for a considerable number of injuries. In search of a solution for this problem, Jacob Schick was the first to develop and market an electric dry shaver in 1929.[3] As homes were gradually fitted with electricity, electric shaving became an option. Schick's shaving technology was based on the "clipper system" (Derks et al. 1996). This system consisted of two combs to guide the hairs, with an oscillating, indented knife in between. Electric dry shaving became increasingly popular in the 1930s, and Schick's company acquired several competitors.[4]

At the end of the 1930s Philips entered the market for electric shavers. At that time Philips's main products were light bulbs and radios. During the economic recession of the 1930s the company was in search of new products to keep sales up (Derks et al. 1996). Philips sent an employee to the United States to collect ideas and products. He returned with a suitcase full of electrical devices, among them a number of electric shavers. In the research laboratory of Philips, Alexandre Horowitz, an engineer from the Delft University of Technology initiated the development of a new electric shaver (Baudet 1986). Instead of an oscillating system, he designed a rotating system with three chisels rotating at high speed under a grid. The rotating razor system eventually became the successful trademark of Philips electric shavers, which
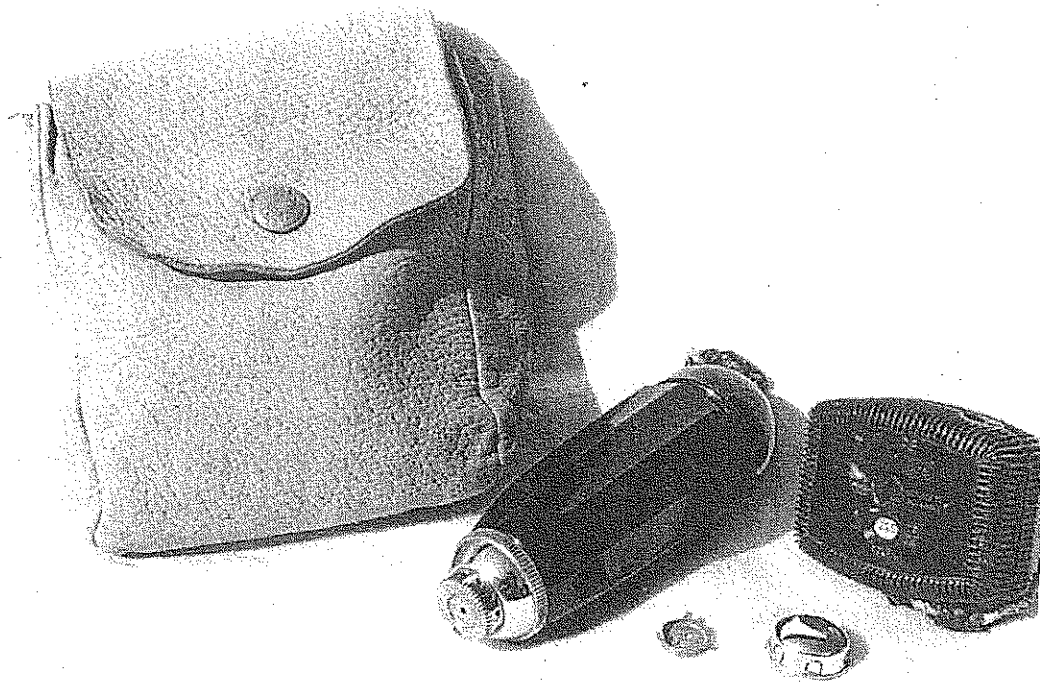
Figure 1
The first Philips electric shaver (1939).

were marketed under the names Philishave in Europe and Norelco in the United States.

The first Philips shaver had one shaving head. The bar-shaped body (nicknamed the "cigar") was made of black Bakelite and was delivered with a leather holder. It was presented at Philips's 1939 Spring Exhibition. World War II prevented the "cigar" from becoming a clear success (Derks et al. 1996). In 1946 the company marketed an improved version. Nicknamed the "steel beard," it had the same shape and appearance as the "cigar" but was more robust. It had a larger shaving head and steel blades. Philips gained a place in the market with an intensive marketing campaign and numerous demonstrations (Baudet 1986). The advertising strategy was directed at male users and emphasized the discomfort of wet shaving at a time when the average home in the Netherlands did not have running hot water. With the "steel beard," Philips conquered a segment of the shaving market in the Netherlands.

The next model, introduced in 1948, was even more successful. Nicknamed the "egg," it was ergonomically well designed. The two-head model, introduced in 1951, considerably shortened the time needed for
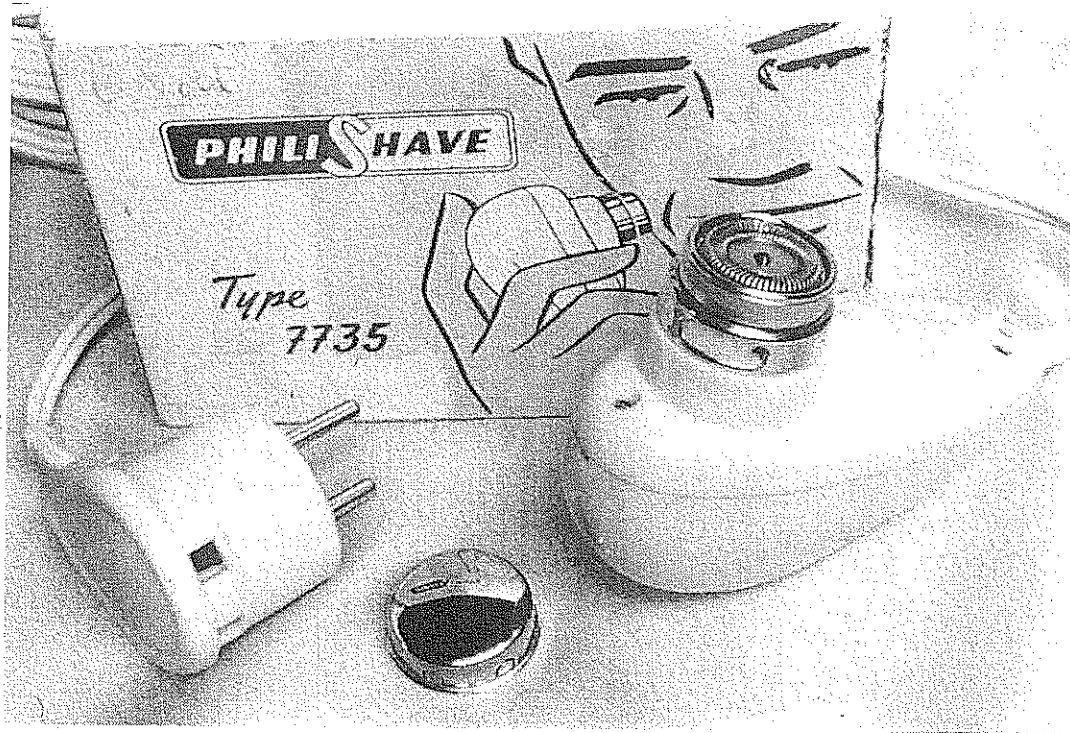
Figure 2
The "egg" model for men (1948).

shaving. The use of new, light-colored synthetic materials was seen as a prerequisite for success, especially in the American market. After World War II, Bakelite was perceived as old-fashioned; ivory-colored plastic was considered modern (Derks et al. 1996).

Philips managed to link this new, modern device to a masculine image. Anthony Quinn used a Philips doubleheader in one of his film roles (Derks et al. 1996). Another marketing technique that proved effective was to provide airline companies with battery-powered shavers imprinted with the airline company's logo. In this way Philips not only linked its shavers with the modern symbol of speed (the airplane) but also saw to it that well-to-do male travelers became acquainted with them. The two-head model became Philips's most successful shaver in the 1950s and the 1960s. The system was improved by the addition of the "fliptop cleaning system." With one press of a little button, the shaving head opened, allowing fast cleaning of the chamber that collected shaven hairs. This innovation was employed in the successor to the doubleheader "egg," launched in 1957. In 1959 this shaver acquired yet another new feature: "floating heads." The two heads were suspended on springs so as to better follow curved facial areas. In 1966 Philips introduced a tripleheader.

Figure 3
The "egg" model for women (1951).

Shavers for Men and Shavers for Women

Although the "cigar" and the "steel beard" were marketed primarily for men, women were also seen as potential users. The market for shaving devices for women had already grown in the first decades of the twentieth century (Derks et al. 1996). Changing fashion, uncovering more parts of the female body, contributed to the growing female practice of removing hair from the armpits, the neck, and the legs. In the 1910s and the 1920s producers of safety razors like Gillette put models specifically meant for women on the market, most of them smaller and rounder to better fit the armpit. In 1939, when Philips introduced its first electric shaver, it already saw women as potential users; indeed, the manual for that shaver included a substantial explanation addressed to women.

With its second generation of shavers, Philips began to differentiate between male and female users. In 1950, Philips's first shaver for women only, the Beautiphil, was introduced. The Beautiphil was a version of the "egg" designed to deal with a different type of hair: there was more space between the slots in the head, and the hair chamber was larger. However, the Beautiphil looked very similar to the men's shaver. Only the storage
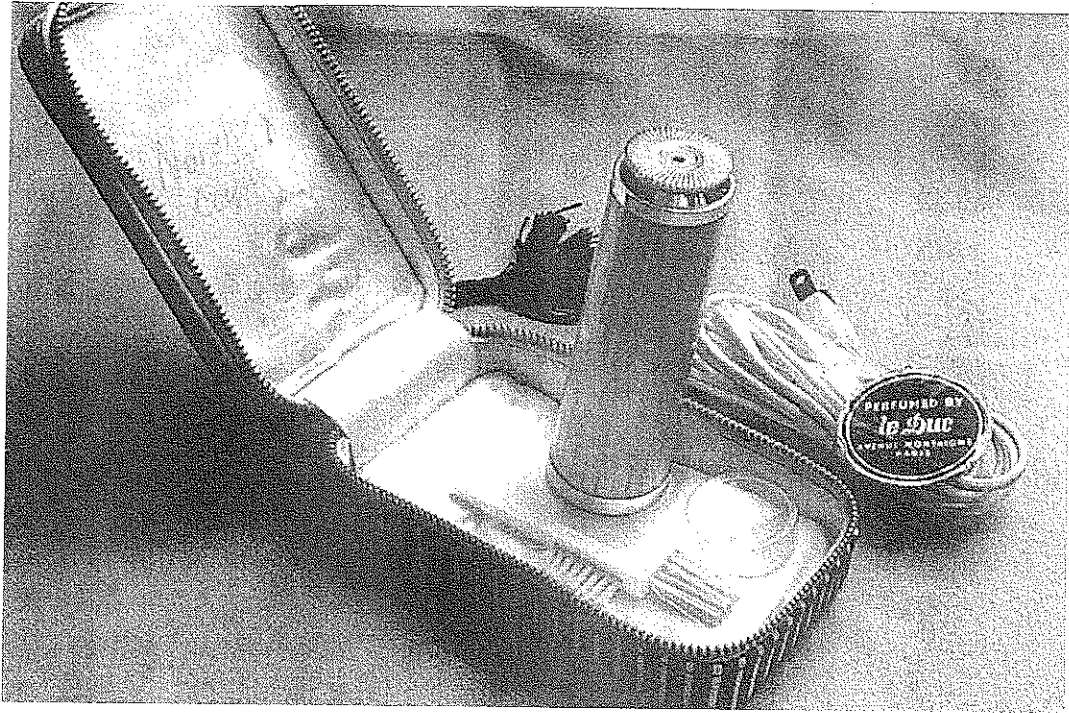
Figure 4
The "lipstick" shaver for women (1959).

case was given a feminine touch. The later double- and tripleheaders too had versions for women. The ladies' shavers were nearly the same as the men's; they differed only in being pink and in having slightly different heads.

The main design strategy used in the 1950s and the 1960s to tailor a shaver for female users was to give it recognizable female-coded features, such as a pink housing or a round red storage case. Philips's competitor Braun followed a similar strategy, decorating its women's shavers with little imitation diamonds.

However, in the late 1950s Philips also produced a few women's shavers that cannot be characterized as mere shallow adaptations of men's models. The design was fundamentally distinct from all prevailing models. It can be labeled as a new gender dimension in Philips's practice of designing for women: the masking of technology and shaving. An illuminating example from that period is the "lipstick," whose design emphasized an association with cosmetics instead of with an electrical device and shaving. The masking of the technology was completed by a little pad saturated with perfume to conceal the smell of motor oil. The avoidance of the association with "male" shaving in the case of women using shaving devices was not new.

The design of the "lipstick" fitted into an already existing tradition of avoiding the connotation of male shaving in the case of women's use of shaving devices. Gillette, for instance, had already in the 1920s and the 1930s cautiously avoided the term "shaving" when advertising its products for women. Their first safety razor for women was called Milady Décolletée.[5] The masking of the technical elements for women, however, was a new dimension in Philips shavers design. This dimension would gain importance in designing for male and female users, as we will see.

In the early 1960s, Philips decided to discard the characteristic rotating system for the Ladyshaves (this name had been used since 1956) and replace it with the so-called oscillating system. In this system a clipper head with slots or a foil with small holes catches the hairs that are subsequently cut by oscillating knives. This system—that was standard in all shavers of competitors Remington and Braun—was more effective in meeting specific demands for shaving both legs and armpits. Moreover, the change fitted with the Philips marketing strategy of visually separating the products for female depilation from the male segment. In 1967, Philips also decided to establish a separate production line for Ladyshaves in Austria (Klagenfurst). The production of Philishaves remained in The Netherlands (Drachten). From now on, not only the outside design was different but also the technology inside became specialized. In fact, the whole design, development and production trajectory of Philishaves and Ladyshaves became separated. This segregation on the organizational level was reflected in a widening of the design differences between the two shaving devices. Two different design cultures came into being.

On the one hand, one can see this segregation as a kind of emancipation of the Ladyshave from the Philishave. The Ladyshave was no longer just a derivative of the successful Philishave, like Eve made out of Adam's rib. Now it had its own design and production environment. On the other hand, it also meant that the gender differences could become a more basic and integral part of the design cultures, resulting in a more explicit stereotypical gender script in both Philishave and Ladyshave. The masking of technology and its detachment from male "shaving" gradually would become a core issue in the design culture of Ladyshaves. The premise of the Ladyshave design philosophy became— and still is—that women dislike the association with technology. As a consequence, the Ladyshave was designed and marketed as a cosmetic device, not as an electric appliance. This development is in strong contrast to the design philosophy of Philishaves which can be characterized

Figure 5
The "telephone hook model" for men (1982).

by an emphasis on technology, as we will see by looking at subsequent developments.

In the early 1970s the tripleheader became standard in the Philishaves and improvements were primarily gradual ones (more groves and more/sharper chisels). In 1975 a new so-called TH-design (Telephone Hook) was introduced (a standing model, but with the triple head in a slanting position at the top). This type of model is standard for tripleheaders to this day. In the second half of the 1970s the ivory color and round shapes of the Philishaves disappeared. Instead, black and metallic colors were used and the shapes became bolder. New too, were adjustable shaving heads that allowed the user to adapt the apparatus to his own preference necessitating an extra regulating button.

No basic changes were made to the Ladyshave in the 1970s. The more expensive models were not sold as shavers but as beauty sets and were equipped with several accessories. Within the new design culture of the Ladyshave, the assembly of parts was not done with screws (as was the Philishave) but instead by a so-called clicking system: once clicked together it was impossible—especially for users—to open the device. The clicking system fitted into the design strategy of masking technology:
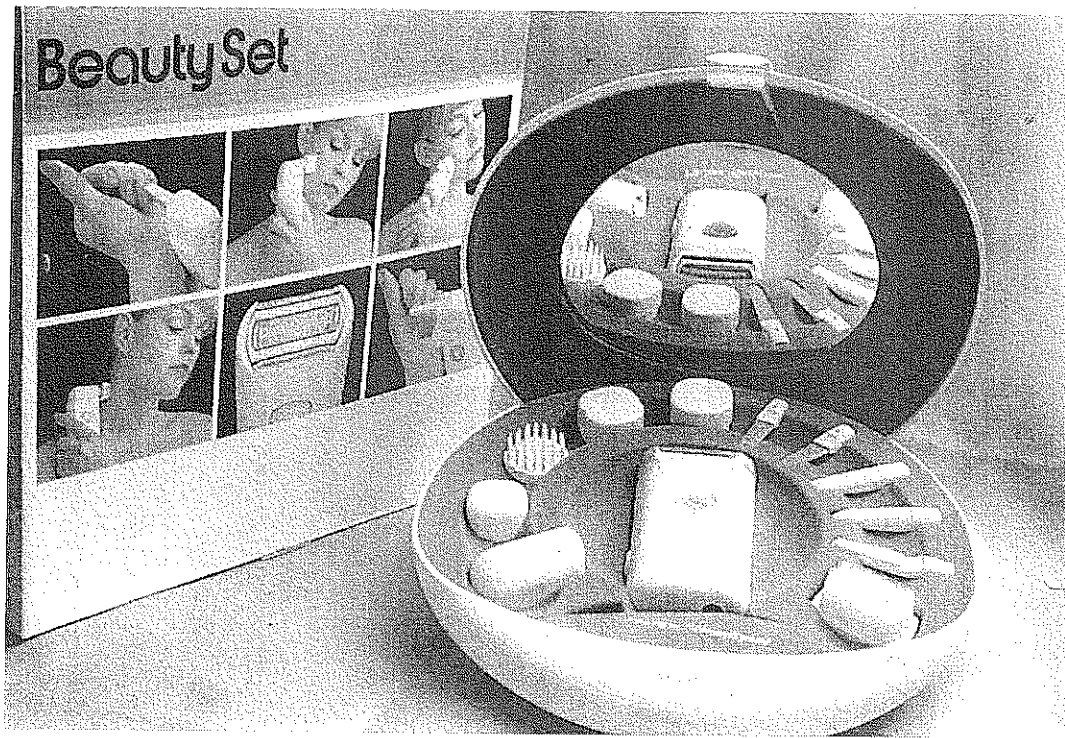
Figure 6
The Ladyshave beauty set (1979).

visible screws would only enhance the undesired association with the technological content instead of cosmetics.

In the mid 1980s, Philips brought a remarkable innovation on the market: a washable Ladyshave using batteries. Some years later this principle was further developed in the Wet & Dry Ladyshave (1994) which women could use dry as well as while showering. The Wet & Dry Ladyshave was elegantly curved and pastel colored. It had one large button with icons for on/off and for armpit or leg. The advantage of using the shavers during showering was that the softened skin would then be caused less irritation by the shaving. This development again fits seamlessly in the design strategy of enhanced the association of the Ladyshave with cosmetics and body care and not with technology.

The developmental trajectory of the Philishave was quite different. Changes were introduced in three dimensions. The first aimed to improve the quality of the shaving process. With respect to smoothness of the skin, there was still a wide gap between dry and wet shaving. In 1980 Philips introduced a new system called Double Action: the first knife lifts the bristle a little and the second knife cuts the beard hair deeper. To emphasize this innovation the phrase "double action" was imprinted on the outside of the apparatus, a usage that
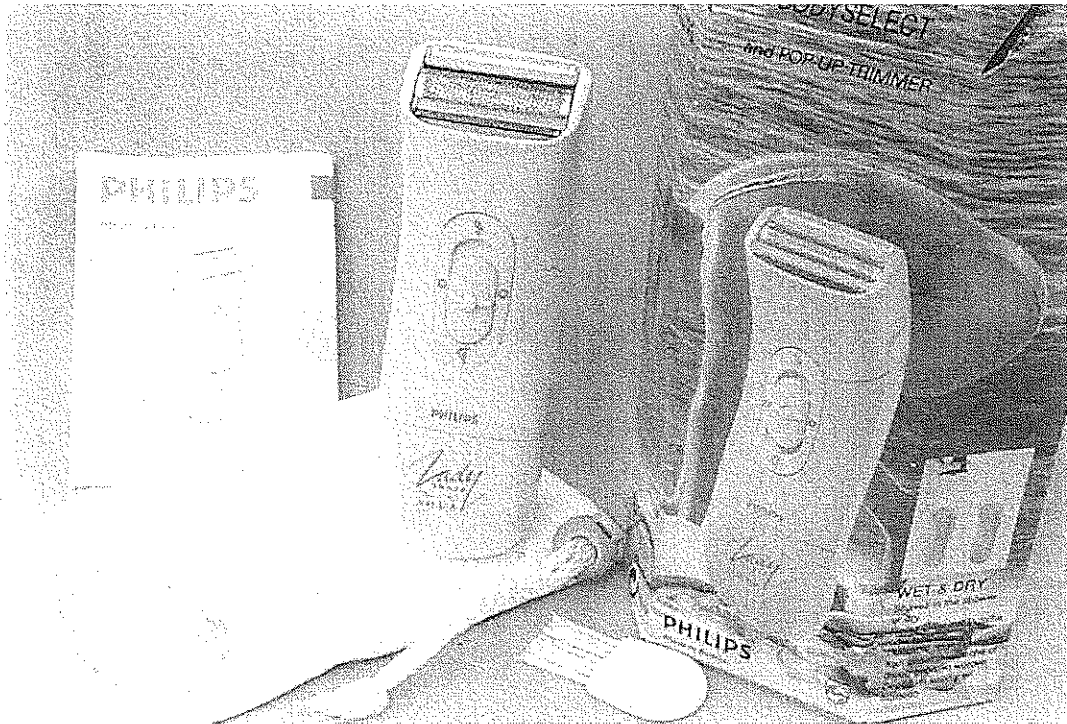
Figure 7
The Ladyshave Wet and Dry (1994).

still exists today. The Double Action system soon became standard in all Philishaves.

The second dimension of change was another weak point of the electric shaver compared to wet shaving: the need for a power point. Cordless shaving became the ideal. Philips had produced some battery-powered shavers, but the battery capacity was too low. In the mid 1980s the technology of rechargeable batteries and the reduction of transformer size was sufficiently developed to produce a usable rechargeable shaver. The rise of micro-electronics in the 1980s was the third dimension to put its stamp on the design of the Philishave. Micro-electronics were used to develop all kinds of monitoring in control features, such as information displays with charge control, number of personal shaving minutes left, etc. The more expensive the model, the more electronics was incorporated in the Philishave. This development continued until the late 1990s.

In January 1998 Philips introduced a new product to tempt the remaining wet shavers to go "electrical": the Cool Skin. This device brings an emulsion onto the skin during shaving that produces an effect resembling the sensation of wet shaving. The Cool Skin proved successful—especially in the United States, which still had 75 percent wet shavers at that time (Wollerich 2000). Also new in the Philishave design

Figure 8
A Philishave with information and control display (1996).

trajectory is that the shaving head of Cool Skin is washable. Both inno-
vations, the use of an emulsion and the washable shaving head, however,
had already been incorporated in the Ladyshaves for some years. Men
using the latest Philishave Quadra can shave under the shower and even
in the bath—possibilities that Ladyshave users had already for at least 5
years.

The Gender Script of Shavers: Constructing Technological Incompetence as Feminine

Masking the technology was a systematic element of the gender script of
the Ladyshave. The methods used included using perfume to mask the
smell of oil, linking the shaver to lipstick, transforming the shaver into a
beauty set, and eliminating visible screws. The script of the Ladyshaves
hides the technology for its users both in a symbolic way (by presenting
itself as a beauty set) and in a physical way (by not having screws that
would allow the device to be opened). The Ladyshave's design trajectory
was based on a representation of female users as technophobic. Whereas
the script of the Ladyshave aimed to conceal the technology inside for

the user, the Philishave design principle was the other way round. The new internal technology of Double Action was made visible on the outside to emphasize the latest technology. In the 1970s metallic and silver-colored materials functioned as tokens representing technological innovation. Slide controls on the outside offered the male user the possibility to relate to the technology within. From the mid 1980s electronic displays fulfilled the same function. The display provided the user with information about and control over what was inside. In the design culture of shavers certain elements were preserved only for men's devices, including black and metallic materials, displays with information and control possibilities, and references on the outside to the technology inside. The new domain of electronics was put fully in the service of developing the gender script of masculine control and technological competence. These types of interfaces and materials were unthinkable in the design culture of the Ladyshave.

The comparison of developmental trajectories of two similar products for women and for men proved to be fruitful for tracing gender scripts in artifacts. The analysis of gender scripts in shavers showed that the bond between men and technological competence has been inscribed firmly in the design of consumer appliances such as shavers. In this respect the shavers reflected the dominant gender symbols and identities, captured in the phrase "To feel technical competent is to feel manly." This quote from the British sociologist Cynthia Cockburn formulates concisely the intimate bond between technological competence and masculine identity that became widespread in the course of the twentieth century western society (Cockburn 1985: 12; Oldenziel 1999; Connell 1987).[6] The Philips shavers not only reflected this gendering of technological competence, they too constructed and strengthened the prevailing gendering of technological competence. The script of the Ladyshave not only "told" women about cultural norms with respect to the armpit and leg hair but also that they "ought to" dislike technology. Clearly, the gender script of the shavers cannot force users to invoke these gendered identities: women can reject the script (e.g. by shaving with a men's shaver or not shaving) or even modify the script (e.g. see it as a technological challenge to open the clicked Ladyshave). But the gender script of the Ladyshave inhibits (symbolic as well as material) the ability of women to see themselves as interested in technology and as technologically competent, whereas the gender script of the Philishaves invites men to see themselves that way. In other words: Philips not only produces shavers but also gender.

Concluding Remarks

This study primarily gave voice to the artifacts—and indirectly to its designers—but not to the female and male users. The question how such gender scripts actually were "read" and what roles the different involved actors had cannot be answered within the limited character of the scope and the empirical materials. A study of the users influence, both in designing and in using shaving devices, certainly will provide an even richer insight in the processes of how gender and technology shape each other mutually.

The content of gender—and thus also of gender scripts—is always situated in time and place. The design strategy of the latest Philishave products seems to converge toward the Ladyshave design. The Cool Skin and other new designs, the Quadra and the smaller two-head Philishave 400 Micro Action, lack an advanced display interface with information and control features. The control features—if present—are unobtrusive. The shape is full of round lines and the material has more (although subdued) colors. The Philishave 400 resembles the curved shape of the Ladyshave Wet & Dry and the Cool Skin allows for cosmetic connoted use under the shower. The Philishave design strategy for men that emphasizes control and technological competence, may well be in retreat at the start of the 21st century.

Acknowledgments

8. Source: Jaschik 1990. A subsequent study by the GAO of the FDA, presented to Congress in 1992, added fuel to the controversy surrounding that agency's policies on inclusion of women. After surveying manufacturers of drugs that had been approved by the agency in recent years, the investigators concluded that "for more than 60 percent of the drugs, the representation of women in the test population was less than the representation of women in the population with the corresponding disease" (Nadel 1992: 2–3).

9. Here I pass over the complex details of the legislative history from 1990 to 1993 (see Auerbach and Figert 1995; Narrigan et al. 1997; Primmer 1997). The first version of the act died in the House of Representatives in 1990. After its reintroduction, the act was passed by Congress in 1991 but vetoed by President Bush, largely because of his opposition to a separate section of the bill that would have overturned the ban on fetal tissue research. Once President Clinton, soon after his inauguration, issued an executive order throwing out the fetal tissue ban, the act moved quickly through Congress and thence to Clinton's desk. However, these changes to NIH research policy were only one dimension of the women's health agenda promoted by the Congressional Caucus on Women's Issues in the form of an omnibus "Women's Health Equity Act," and many of the other measures included therein never were enacted.

10. More generally, on the transformation of the politics of women's health in recent decades, see Weisman 1998, 2000; Treichler, Cartwright, and Penley 1998; Eckman 1998.

11. The revised directive, which took effect with the 2000 census, identifies "five minimum categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or other Pacific Islander, and White." It also specifies "two categories for data on ethnicity: 'Hispanic or Latino' and 'Not Hispanic or Latino.'" Finally, the revision allows respondents to identify themselves as belonging to more than one category.

12. As I have argued elsewhere, the fusion of these two kinds of claims—ethical and epistemological—in support of diverse, inclusive, and heterogeneous trials endowed the arguments of AIDS activists with particular force and credibility and helped them to travel back and forth between lay and expert arenas (Epstein 1995, 1996).

13. Clearly there are many potential implications of the new inclusionary policies, most of which are simply beyond the scope of this chapter. For an evaluative approach that focuses on questions of justice, see Baird 1999.

Chapter 9

1. In their studies of the design process, Walsh et al. (1992: 124) and Cockburn and Fürst Dilic (1994: 10) found only a few female designers.

2. Bram Porrey has created an extensive database and a catalogue with illustrations of all shaving devices that Philips produced since 1939. He is an active mem-

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ber of the Philishave Collector Club. This club of hobbyists was established in 1990, one year after the Philips invited diverse collectors to celebrate the fiftieth anniversary of the Philishave. In 1996 the Club had about 100 members. In 1996 the Collectors Club, which is independent of the Philips company, published *Van Klapmes tot Philishave*, a concise history of shaving devices (Derks et al. 1996).

3. The idea of electric dry shaving was generated in the late 1910s, but not until the end of the 1920s did electric motors became small enough to be used in shavers (Derks et al. 1996).

4. In the first half of the 1930s, more than 1.2 million electric dry shavers were sold in the United States (Derks et al. 1996: 16).

5. Other producers though did use the word "razor." Two examples were the "Women"s Razor" and the "Laurel Lady's Boudoir Safety Razor" (Derks et al. 1996: 37–38).

6. The content of gender is diverse, and not all masculinities have technological competence as a core issue. However, I agree with Connell (1987) that techno-logical competence is central to the dominant, hegemonic form of masculinity.

Chapter 10

1. For a similar criticism, see Silverstone and Haddon 1996.

2. Although my argument is very likely to be valid for the relationship between technology and identities in general, I will restrict my analysis to gender identities.

3. Actually, gender theorists adopting ethnomethodological and interactionist approaches have been the first to describe the ongoing processes of gender pre-sentation and gender attribution involved in categorizing people as belonging to a specific gender as "doing gender" (Garfinkel 1967; Goffman 1976; West and Zimmerman 1987). An early example of this sociological work on gender as process is Kessler and McKenna's *Gender: An Ethnomethodological Approach* (1978), which describes how we come to impute sex identity to people on the basis of how they perform gender. Butler's theory of performativity has enriched the view of gender as doing by incorporating theories of speech acts, psychoanalysis, and poststructural philosophy.

4. Butler's work represents a multi-disciplinary approach which combines theo-retical perspectives developed in Austin's theory of speech acts, the poststruc-turalist philosophy of Derrida and Foucault, and psychoanalytical theory (Austin 1962; Butler 1990, 1993).

5. Although Butler (1993) emphasizes the importance of language in producing gendered bodies, she does not argue that bodies are merely linguistic constructs. Butler's argument must be considered as an epistemological rather than an onto-logical claim (Vasterling 1999: 19).