

IT'S ALL ABOUT SEX. THE PECULIAR CASE OF TECHNOLOGY AND GENDER

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Abstract. *Gender and technology might seem unrelated on first sight because technology is often considered a neutral other that does not have anything to do with gender. Yet, taking a closer look at the language we use to talk about technology, at the images we rely on to represent technology, its uses and users, it becomes clear that gender stereotypes are more present than ever in the context of technology. Rather than subverting traditional gender roles, technology often reinforces and re-inscribes stereotypical behavior and ideas. Analyzing Apple iPad/iPhone advertisements, this paper will uncover some of the gender biases present in popular techno-narratives.*

1. Introduction

The setting: somewhere in the Arctic or Antarctic, everything is covered with snow and ice and a frosty wind blows. JJ Barns types into his terminal: «Any ladies out there?» We are taken to sunny San Francisco with a scenic view over the Golden Gate Bridge. Kerri Y replies: «Yes – ladies escaping the gender biases of the physical world.» Back in frosty and stormy conditions JJ Barns replies: «You sound really cute»¹. This short *AOL – America Online* video clip expresses a dominant vision of the impact of technology on the gendered body that was pervasive in particular in the early days of the Internet: its ability to transcend unjust power structures inscribed in the physical and gendered body. It is an example of how users invest technology with a gender-neutral, or better, transformative aura that transcends gender biases.

Even today, technology is often still considered as something that does not have anything to do with gender. Yet, taking a

¹ AOL commercial found on youtube: AOL Commercial – Gender Bias, <http://www.youtube.com/watch?v=uUYC2E-9Av4> (15 April 2012).

closer look at the language we use to talk about technology, at the images we rely on to represent technology, its use and users it becomes clear that gender stereotypes are more present than ever in the context of technology. Gender matters in a very traditional and stereotypical way and rather than subverting prejudices, more often than not technology is used and abused to reinforce gender roles. In an attempt to uncover the gender/body/technology makeup, this paper will first discuss the notion of technology as a narrative strategy. In a second step it will look at the hidden gender issues in technology, often perceived to be gender-neutral. Finally, this paper will offer a close reading of the commercials of some of the most recent Apple products. Apple has been selected as a case study because it has deeply shaped our understanding of human-technology interaction. It has fundamentally transformed the ways in which we use and 'do' technology in everyday life. It is also a prime example for how even in an open, progressive, and diverse company, a persistent male bias is present underneath the superficial invisibility of gender in technology or attempts at diversity. The material analyzed in this paper has been published on Apple.com and aired as TV commercial both in the US and in Europe.

2. *Technologies*

What is 'technology'? There are different ways to understand and define technology. It was not until the 1930s that the term became popular in the United States and only in 1978 did the *Encyclopedia Britannica* include the term 'technology' for the first time². The various ways to understand technology range from it being synonymous with science, to the practical application of science, to «useful arts»³ (in particular in 19th century USA). Often, technology is understood with regards to its aims, the

² Cf. R. OLDENZIEL, *Making Technology Masculine. Men, Women and Modern Machines in America 1870-1945*, Amsterdam University Press, Amsterdam 1999, pp. 14-15.

³ Cf. *ivi*, p. 20.

production of «concrete results (in the form of objects, commodities, tools, or procedures)»⁴. What I am concerned with here in the context of this paper, however, is the 'hidden' dimension of technology. Technology is always more than a technique, a way or practice of doing things, or (applied) knowledge. It is also always more than its material dimension, what we can see, touch, and what we can do with it. At least equally important (if not more important) as a product's material dimension however are its symbolic dimension and its socio-cultural meaning⁵. As something that carries meaning, technology is, as Ruth Oldenziel puts it, «part of a narrative production»⁶ and thus always an expression of ideas of culture, society, gender, or race⁷. Thus we cannot think of the material aspects of technology without also considering the narratives that come with technologies and technological products in all stages, from the idea, to the design, production, and marketing, to the ways individuals use and rely on technology. Further, it is important to consider who is involved, and in what ways, at these various stages and how he or she contributes to the writing of the techno-narrative.

Ascribing meaning to an artifact is both an individual and communal effort. As such, technology – both in its material and symbolic dimension – is the product and manifestation of social relations and involved in the negotiation of these very relations. Technology is a «materially grounded arena for dynamic social interaction involved in the planning, production, use, repair and discard of material culture»⁸.

⁴ E. AGAZZI, *From Technique to Technology. The Role of Modern Science*, «Philosophy and Technology», IV (2), 1998, pp. 1-9, here pp. 1–2, <http://scholar.lib.vt.edu/ejournals/SPT/v4n2/AGAZZI.html> (25 April 2012).

⁵ Cf. B. PFAFFENBERGER, *Social Anthropology of Technology*, «Annual Review of Anthropology», XXI, 1992, pp. 491-516, here p. 496.

⁶ R. OLDENZIEL, *Making Technology Masculine*, cit., p. 14.

⁷ Cf. N.E. LERMAN, *Categories of Difference, Categories of Power. Bringing Gender and Race to the History of Technology*, «Technology and Culture», LI (4), 2012, pp. 893-918, here p. 899.

⁸ M.-A. DOBRES, *Gender and Prehistoric Technology. On the Social Agency of Technical Strategies*, «World Archaeology», XXVII (1), 1995, pp. 25-49, here p. 27.

At first sight it might seem that the material dimension of technology is neutral in its proper sense and technology becomes gendered only when we invest it with meaning, i.e. insert it in a framework of socio-cultural narratives of gender roles and identities. However, drawing such a clear line between the material and the symbolic dimension is not possible. Rather, they are closely connected as the context of the material dimension, i.e. who uses technology for what purposes in which setting, often plays a crucial role in whether or not we grant a product the status of technology. With regard to technology's relation to the female body, this is crucial for at least two reasons: 1) Women are often less enthusiastic (or perceived to be less enthusiastic) about technology or less technically competent, not because they lack some sort of 'technology gene' but because girls are often brought up distanced from technology. Women are also often less exposed to technology, or exposed in hidden or other ways: as users rather than producers or inventors and when they produce/invent, it remains often hidden. Less and a different kind of exposure leads to less practice which again leads to a lack of experience which, in turn, often leads to insecurities in handling technologies. This lack of experience is then socially re-interpreted and becomes a social expectation: women are expected to be less technologically apt than their male counterparts and thus potential technocuriosity is not encouraged⁹. 2) Whether or not something is considered to be 'technology' depends, to some extent, on which gendered sphere we associate a piece of equipment with, as social anthropologist Francesca Bray puts it: «An electric iron is not technology when a woman is pressing clothes, but it becomes technology when her husband mends it»¹⁰. These boundaries are not necessarily stable and can change over time, as the example of the microwave shows: initially perceived as a technological gadget belonging to the masculine realm, it soon became a stand-

⁹ Cf. C. COCKBURN and S. ORMROD, *Gender and Technology in the Making*, Sage, London 1993, p. 1.

¹⁰ F. BRAY, *Gender and Technology*, «Annual Review of Anthropology», XXXVI, 2007, pp. 37-53, here p. 42.

ard household appliance and entered the feminine sphere¹¹. Yet Elizabeth Silva points out that the lines between masculine/feminine (technological) realms are not as clear-cut as it often might seem. While today the domestic kitchen is still a predominantly feminine space, technologies such as the microwave introduced new actors to what was formerly an exclusively feminine realm:

The main user of the cooker remains a woman, although other users have appeared. But, with increasing “intelligence” in the machine, used as part of the technological nexus, it has also become possible to address neutered cooks, for instance, “busy professionals” or “overworked parents”. This enlarged category of cooks reflects a reshaping of gender boundaries. The kitchen is no longer an exclusive realm of women, just as the world out of the kitchen is no longer exclusively a place for men. Actually this transformation of gender-related properties appears to have some basis in class divisions, with the kitchen becoming a place of sociability and distinction, in particular for better-off families¹².

Thus technology in its materiality does not determine gendered spaces, rather, the power structures, use cases, and narratives in which each technological product is involved contribute to a gendering of spaces. What these spaces look like, which gender they are associated with, how they are constructed, and who has access to what kind of technology can be different for different parts of society. Any analysis of the gender-technology relation, then, needs to consider the dynamic nature of technology and the symbolic meanings it adopts during the various stages of design, production, marketing, and use.

To briefly sum up, technological products are material realities, yet they are also part and expression of dynamic social processes¹³. As material realities, they are embedded in our everyday

¹¹ Cf. C. COCKBURN and S. ORMROD, *Gender and Technology in the Making*, cit., pp. 41-74, p. 108.

¹² E. SILVA, *Technology, Culture, Family. Influences on Home Life*, Palgrave, Basingstoke 2010, p. 95.

¹³ Cf. M.-A. DOBRES, *Gender and Prehistoric Technology*, cit., p. 27.

lives and become part of a web of narratives¹⁴. Gender is an important factor in how the majority of consumers think about technology, how it is marketed and how it is used, even if the lines between ‘masculine’ technology and ‘feminine’ (non-)technology are often blurry and show that technology can also be used in unexpected ways.

3. *Gender Neutrality?*

The relation between technology and gender is perceived to be ambivalent and peculiar. On the one hand, as Stephen Talbott points out, technology is often regarded as an object that is gender neutral, or even better: that is able to overcome age, gender, race, and any prejudices related to those categories and thus has a liberating, even transcendent quality: «The Internet, many believe, will cleanse us from sin. In particular, it will deliver us from prejudice and bigotry. The idea is that I can’t see your age or race or gender or handicap when I interact with you across the Net, and therefore I can’t cultivate prejudicial feelings against you»¹⁵. On the other hand, technology is strongly associated with the masculine as its natural domain, both with regard to its invention and to its handling. These two seemingly conflicting perceptions have co-existed rather peacefully for the most part of the history of technology. What is peculiar about these two perceptions is that whenever technology is criticized as being naturally masculine and thus its apparent neutrality is put into question, this is

¹⁴ Cf. B. PFAFFENBERGER, *Social Anthropology of Technology*, cit., p. 505.

¹⁵ St. L. TALBOTT, *Virtual Spirituality and the Destruction of the World*, in *Ritus – Kult – Virtualität*, ed. by CHR. WESSELY, G. LARCHER, Pustet, Regensburg 2000, pp. 99-121, here p. 99. Translation taken from the original English version available in the appendix of the PDF copy of the book on the CD-ROM that came with the book. The perception of technology as neutral and masculine is also something that surfaced in many personal conversations and is very present in the self-perception of white western male engineers. The perception of technology’s gender neutrality is often rooted in an understanding of technology as a tool which can be used in a variety of ways and for various aims.

often done with the underlying idea that technology 'really' is neutral (technology as liberating and transcending social, exclusive categories). This process of replacing one version of neutrality with another neglects, however, that users often replicate social hierarchical structures in and through technology.

The notion of technology's neutrality has many different roots but at the heart of many of them is our everyday experience: transportation technology helps us get to work every day or to our favorite vacation spot; communication technology allows us to stay in touch with family and friends and exchange information; technological appliances in and around the household help us to be more efficient in our tasks or cater to the modern lifestyle of cleanliness and consumption¹⁶. For the most part technology is experienced as a neutral object or tool to facilitate certain tasks or control, shape, and transform the environment¹⁷, and this perception of neutrality is reinforced by the fact that the same piece of technology can be used for good or evil purposes. However, we often pay little attention to the subtle ways in which technology and how we use it impact social structures. There are moments in which technology becomes something entirely other and that can change how we experience the world – at least that is what marketing often tries to make us believe, as in the case of the 'magical' iPad –, but as soon as the novelty has worn off, technology is simply 'there', incorporated in everyday life, and as such a 'normal' and (therefore) neutral device.

Technologists and policy makers have contributed to the perception of technology as a neutral agent in other contexts, e.g. a political context, as well. In her study of nuclear power after World War II, Gabrielle Hecht points out that during the cold war, the notion of 'neutral technology' was deliberately and carefully constructed: «Conceptualizing science and technology as apolitical was crucial in justifying the vast resources poured into military and industrial development [...] But if atomic weapons, nerve gas, the moon landing, or any number of other achievements functioned as credible evidence of American superiority, it

¹⁶ Cf. B. PFAFFENBERGER, *Social Anthropology of Technology*, cit., p. 495.

¹⁷ Cf. *ivi*, p. 497.

was precisely because technology was thought to provide an objective, natural, and *inherently apolitical* measure of strength»¹⁸. While this example is primarily concerned with technopolitics rather than gender, it shows how different social agents have contributed to the understanding of technology as something beyond earthly and social realms (characterized by gender and political categories among others) for a variety of reasons, on different levels, and in different contexts.

Feminist scholars such as Donna Haraway or Sherry Turkle have underlined the ambivalent nature of technology. In her famous cyborg manifesto, Haraway emphasizes that most technology is derived from war technology, created by men and used as a means of power to stabilize existing patriarchal structures, yet she also points out the subversive potential of technology and cyborg creatures¹⁹. Thus, in its early days, the Internet was understood as a powerful medium that could question and transform existing power structures and hierarchies and contribute to a more equal society²⁰ – a society in which gendered discrimination will no longer exist.

Early approaches in cyberfeminism have often seen the subversive potential of the Internet in its disembodied nature. Gender is embodied and socially inscribed into bodies, and cyberfeminism understood this «embodied visibility»²¹ of gender to be one of the causes of oppression, unjust power structures, and discrimination based on gender, ethnicity, and age²². The Internet was perceived to be able to overcome these gendered structures precisely because the user's physical body is usually concealed from communicative practices on the Internet, and because the user can choose a virtual body representation that does not reflect their age, sex, or race: «In the early days of the Net, technological visionaries imagined the online world as a utopian space

¹⁸ G. HECHT, *The Radiance of France. Nuclear Power and National Identity after World War II*, MIT Press, Cambridge MA 1998, pp. 336-337.

¹⁹ Cf. D. HARAWAY, *The Haraway Reader*, Routledge, New York 2004, p. 10.

²⁰ Cf. J. DANIELS, *Rethinking Cyberfeminism(s). Race, Gender, and Embodiment*, «Women's Study Quarterly», XXXVII (1&2), 2009, pp. 101-124, here p. 101.

²¹ Ivi, p. 110.

²² Cf. ivi, pp. 109-110.

where everything – even transcending racism – was possible»²³: stereotyped discrimination would be history.

Fifteen years later, we can observe a certain disenchantment regarding the possibilities of the Internet and communication technology to overcome gender binaries and associated discrimination due to gender, race, age, sexuality, and other categories of exclusion. Thus following her early hopes for technology to provide new ways to reflect about the self, Sherry Turkle has become more critical of technological development²⁴. She argues that today, we are overwhelmed by technology and that the «ties we form through the Internet are not, in the end, the ties that bind. But they are the ties that preoccupy»²⁵. Turkle is far from being a luddite as her February 2012 TED (Technology, Entertainment, Design) talk shows in which she explains that getting a text message from her daughter feels like getting a hug. Almost like Paracelsus' famous quote «The dosage makes it either a poison or a remedy», Turkle starts her TED talk: «I embody the central paradox. I am a woman who loves getting texts who is going to tell you that too many of them can be a problem»²⁶. Other critics of technological enthusiasm and utopianism, such as Lisa Nakamura, stress that despite the seeming absence of the body, bodily characteristics inscribe themselves into the process of communication. Race, for example, «has a way of asserting its presence in the language users employ, in the kinds of identities they construct, and in the ways they depict themselves online, both through language and through graphic images»²⁷. Rather than being disembodied, technology in general and the Internet in particular can be a laboratory for body experiments, yet we need

²³ L. NAKAMURA, *Cybertypes. Race, Ethnicity, and Identity on the Internet*, Routledge, New York 2002, p. xi.

²⁴ Cf. S. TURKLE, *Alone Together. Why We Expect More from Technology and Less from Each Other*, Basic Books, New York 2011, p. xi. Cf. also S. TURKLE, *The Second Self. Computers and the Human Spirit*, Simon&Schuster, New York 1984.

²⁵ S. TURKLE, *Alone Together*, cit., p. 280.

²⁶ S. TURKLE, *Connected, but Alone?*, TED Talk February 2012, http://www.ted.com/talks/lang/en/sherry_turkle_alone_together.html (24 April 2012).

²⁷ L. NAKAMURA, *Cybertypes*, cit., p. 31.

to be aware that it probably excludes as much as it provides spaces of inclusion²⁸. Another reason for the perception of technology as both neutral and revolutionary/utopian is the understanding of technology as emerging from culture and being part of that very culture, while at the same time being wholly 'other'. For Haraway, for example, technology is rooted in culture and she argues that modern technology – and with it the cyborg and thus all of us, as we are at least partial cyborgs – is «the illegitimate offspring of militarism and patriarchal capitalism». Yet the «illegitimate offsprings are often exceedingly unfaithful to their origins»²⁹. Technology is, in a way, in this world but not of this world. It is part of culture, but has the ability to transgress cultural practices and to bring forth something other.

Technology, then, is and can be many different things and adopt many different meanings, often at the same time: it is subject to and of transformations; it is perceived as a tool that can be used to achieve good or bad ends but is neutral in and of itself and thus beyond the good/bad dichotomy; it is something that bears on us and thus something we might want to overcome in a longing for a return to 'nature', but at the same time we cannot and do not want to do so because there is something about technology and the (creative) processes that surround it that captures us, that is pure and otherworldly and attributes this magical aura to technology that fascinates us. This perception of neutral, pure, or magical technology affects and infuses the perception of the relation of gender and technology as well. In this framework, technology becomes gender-neutral, yet with often very clear ideas who the neutrality or naturalness applies to.

In today's public perception, technology is often exclusively located in a male domain. At first sight, the notion of technology's neutrality and technology as a masculine domain seem to be contradictory but they are related and reinforce each other. Masculine technological culture has been normalized and naturalized through masculine technological practices and the dominant narratives of technology. In this sense, 'neutral technology' usual-

²⁸ Cf. DANIELS, *Rethinking Cyberfeminism(s)*, cit., p. 101.

²⁹ HARAWAY, *The Haraway Reader*, cit., p. 10.

ly refers to what is perceived as the 'natural' spheres of technology. In western patriarchal societies, the white, western male is usually the paradigm for what is normal or natural. Men's claim of technological territories, then, contributed to a naturalization process which in turn resulted in the understanding of technology as white, western, and masculine, as the (unreflected, apparently neutral) norm.

Computer programming provides an interesting example for these naturalization and normalization processes because in its early days, programming lacked hardcoded gender inscriptions. A look at the *Cosmopolitan* article «The Computer Girls»³⁰ from 1967 shows how boundaries and ascriptions as to what counts as masculine or feminine technology have changed over time. The article quotes the (female) scientist Grace Hopper who encourages women to enter the programming profession. Programming, according to Hopper, requires planning skills which come natural to women because it is «just like planning a dinner»³¹. From today's perspective, Hopper's reference to dinner planning is yet another example of naturalized gender spheres and roles (though probably with the best intentions). It shows, however, that programming was not yet hardcoded as a masculine sphere with a high number of women working in programming, in particular in comparison to other techno-scientific disciplines, as the historian Ensmenger points out: «The lack of a fully established scientific or engineering identity left space open for women»³². What started as a field that endorsed women turned masculine over time:

³⁰ L. MANDEL, *The Computer Girls*, «*Cosmopolitan*», April 1967, pp. 52-56, quoted in N. ENSMENGER, *Making Programming Masculine*, in *Gender Codes. Why Women are Leaving Programming*, ed. by TH.J. MISA, Hoboken, Wiley 2010, pp. 115-141, here p. 115. A copy of the first page of the article can be retrieved through DAK, *Women in Technology. Get With the Picture*, Wired.com, 26 June 2012, <http://www.wired.com/geekmom/2012/06/women-in-technology/> (26 June 2012); <http://blog-admin.wired.com/geekmom/wp-content/uploads/2012/06/cosmopolitan-april-1967-1-large.jpg> (26 June 2012).

³¹ G. Hopper as quoted in the *Cosmopolitan* article L. MANDEL, *The Computer Girls*, cit., p. 52, quoted in N. ENSMENGER, *Making Programming Masculine*, cit., p. 115.

³² N. ENSMENGER, *Making Programming Masculine*, cit., p. 119.

«computer programming [...] began as women's work. It had to be made masculine. This process of masculinization was closely associated with the development of the professional structures of the discipline: formal programs in computer science, professional journals and societies, certification programs and standardized development methodologies»³³. There is nothing 'neutral' or 'natural' about technology, then, other than the meanings we as individuals and as communities attribute to it.

The inscription of gender spheres is a complex – and often long – process that involves different agents. In her study of gender and technology in the US in the period between 1870 and 1945, Ruth Oldenziel points out that technological innovation and its materializations are always accompanied by stories and fragments of stories that are produced, picked up, repeated, and passed on by both engineers/producers and consumers. The worldview of both engineers and users, the social context in which they grew up, the jokes and stories they tell, engineers' autobiographies³⁴, or visual representations of men with 'their' technologies: all these bits and pieces contribute to the web of narratives and the production of cultural values around technology. As such, technological innovation and the production of goods is as much about technology as it is about producing meaningful cultural artifacts, or in other words: ascribing meaning to the innovations and goods produced. In this context, the engineer is always more than just a producer of a material reality, as Oldenziel argues: «Engineers built bridges. They also constructed cultural infrastructures and engaged in narrative productions»³⁵. And she goes on, «They [...] produced culture in the gray areas of privately printed autobiographies and speeches at birthday parties. While at work or on the production floors, building sites, and in laboratories, engineers produced culture as well as goods»³⁶. These stories and narratives and autobiographies of engineers envisioned and located technology in an almost exclu-

³³ Ivi, p. 122.

³⁴ Cf. R. OLDENZIEL, *Making Technology Masculine*, cit., pp. 13, 91.

³⁵ Ivi, p. 13.

³⁶ Ivi, p. 91; cf. also ivi, p. 96.

sively masculine realm, portraying the relationship between men and technology as a vocation contributing to an understanding of technology that comes naturally to men but is alien, foreign, or exotic to women³⁷: «Men, it seemed, were born possessing it (natural technophiles, in other words), while women were natural technophobes and born without it»³⁸.

Women, however, were not completely absent from technological narratives. On the contrary, in publications geared towards a mass audience, women often held a central role. Oldenziel argues that while women often played more traditional roles such as mothers or lovers or daughters, they usually lent male «engineers their virility» and often played the role of the «heroine [...] to counterpoint or criticize the world of engineering work»³⁹. Thus women were not entirely excluded from technological narratives, but they were portrayed in distinct roles different from those of their male counterparts: as female users of technology produced by men, or as producers in subordinate positions, e.g. on an assembly line.

The 1916 novel *Web of Steel* provides a good example for the tensions and struggles between male and female audiences and writers. In their preface, the authors, father and son Cyrus Townsend Brady and Cyrus Townsend Brady Jr., pride themselves with their work written by men for men «showing how the demands of engineering work and male honor were incompatible with women's demand for family and community»⁴⁰:

“WEB OF STEEL,” as those who read will see, is a book for men, about men, and written by men.* The authorship is placed in the plural advisedly. The book is a real collaboration. In the minds of the writers there is a further pleasant association in the fact that it is a book about a father and son by a father and son, although no one must identify the writers with the characters in the story because of that relationship.

³⁷ Ivi, pp. 10, 119.

³⁸ R. OLDENZIEL, *Signifying Semantics for a History of Technology*, «Technology and Culture», XLVII (3), pp. 477-485, here p. 478.

³⁹ R. OLDENZIEL, *Making Technology Masculine*, cit., p. 119.

⁴⁰ Ivi, p. 120.

It is said that the success of a book, like the success of almost everything else that man at least undertakes, depends upon women; that women buy, read, discuss, and promote a novel, and if the book has no appeal to women it is forever doomed. The authors have at least proved themselves men of courage, the publishers likewise, for it cannot be too insistently set forth that this is primarily a book for men. The authors hope that even with that expressed limitation it may nevertheless appeal to women in some measure, especially those who would fain enjoy – the authors are careful not to say usurp! – masculine place and function. Let no one imagine, either, the authors hasten to assure those who may honor them by reading this preface, that there are no women in the book.* On the contrary the fortunes of at least one of the men and the fate of the other are woven around the eternal feminine whom the authors have striven to make as feminine and charming, as appealing and delightful, as their large experience with the other sex permits and warrants!

* Yet with true masculine inconsistency it is dedicated to a woman⁴¹!

The preface to *Web of Steel* thus shows that technology is not inherently masculine, but the stories and symbols associated with technology *construct* it *as* masculine and not feminine.

The social changes technology, in particular industrialization, caused, contributed to this web of narratives and thus to the masking of technology as naturally masculine. In her analysis of the process of industrialization in the US, Ruth Schwartz Cowan argues that in the pre-industrial age shaped by rural communities⁴², everyone in the family (men, women, and children) had to contribute to some extent to the labor-intensive housework and

⁴¹ C. T. BRADY and C. T. BRADY Jr., *Web of Steel*, Fleming H. Revell Co., London 1916, p. 7.

⁴² While Schwartz Cowan focuses on the USA, her conclusions are important for a broader context, too, as the naturalization of technology as masculine had not a single source but many different ones contributing to the phenomenon, cf. R. SCHWARTZ COWAN, *Women's Work, Household, and History. The Historical Roots of Inequality in Work-Force Participation*, in *Families and Work*, ed. by N. GERSTEL and H. ENGEL GROSS, Temple University Press, Philadelphia 1987, pp. 164-177.

sustenance of the family on a daily basis, albeit in a gendered manner:

Cooking was women's work, but the goal of getting any given meal to the table required the work and skills of both men and women, for the hearth had to be supplied with wood (men's work), the pig had to be butchered (men's work), the water had to be carried (androgynous work, frequently assigned to children), and the grain had to be reduced to meal or flour (men's work) before the bacon could be fried or the bread could be baked or the soup could be stirred. The stereotypical tasks and the special skills of both men and women were required to maintain a household even at a minimal standard of comfort and decency; small wonder then [...] that so many widows and widowers quickly remarried after the death of a spouse⁴³.

In addition to the contribution to housework itself, everyone in the family also contributed to the household income, as Schwartz Cowan points out: men cut timber and sold wood, for example, and women raised and sold chicken and eggs and produced and sold cloth. Although tasks were rather stereotypically allocated, both men and women shared in keeping the household running. The joint efforts at home, however, did not mean that men's and women's work was recognized as equal. It was usually 'masculine products', i.e. goods produced by men, that made up the majority of trade economy – even if women might have contributed in one way or the other during the production process⁴⁴. Similarly, with cooking and the care for children and elderly relatives being the responsibility of women, they were more tied to the household than their male partners: «a woman's work was truly never done, whether or not her husband assisted by butchering hogs and her children by carding wool»⁴⁵. Distribution and evaluations of duties according to gender predates industrialization, yet industrialization reinforced the gendering of spheres of belonging. Particularly in the early phase of industrialization, technology made many of the housework duties fulfilled by men

⁴³ Ivi, pp. 165-166.

⁴⁴ Cf. ivi, pp. 166-167.

⁴⁵ Ivi, p. 167.

or children redundant. Oldenziel argues that men's contribution to the household was no longer needed because industrialization provided alternative sources for what they had been responsible for. Now, men had to go out, find work, and bring home money so that the family could afford the commercial offers that replaced previously self-produced goods. However, no substitutes (other than servants or laundresses) were made available (or became successful) for women's work, cooking, doing the laundry, caring for children, or basic everyday tasks such as cleaning⁴⁶. The new distribution of duties brought about by technology had a major impact on how society perceived gender roles and the appropriate place for a man or a woman. Schwartz Cowan poignantly states:

Not surprisingly a new ideology developed in the first decades of industrialization to rationalize the new familial relationships that were developing as a result of the divergence between men's and women's labor. [...] Woman's place was in the home; man's was in the world. Women were to be nurturant, religious, self-abnegating, demure – the better to fit themselves for their restricted but critically important domestic roles; men were to be strict, aggressive, calculating, realistic, expansive, bold – the better to fit themselves for the market⁴⁷.

The enhancement of households through the spread of household utilities such as water, gas, and electricity and the introduction of technology into the household eased (or eliminated) some of the work women were responsible for. Yet, they also brought about more work for women and increased the gender divide. Household appliances, such as the vacuum cleaner, replaced commercial services or some of the servants a wealthier family might have had, and the work previously done by servants now became the responsibility of housewives. Rather than relieving housewives of their duties and allowing them more free time, other appliances such as the laundry machine, increased the standards of cleanliness: doing laundry became easier, but this

⁴⁶ Cf. *ivi*, p. 168.

⁴⁷ *Ibidem*.

was offset by an increase in quantity⁴⁸. Technological appliances that entered the household and were accepted by consumers, then, did not subvert traditional gender roles, instead they stabilized and reinforced the gender gap and a woman's ties to the household – something that still resonates today in the often failed attempts to distribute household chores equally among partners⁴⁹. While technological development contributed to changes in family structures, i.e. who stayed at home and who went out for what reason, it was ultimately the community and the narratives that were created that naturalized those new family structures and made them the unescapable destiny of both men and women.

The notion of a clear separation of private, domestic spheres from the public and work environment (and with it the notion of stay-at-home-women while their husbands are out and abouts)

⁴⁸ Cf. R. SCHWARTZ COWAN, *More Work for Mother. The Ironies of Household Technology from the Open Hearth to the Microwave*, Basic Books, New York 1983, pp. 89-99.

⁴⁹ Schwartz Cowan points out that technology per se does not cause the gender divide but different technologies have different effects on society. Marketing, economic interests, consumer choices, and the meaning ascribed to technology by various social actors contribute to the socio-cultural impact of technological products. «Technological systems that might have truly eliminated the labor of housewives could have been built [...]; but such systems would have eliminated the home as well – a result that [...] most Americans were consistently and insistently unwilling to accept». And she goes on to argue: «The allocation of housework to women is [...] a social convention which developed during the nineteenth century because of a specific set of material and cultural conditions. It is a convention so deeply embedded in our individual and collective consciousness that even the profound changes wrought by the twentieth century have not yet shaken it» (ivi, p. 101 and p. 150). I would add to her argument that while different technological products provide different structures and frameworks, they do not necessarily determine social structures. We as individuals and society ascribe meaning to those structures and work with and in these structures. Rather than accepting changes brought about by technology as natural or inherent in technology, we need to analyze, question, and subvert the narratives we create around technological products and the socio-cultural structures they provide.

in consequence of industrialization has also met with criticism⁵⁰, because it does not do justice to the complexities of human experience and human practice, both at home and in work environments⁵¹. In his study of 18th century England, historian Lawrence E. Klein argues that «women had extensive public lives in the eighteenth century and that language was available to discuss and sometimes even legitimize this fact»⁵². Similarly, Hannah Barker shows that women contributed to the economy and points out that «women were not always subordinate to men, and that considerations of age, wealth, skill could override those of gender»⁵³. Technology, politics, power structures, and ideology may have contributed to a separation of spheres, but whether or not those boundaries are respected (and by whom and for what reason) is often a different story⁵⁴. Different conclusions in research, then, have in part to do with different approaches, different foci, or different methodologies⁵⁵, and show that research itself is not neutral but depends on ideologies and creates itself stories and interpretative frameworks that shape the ways of seeing things⁵⁶. Research, then, can contribute to subvert the notion of the separation of spheres, «not by rejecting research projects that have documented stability in the gender-technology relation, but rather, as thought-experiment, to explore what a

⁵⁰ Cf. M. LENOARD, *Old Wine in New Bottles? Women Working Inside and Outside the Household*, «Women's International Study Forum», XXIV (1), 2001, pp. 67-78; W. FAULKNER, *The Technology Question in Feminism. A View from Feminist Technology Studies*, «Women's Studies International Forum», XXIV (1), 2001, pp. 79-95, here pp. 81-82; A. VICKERY, *Golden Age to Separate Spheres? A Review of the Categories and Chronology of English Women's History*, «The Historical Journal», XXXVI (2), 1993, pp. 383-414.

⁵¹ Cf. L.E. KLEIN, *Gender and the Public/Private Distinction in the Eighteenth Century. Some Questions about Evidence and Analytic Procedure*, «Eighteenth-Century Studies», XXIX (1), 1995, pp. 97-109, here pp. 98-99.

⁵² Ivi, p. 100.

⁵³ H. BARKER, *The Business of Women*, Oxford University Press, Oxford 2006, p. 10.

⁵⁴ Cf. M. HUNT, *Wife Beating, Domesticity and Women's Independence in Eighteenth-Century London*, «Gender & History», IV (1), 1992, pp. 10-33, here p. 27.

⁵⁵ Cf. H. BARKER, *The Business of Women*, cit., p. 5.

⁵⁶ Cf. H.G. CORNELIUSSEN, *Gender-Technology Relations. Exploring Stability and Change*, Palgrave, Basingstoke 2012, pp. 5-6.

specific focus on change can teach us»⁵⁷. As such, Schwartz Cowan's study should not be seen as evidence for technology's function to gender spaces and determine the role of women. Technology is never just an artifact that imposes an effect on society, rather, it is a «complex that includes knowledge, routine and symbols in a “seamless web” of society and technology, and with considerable “interpretative flexibility”»⁵⁸. Technology, then, is highly symbolic and all the different agents entangled with technology contribute to its meanings.

The production of techno-narratives and cultural practices around technologies shows that technologies are not naturally masculine or feminine, but that ideas and visions of masculinity and femininity are inscribed in them. Often unquestioned in a patriarchal society, such notions then have become accepted as normal and thus invisible: technology is perceived to be 'neutral'. Men have become the unquestioned, natural, and active producer of technologies⁵⁹, and women use them, «[t]hey have become the passive beneficiaries of the [male] inventive flame»⁶⁰. Ascribing gender to technology thus happens in all the various stages of creating technology: from design to production processes, from marketing to the way individual users decide to adopt and integrate appliances into their daily lives⁶¹. New technologies see the light of the day in this masculine culture of technology. As such social narratives lead us to associate this techno-culture with masculinity, although it is strangely visibly invisible: we usually do not know who (man or woman) designs, produces, markets, or uses technology for what reason. Popular culture, however,

⁵⁷ H.G. CORNELIUSSEN, *Disrupting the Impression of Stability in the Gender-Technology Relation*, Online Proceedings of the 5th European Symposium on Gender & ICT: Digital Cultures – Participation, Empowerment, Diversity, 5-7 March 2009, University of Bremen, Germany, p. 1, http://www.informatik.unibremen.de/soteg/gict2009/proceedings/GICT2009_Corneliusen.pdf (23 June 2012).

⁵⁸ H.G. CORNELIUSSEN, *Gender-Technology Relations*, cit., p. 7.

⁵⁹ Cf. R. OLDENZIEL, *Making Technology Masculine*, cit., pp. 18.

⁶⁰ F. BRAY, *Gender and Technology*, cit., p. 38.

⁶¹ Cf. J. WAJCMAN, *Reflections on Gender and Technology Studies*. In *What State is the Art?*, «Social Studies of Science», XXX (3), 2000, pp. 447-464, here p. 455.

exposes us to a flood of images of ‘men and their toys’ reflecting and reinforcing the perceptions of what men and women (are supposed to) do with technology and which technologies are appropriate – and thus more natural – for which gender.

4. *Re-inscriptions of Gender*

Silva points out that ‘doing’ technology changes over time and that various socio-economic circumstances, such as the economic necessity of a double income to sustain their family, or the educational and professional background of the partners contribute to the undermining of traditional gender divides at home⁶². Yet, in spite of all the changes over the past few years, traditional gender images of stay-at-home moms and men who are active in the public sphere continue to be an important ingredient in the way technological products are marketed. In the following, I will analyze Apple iPad and iPhone TV commercials to show that traditional gender roles remain an important element in a tech-company’s attempt to create emotions and connect with potential customers. Drawing on those traditional gender images, tech-companies such as Apple contribute – albeit often in subtle ways – to the continuation of gendered tech-narratives.

At first sight, Apple represents itself as a very diverse company. As the iPad «Built-in Apps»⁶³ page shows, it tries to overcome the traditional iconography of the white western male as prototypical tech-user by featuring both women and men from different ethnic backgrounds. A good example is the FaceTime section on this page: the description reads «FaceTime closes the distance between you and the people you care about – from miles to inches». The image that accompanies the text features a young black man talking to a young white woman. While we do not know their relationship status, reading image and text together, we can at least assume that they ‘care about’ each other. This is of course part of an economic interest to make a profit by selling

⁶² Cf. E. SILVA, *Technology, Culture, Family*, cit., p. 86-93.

⁶³ <http://www.apple.com/ipad/built-in-apps/> (24 April 2012)

Apple products to as broad an audience as possible and not only white, male users. Yet, the refreshing iconography Apple creates can contribute to a rewriting of social narratives, showing that there are multiple other narratives besides the dominant one of the white western male tech adept. Another example of how Apple tries to express diversity can be found on the contact support page⁶⁴, which features a picture of a young Caucasian man, a young non-Caucasian man, and a woman representing the Apple support staff. Even with the 2:1 gender imbalance, the woman is represented as one of the technical support team, a notion that would not fit into a more traditional understanding of the relationship of women and technology.

In its TV commercials, Apple transgresses traditional gender stereotypes as well. The commercial for Siri, Apple's voice recognition software, shows a black man – the famous actor Samuel L. Jackson – cooking dinner for «date night»⁶⁵, rather than representing a woman doing the cooking. In another Siri commercial⁶⁶, Apple's new digital assistant helps businesswomen and businessmen alike to plan and organize their day, manage business meetings and stay in touch with both business contacts and friends and family. The commercial for the new Apple product, the 'new iPad' (aka the third generation iPad), features a male and a female car mechanic⁶⁷.

While the diversity of characters in Apple TV spots is to be appreciated, the same spots, however, draw on other, more traditional notions, e.g. that the home is the 'normal' or 'natural' realm

⁶⁴ <http://www.apple.com/support/contact/> (24 April 2012). As of early 2013, the image found on the Contact Apple Support page only shows two people, a young man of Asian background and a young woman of Caucasian background (<http://www.apple.com/support/contact/>, 4 March 2013).

⁶⁵ Apple - iPhone 4S - TV Ad - Date Night, <http://www.youtube.com/watch?v=azBzUEFZIss> (24 April 2012).

⁶⁶ Apple - iPhone 4S - TV Ad - Siri, Snow Today, http://www.youtube.com/watch?v=5ba0tZ_P5cg (24 April 2012).

⁶⁷ Apple - Introducing the new iPad, <http://www.youtube.com/watch?v=AEngFNb5CRU> (24 April 2012). I do have to add that this is a reading based on just two small hints: what appears to be a female bracelet and female glasses – probably too little for solid interpretation but interesting nonetheless and, one could argue, a stereotypical reading/interpretation in itself.

of women and ‘out there’ is the domain of men. To see a man cook in a home setting certainly is a nice change, but the portrayal fits perfectly well into the stereotypical pattern that men cook only for special occasions (such as ‘date night’ in the TV spot) whereas the everyday, less glamorous cooking is left to women⁶⁸. Not surprisingly then, the majority of people we see cooking, baking, or taking care of the groceries in Apple’s TV spots, are women: a woman baking (probably for family or kids)⁶⁹, another woman asking Siri to remind her to get milk when she leaves work⁷⁰, or a woman using the iPad for her fruit shopping (from a male seller, which again reinforces the idea that men do business ‘out there’ while women are at home or take care of everything that has to do with ‘their’ realm)⁷¹.

Consumer technologies such as household or communication technologies transform the ways in which we negotiate private and work life. As Silva argues, «[h]ousehold technologies, both as commodified market relations in themselves and as enablers of the adoption of other market relations, are inserted into daily routines and contribute towards negotiations of different patterns of gendered work in the home»⁷². Yet, the gender patterns present in many Apple TV commercials resemble more traditional structures. In Apple’s spots, mostly women take care of kids while men are usually alone in business or spare time or interact with technology while women interact with children. In the ad «Snow today»⁷³, a businesswoman, not a man, asks Siri about her work meetings while getting the kids ready for school:

⁶⁸ Cooking obviously is an ambivalent example: women are typically expected to cook at home and care for the family’s nutrition, yet many of the famous chefs are men; nevertheless today there are also a number of female TV chefs, such as Nigella Lawson or the Barefoot Contessa.

⁶⁹ Apple - Introducing Siri on iPhone 4S, <http://www.youtube.com/watch?v=rNsrl86inpo> (24 April 2012).

⁷⁰ Apple - iPhone 4S - TV Ad – Assistant, <http://www.youtube.com/watch?v=8uS6d7fsPnM> (24 April 2012).

⁷¹ Apple - Introducing the new iPad, <http://www.youtube.com/watch?v=AEngFNb5CRU> (24 April 2012).

⁷² E. SILVA, *Technology, Culture, Family*, cit., p. 74.

⁷³ Apple - iPhone 4S - TV Ad - Siri, Snow Today, http://www.youtube.com/watch?v=5ba0tZ_P5cg (24 April 2012).

although women do enter the work force, they continue to be responsible for children and household, doing double duty.

Today, we experience a shift in how we do our work and where we work. More people travel longer distances to their workplace, with communication technology and home and mobile broadband allowing more people to have home office days. Yet, the portrayal of the 'typical' space for men and women in Apple's videos falls into the traditional notion of the home as the 'natural' place for women. In the videos, we see both men and women in relation to the public sphere: couples go on road trips together, a woman goes jogging in a park, or women pack and get ready for a trip. Yet, the ads portray the majority of women in their 'natural' realm, the home: rather than portraying them as traveling, the ads show women *getting ready* for a trip and they do so in their 'natural' realm; or they show women in extensions of their natural realms taking care of their natural duties, for example in an SUV packed with ballet children. Of course, it is again a woman, the driver of the SUV, who tells Siri «We have a flat tire», unable to deal with the emergency on her own⁷⁴. Men, on the other hand, are almost exclusively portrayed outside their homes: a man running while using Siri to manage his meetings, or alone in the car using Siri to text his wife he will be 30 minute late, or at what appears to be an airport asking Siri to «tell my wife I'm gonna make it»⁷⁵.

The most striking example of how traditional gender roles, perceptions, and expectations are inscribed into tech-narratives is an iPhone FaceTime commercial⁷⁶. This two-minute clip shows various use cases for the product. With *When You're Smiling* by Louis Armstrong as soundtrack, the video is highly emotional and tries to show how the iPhone's video calling ability can bring family and friends together. The notion of the family, again, is

⁷⁴ Apple - iPhone 4S - TV Ad – Assistant, <http://www.youtube.com/watch?v=8uS6d7fsPnM> (24 April 2012).

⁷⁵ Apple - iPhone 4S - TV Ad – Assistant, <http://www.youtube.com/watch?v=8uS6d7fsPnM> (24 April 2012); Apple - Introducing Siri on iPhone 4S, <http://www.youtube.com/watch?v=rNsr186inpo> (24 April 2012).

⁷⁶ Apple iPhone 4 FaceTime commercial, <http://www.youtube.com/watch?v=yatSAEqNL7k> (24 April 2012).

very traditional: the video starts with a mom taking care of her little ones – of course at home – while we see her husband (in Apple's neat Walt Disney world, they are, of course, properly married, as their wedding band suggest) in a hotel room. Towards the end of the clip we see a pregnant woman (of Asian heritage) getting an ultrasound examination and her (Caucasian) soldier husband (again, properly married with a wedding ring) follows the procedure through FaceTime from his barracks bursting in tears. Technology allows family members to stay in touch and connects the masculine domain – business, the public sphere – with a woman's natural sphere – home and childcare. Interestingly, Apple's advertising iconography and portrayal of human relationships is very traditional (read: heterosexual), although in 2008, tech-blogs reported Apple to be among the top gay-friendly companies⁷⁷. The explicit portrayal of a homosexual couple is still a desideratum in Apple's iconography, but the expansion of the emojis in the September 2012 iOS 6 release (scheduled for fall 2012) including an icon for a lesbian and a gay couple holding hands is a sign that the company might also move to a more inclusive advertising style⁷⁸.

Of course, Apple is a for-profit corporation and we have to take the carefully staged commercials for what they are: an attempt to sell a product, a brand, and a lifestyle by creating short stories around Apple devices, giving life to inanimate matter, and showing some of the many ways in which Apple thinks its devices can, should, or might enhance its customers' lives. Apple presents itself as catering to a very diverse customer base. Yet, this diversity is countered by very traditional notions of family

⁷⁷ Cf. e.g. MACNN, *Apple Rated Among Top 'Gay-Friendly' Companies*, 15 May 2008, <http://www.macnn.com/articles/08/05/15/apple.is.gay.friendly/> (23 June 2012); A. SEMUELS, *Apple Named Most Gay-Friendly Brand*, LA Times, 16 May 2008, <http://latimesblogs.latimes.com/technology/2008/05/apple-named-mos.html> (23 June 2012).

⁷⁸ Cf. J. DIAZ, *Apple Adds Gay and Lesbian Couple Icons to iOS 6*, Gizmodo 14 June 2012, <http://gizmodo.com/5918381/apple-adds-gay-and-lesbian-couple-icons-to-ios-6> (23 June 2012).

(proper marriage between men and women)⁷⁹ and the portrayal of stereotypically gendered use cases and realms. This iconography can be understood as the construction and expression of a specific world view. Questioned about Apple's censorship after the removal of several adult apps from the iOS AppStore, for example, Steve Jobs made it clear that adult content such as pornography is off limits for iOS devices: «*However, we do believe we have a moral responsibility to keep porn off the iPhone. Folks who want porn can buy and [sic!] Android phones*»⁸⁰. Adult content and gender roles or family structures are certainly two very different things, but it is important to acknowledge that values and world views held by key figures of a company can have an impact on the marketing strategy of the company and its positioning in the market place. With a gay man serving under Steve Jobs as COO (and the successor of Steve Jobs as CEO), as reportedly one of the first California companies to offer equal benefits to employees' same-sex partners, and with its support to fight Proposition 8, the elimination of the right of same-sex couples to marry⁸¹, Apple certainly is not an anti-gay company, although it shows exclusively heterosexual couples in its ads. In a contribution to the Australian magazine *The Punch*, political scientist Lauren Rosewarne, however, calls Apple's stance towards homosexuality lukewarm at best. «Apple are masters at flip-flopping when it comes to homosexuality. Let's cast our minds back to the launch of the iPad. The

⁷⁹ This very traditional portrayal of family is interesting especially because Tom Cook, Steve Job's successor as Apple CEO, is assumed to be homosexual, something neither he nor Apple have confirmed or denied. Media reports keep pointing out that Cook has not publically come out yet. An example of the many media reports on the subject matter is: F. SALMON, *Don't Ignore Tim Cook's Sexuality*, Reuters Opinion Blog, 25 August 2011, <http://blogs.reuters.com/felix-salmon/2011/08/25/dont-ignore-tim-cooks-sexuality/> (20 April 2012).

⁸⁰ Steve Jobs in M.G. SIGLER, *Steve Jobs Reiterates: "Folks who want porn can buy an Android phone"*, TechCrunch, 19 April 2010, <http://techcrunch.com/2010/04/19/steve-jobs-android-porn/> (20 April 2012), italics in original; cf. also R. TATE, *Steve Jobs Offers World Free From Porn*, Gawker, 15 May 2010, <http://gawker.com/5539717/> (23 June 2012).

⁸¹ Cf. R. PALMER, *Apple Opposes Calif. Prop 8, Donates \$ 100k to 'No' Campaign*, TUAW, 24 Oct 2008, <http://www.tuaw.com/2008/10/24/apple-opposes-calif-prop-8-donates-100k-to-no-campaign/> (23 June 2012).

company quickly censored a graphic novel showing two men kissing. And then they uncensored it»⁸². And she continues quite poignantly: «First Apple hate the gays. Then they love the gays. Then they don't know how they feel about the gays. Then they realize that the gays buy the computers too»⁸³. Apple's history of censoring adult and non-adult apps, and the iconography of its TV ads with its strong emphasis on 'family values', can then be understood as an attempt to create a Disney-style⁸⁴ happy-ever-after world. Whether or not this shiny world has room for same-sex couples to be featured in commercials remains to be seen.

We can also understand Apple's TV commercials as a reflection of the social structures the company is situated in, does business in, and caters to. As such, the use cases for both (business)women and (business)men can be understood as an expression of what Apple thinks the socio-cultural situation of and gender roles for the majority of its (western US American) customers looks like: namely that women enter the work force, but that heteronormative systems and their consequences remain the same.

The properly married heterosexual couples in Apple's advertisement can be understood as a reflection of what is a socially acceptable portrayal of norms in Apple's home market and one can only imagine the outcry of Christian conservatives (and possible negative consequences for sales figures) were Apple to feature relationships outside heteronormativity. Advertisements need to be able to gain customers' attention and provide values, images, situations, and problem solutions they can identify with

⁸² L. ROSEWARNE, *Apple Should Have Kept the Anti-Gay App*, «The Punch», 28 March 2011, <http://www.thepunch.com.au/articles/apple-should-have-kept-the-anti-gay-app/> (23 June 2012).

⁸³ *Ivi.*

⁸⁴ Cf. R. HIRSCHFELD, *If Apple is Disney then is the iPad Miley Cyrus?*, 20 June 2010, <http://robhirschfeld.com/2010/06/20/if-apple-is-disney-then-is-the-ipad-miley-cyrus/> (23 June 2012); C. BUCKLER, *Why Apple's Moral Censorship is Doomed*, 23 July 2010, <http://www.sitepoint.com/why-apples-moral-censorship-is-doomed/> (23 June 2012). There has also been dispute about an 'anti-gay' app Apple approved but pulled after fierce criticism in the media, cf. N. SPENCE, *Apple Pulls Anti-Gay App from iTunes Store*, Macworld, 29 Nov 2010, http://www.macworld.com/article/1156034/anti_gay_app_pulled.html (23 June 2012).

within a few seconds. Advertisers can employ various strategies for this, they can send out controversial and ambivalent messages, create utopian worlds, or provide a space in which potential customers recognize their own experiences. As Pamela Morris argues, «advertisements are both cultural indicators and cultural artifacts, acting as echoes, mirrors, and historic notes»⁸⁵. Thus an advertisement is more than just a mirror of society, it also contributes to public and shared understandings of what masculine and feminine roles are or ought to be, of what male and female bodies look or ought to look like: «Advertisements guide thinking, action, and behavior as people come to accept mainstream ideas through visuals. The most crucial of these is what it means to be a man or a woman. Ideas about how to feel, dress, look, and behave, and how to interact with other men and women is the bedrock of the culture in which we live»⁸⁶.

Gender and normalized, naturalized, traditional gender roles – which gender is expected to participate in the technological realm in what ways – are an important ingredient in the attempt to get a company's message across. «At issue is the narrow and limiting role women are boxed into – sexualized ideals. Images contribute to gender roles that are generally unconscious and subtle but constrain women from opportunities and advancement in the public sphere, including in business and government»⁸⁷. Even with all the diversity in Apple's spots, the videos contribute to these 'boxing-processes'. Not only do they reflect current social structures, but they further reinforce expectations regarding the appropriate, normal, and natural spheres for female and male bodies. Yet, these stereotypical gender roles are often hidden or not recognized as such because they are taken for granted, experienced as 'normal' and 'natural' in our everyday lives. The emotionally laden images in advertising thus both reflect socio-

⁸⁵ P. MORRIES, *Overexposed. Issues of Public Gender Imaging*, «Advertising and Society Review», VI (3), 2005, http://muse.jhu.edu/journals/advertising_and_society_review/v006/6.3morris.html (28 April 2012).

⁸⁶ *Ibidem*.

⁸⁷ *Ibidem*.

cultural and socio-economic structures and contribute to naturalization processes.

5. *Conclusion*

Technology is experienced and perceived as ambivalent. It can be threatening and destructive, as in the case of the Fukushima Daiichi nuclear disaster in spring 2011, or intrusive, such as the omnipresence of beeping and ringing cell phones in movie theaters, lectures, or public transportation. We often long for 'safe havens', i.e. technology-free zones, and yet hesitate to disconnect ourselves from the permanent stream of information⁸⁸. But people perceive technology also as an enrichment of their lives because it allows them to do things otherwise not possible. Yet, when it comes to gender roles, technology is still taken to be a neutral actor or it is invested with a utopian power to transform existing structures of injustice and oppression.

Looking at the ways women and men 'do' technology and the spaces where they 'do' technology – or are perceived to 'do' technology –, often unveils that even diverse representations of today's life are infused with a very traditional separation of masculine/feminine spheres reinforced by socio-cultural, economic, and technological narratives. Despite the critical work of feminists and cultural theorists, these narratives often remain unquestioned and unchallenged on a broader scale. The continued representation of a gender binary in uses of technologies in advertisements such as those by Apple analyzed above, is an expression of the world views of both those in charge of the design, production, and marketing process as well as the consumers they cater to:

Advertisers are realists. They can't afford their message to be too idealistic. They have to present the best of what they know

⁸⁸ Volkswagen implemented a Blackberry mail shut-down for some workers starting 30 minutes after their shift, cf. DIE ZEIT ONLINE, *Volkswagen verringert Handy-Stress*, 23.12.2011, <http://www.zeit.de/karriere/beruf/2011-12/volkswagen-blackberry-mailsperre> (23 June 2012).

their audience wants. They need to be cautious enough not to overshoot and bold enough not to hit below the mark.

People in advertisements communicate the message. They socialize it. They give us a role model for what is right, beautiful, and normal at any given moment. The advertiser is both the shaper and the shaped. They give us gender specific advertisements to tell us what it is like to be a man or a woman⁸⁹.

The way Apple markets its recent products is an informative example of how advertisers are both the «shaper and the shaped». Even with all the diversity present in its marketing, it still subscribes to the popular notion of technology as the natural realm of men. Thus Apple's advertising and Apple's corporate structure is a reflection of the naturalization processes at work in society at large. Not only is Apple's CEO male, but so is Apple's leadership⁹⁰. An all-male team gets on stage a few times a year to lure us into buying Apple's latest magical devices. Male bodies talk to, sell to, design and market for female bodies. Male bodies on stage and in the marketing videos talk about 'magical' devices they designed and produced, and they promise that they will make our interaction with technology feel more 'natural' and transform the ways we do things. However, the aim to make interaction with technology more 'natural' together with the visual dichotomy of male/female bodies only strengthens traditional gender master narratives rather than subverting them and thus contributes to the naturalization of specific technologies as masculine or feminine. These master narratives need to be challenged and disrupted, through critical analysis and imaginations of different technarratives, such as in the sticker that has been around for a while saying: «No, this is *not* my boyfriend's computer».

Many different aspects contribute to our understanding of the role of male and female bodies in society, and technology is one of them. Yet, technology does not determine masculine or female spheres by itself, rather, it is part of a meaning-making process in which it can adopt different meanings and can be used to strengthen or subvert existing power structures and gender

⁸⁹ P. MORRIES, *Overexposed*, cit.

⁹⁰ Apple – Executive Profiles, <http://www.apple.com/pr/bios/> (9 May 2012).

stereotypes. After all, as Hughes writes, technology is «messy and complex. It is difficult to define and to understand. In its variety, it is full of contradictions, laden with human folly, saved by occasional benign deeds, and rich with unintended consequences. Yet today most people in the industrialized world reduce technology's complexity, ignore its contradictions, and see it as little more than gadgets and as a handmaiden of commercial capitalism and military»⁹¹.

Technology is not just tools or gadgets we decide to use or not to use. Rather, technology emerges from and is an expression of human creativity. It is a way to construct and transform the world around us, the world we live in⁹². We construct and create technology, and by using technology, we shape our world. There is nothing natural about the relationship between gender and technology or the female body and technology other than whatever ideas of 'norms', 'nature' and values we attribute to technology. As Silva argues,

[r]esources, some of which are technologies, construct social divisions because they are built within assumptions constituted in these divisions. That is not to say that technologies are not changed with use. Indeed they are, and the assumptions of their construction may be greatly transgressed⁹³.

Technology is gendered, still predominantly white and male, but not because this is its nature, but because technology is a cultural product – the product of a (western) culture that takes as its norm the white western male⁹⁴. The adequate, proper, 'natural' role and place of male and female bodies is inscribed in power structures, symbols, values, and what we think of as 'normal' or 'natural'. Technology is not something otherworldly – even if it is sometimes perceived as such –, but part of the gendered reality

⁹¹ T.P. HUGHES, *Human-Built World. How to Think About Technology and Culture*, University of Chicago Press, Chicago 2004, p. 1.

⁹² Cf. *ivi*, pp. 5-7.

⁹³ E. SILVA, *Technology, Culture, Family*, *cit.*, pp. 187-188.

⁹⁴ Cf. M.M. WRIGHT, *Finding a Place in Cyberspace*, «Frontiers», XXVI (1), 2005, pp. 48-59, here p. 49.

we live in. Bray thus argues that «[o]ne fundamental way in which gender is expressed in any society is through technology. Technical skills and domains of expertise are divided between and within the sexes, shaping masculinities and femininities»⁹⁵. Therefore, we do not need narratives and stories of 'magical' devices promising to make interaction with gadgets more 'natural' while reproducing gendered realities. Technology is, I would argue, in its essence creativity and we can be intrigued by what we, in our human creativity, have brought forth. Yet, in spite of all our wonder and awe, we need to learn that technology is invested with the stereotypes and prejudices of the culture we live in. Technology will not change them nor will it overcome the gender divide by itself if we do not learn that we ourselves have to change.

⁹⁵ F. BRAY, *Gender and Technology*, cit., p. 38.