

Hacking Barbie in gendered computer culture

13

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13.1 *A Barbie doll.*

She came into the world in 1959, seemingly out of the blue. Barbie, an eleven-and-a-half-inch tall doll for girls, but radically different from the usual dolls for children: she had the looks and shape of a mature woman. And how! Torpedo boobs, an incredibly thin waist, long legs, and a confident, almost arrogant facial expression. She could be twenty or thirty-something, but was, anyway, a woman of the world, with her fashionable hairstyle and heavy eye make-up. Not to mention her clothes: summer dresses, jumpsuits, party outfits, nurses' uniforms, and business suits. Apparently, Barbie

had money and several jobs to go with it, ranging from a fashion model to a CEO. She seemed to be a woman who had everything. Well, not everything. She did not have nipples or a navel, let alone genitals or hair other than on her head. She did not have parents or a husband. Okay, she did have a kind of a boyfriend, Ken, a lethargic male doll, who did not even have real hair. But he was more an accessory than part of her life, as any girl who ever played with Barbie dolls, knows.

An adult doll, almost real. Imagine what a revelation, yes revolution, this must have been in the minds of little girls in the early 1960s. Suddenly there was a doll you need not nurture or take care of by changing diapers and cuddling around. Barbie was not a doll to practise your assumed future role of being a mother on, but a doll you could project any imaginable occupation and identity on. The introduction of Barbie marked the coming of age of a new generation of girls and women. Raised with Barbie dolls, they came armed with other role models. 'Girls can be anything', came to be the new message.

Can Barbie be considered as a heroine of women's lib? Frankly, most feminists do not think so. Indeed, girls could be anything, but Barbie's implicit extra message was: 'Yeah – as long as they wear the right clothes, have the right body, and buy the right products.' Feminists condemned her as a gender-dichotomizing commodity marketed for the stereotypical white heterosexual girl, an icon of the 'cultural plastic' that women's bodies have become in a technological age (Toffoletti, 2007). Barbie's caricatural femininity, her abundant consumerism, and her weird blend of tits, ass, and anorexia constitutes everything feminism abhors. However, as M.G. Lord (1994) states in *Forever Barbie: The Unauthorized Biography of a Real Doll*, everyone projects her own perspective and fantasies on Barbie. Feminists may also highlight her importance as an economically independent role model or they may point at practices of counter-hegemonic Barbie appropriation in gay and transvestite circles. Barbie collectors and artists, instead of blindly complying with the ideals of femininity Barbie is supposed to represent, negotiate and transform ascribed meanings (Spigel, 1994, Rand, 1995, Strohmeier, 1997). Barbie seems to lend herself particularly well to such appropriation, and to a variety of self-identifications and types of gendered behaviour.

From a feminist perspective, therefore, Barbie is at least an ambivalent figure who embodies a rigid gender dichotomy as well as a broad range of 'femininities'. We may need exactly this ambivalence to think through the shifting and clashing configurations of femininity of the last fifty years. Barbie, as the plastic and virtual embodiment of these shifts, may teach us something about gender constructions and diversifications. In this chapter, I take up Barbie as an ambivalent women warrior on the battlefield of work and play and connect this to the development of computer technology and new media culture. Entering this field, from Barbie's perspective, enables us to transcend and reconsider the sweeping generalizations about women and technology and reconsider the social-cultural history of computer culture from a gender sensitive perspective.

In this context, Barbie can be considered as what Sherry Turkle (1995) has dubbed an 'object-to-think-with'. While all objects can of course be thought about, an object-to-think-with is more closely connected to the way we think and frame the world around us. An object-to-think-with can be defined as an object, however mundane or trivial,

which cannot only be deployed as an instrumental *tool* (or toy, for that matter), but can also function as a reflective *mirror*, invoking questions regarding the human subject and its condition. Turkle has been studying computers as objects-to-think-with (Turkle, 1984, 1995), conceiving them as ‘postmodern machines’ which reflect and reinforce post-structuralist notions of decentred subjects and fragmented identities. She has pointed out how computers, and especially the Internet, provide people with ‘the chance to express multiple and often unexplored aspects of the self, to play with their identity, and try out new ones’ (Turkle, 1996: 12). Turkle’s notions about identity play have often, and all too easily, been reduced to ‘on the Internet you can be anything you want’. Such a shortcut does not do justice to her work, neither to the complexities of Internet dynamics and its interwovenness with daily life roles and identities. However, here we have a first connection between computers and Barbie. As objects-to-think-with, they both seem to suggest ‘you can be or do anything’; both seem to provide a projection screen for enacting different subjectivities. In the following sections, I will explore whether this is as uncomplicated as suggested. After a brief historical survey of Barbie and dolls in general, I will address the implications of Barbie’s messages about work and play, especially in relation to computer work and play.

Nipples and bumps

Barbie can be considered to be the most potent icon of American hegemonic popular culture in the late twentieth century. Such an icon can be studied in several ways: historical, economical, and sociological. In the context of the history of children and their toys, Barbie is significant in light of the rise of a huge toy industry from the moment plastic became malleable and the emergence of the child as a consumer and market target. Such a history would also include the topic of mediatized branding and advertising, as Mattel, Barbie’s manufacturer, was one of the first companies who used television commercials, children’s panels, and psychological research as marketing instruments. Tracing Barbie’s history as a manufactured object would expose her roots as the German Lilli doll, originally a comic figure in *Bild Zeitung*, sold in the 1950s as a semi-pornographic gag gift for men. Barbie’s history would be sparkled with hilarious sex and gender details, such as the heated debates in Mattel’s board room about the proper size of Ken’s ‘bumps’ (Lord, 1994: 49), or the shocking nipples the first Barbie-prototypes appeared to have had (ibid.: 33). However, such an exhaustive genealogy would go beyond the scope of this chapter. Yet, some historical background is needed. It should be noted that Barbie was not the first doll in history modelled after an adult. Such dolls were the standard until the early nineteenth century, just as children were seen as small adults, not as a social and psychological category in their own right. Baby dolls made their entry in history when children were no longer regarded as small adults but as immature beings, to be educated and socialized into adults.

Media-ecologist Neil Postman (1982) connects the emergence of childhood as a separate life sphere and development stage to the advent of the printing press culture.

Teaching children to read and write meant that a social boundary between adults and children was constituted, a gap between those who knew and those who had to learn. In his rather culture-pessimistic study *The Disappearance of Childhood*, Postman argues that this boundary is perverted with the arrival of television, which he takes to have destroyed the original enchantment of childhood. Due to televised media culture, adults have become more childish and children, with all the secrets of adulthood now revealed to them in prime time, have become more adult. Postman suggests in his conclusion that maybe the advent of computers, which call for a general computer literacy, would re-establish childhood as a separate youth culture (Postman 1982: 149). Apparently, Postman envisioned computer literacy as something which had to be formally transferred from adults to children, just like print literacy, which would thus re-install a proper hierarchical generational divide between adults and youth. However, computer literacy turns out to develop differently; children do not acquire computer skills primarily under the supervision of adults. As ‘digital natives’ they learn bottom-up by playing, surfing, and tinkering around, in contrast to the education-oriented adult ‘digital immigrants’ (Rushkoff, 1997; Prensky, 2001).

True as this may be, such quasi-general approaches ignore that children do not just get socialized into adults, but are also, in the process, gendered into two mutually exclusive gender categories. This starts with the assignment of appropriate clothing and toys – dresses and dolls for girls; trousers and trains for boys – and this gender dichotomy is extended into youth media culture and finally into adult work. In that sense, gendered toys are social barometers, reflecting and projecting social expectations: baby dolls prepare girls for future motherhood and care; trains and cars prepare boys for movement and construction.

The quiet revolution in work and play

What are the implications for patterns of gendering if baby dolls are transformed into mature dolls? To what extent did the message ‘girls can be anything’ come across? Indeed, since the 1950s, the figures in Western societies show a general increase in the number of women entering education, college, and paid labour. The women’s labour force participation rate increased in the US from 34 per cent in 1950 to 52 per cent by 1980 and to 59 per cent in 2007. European countries roughly reveal the same pattern (Kutscher, 1993; Tijdens, 2006). Goldin (2006) specifically points at what she calls the ‘quiet revolution’ in the mid-1970s, a social-psychological revolution regarding women’s mental ‘horizon, identity, and decisions’, which resulted in women planning their education with an eye on their future in the work force. Is it a coincidence that this was also the first generation of women who had grown up with Barbie dolls? Barbie’s promise to little girls, that there are more options available than becoming a mother and housewife, seemed to have fallen on fertile soil.

Yet, when taking a closer look at these shifts, we see women are overwhelmingly over-represented in sectors such as child care, healthcare, administration, and retail, while in construction, science, technology, and informatics, they are highly under-

represented. Especially in informatics and computer engineering, the numbers are alarmingly low. Women make up 56 per cent of the total US workforce, yet they occupy only 27 per cent of ICT related jobs (NCWIT, 2007). In Europe the figures are different, ranging from high – 50 per cent female ICT workers in Italy and Spain – to extremely low – Belgium 16 per cent, Germany 14 per cent, and the Netherlands 11 per cent (Luijt, 2003; Collet, 2005). All in all, the picture is one of gender segregation, : typical women’s work is still predominantly about care and relations, working with people, and men’s work is still predominantly about construction and technology, working with things. Moreover, women’s work is consistently paid less than men’s work, and is under-represented or absent higher up in the hierarchies of any employment sector.

Is it Barbie’s fault? Her estimated eighty professions included being a flight attendant, rock star, police officer, presidential candidate, veterinarian, nurse, astronaut, or aerobics instructor. She did have business suits right from the beginning, and Mattel eventually also issued a doctor’s and a pilot’s uniform to her initial nurse and stewardess outfits, but today Barbie’s represented activities consist mainly of shopping, house cleaning, and caring for her young siblings (Pearson and Mullins, 1999). Yet, in the late 1950s, Barbie was conceived and marketed as a single career girl who did not do rough housework. And who was definitely *not* into motherhood, as Lord (1994) stipulates. After Mattel had issued wedding clothes for Barbie and Ken, children clamoured for Barbie to have a baby. Though Mattel usually responded to market demands, Ruth Handler, Barbie’s ‘founding mother’ at Mattel, refused. Never would Barbie’s physique, life, and freedom be compromised by having babies. Eventually she came up with ‘Barbie Baby-Sits,’ including accessories such as a baby, bottles, and self-help books with titles like *How to Get a Raise* and *How to Travel* (Lord, 1994: 50). Apparently, it was not enough. Girls did get Barbie’s message about work but somehow the gender segregation in play – ‘dolls for girls, trains for boys’ – was metaphorically extended into adult professional life.

What did Barbie actually teach girls about play? Mattel kept on issuing new packages of scenes and dolls (kitchens, post offices, camping sites, Rapunzel, Twiggy, television stars, etc.), providing a perpetual stream of opportunities for identifications. Yet, the rules of play were always the same: you were to identify with Barbie. Projecting yourself on Barbie, you would *be* that actress, that school teacher, or even that striptease dancer. No matter how broad the range of roles, Barbie play always involves dressing up and role play (or rather role buy, though some girls did bravely engage in sewing tiny unmanageable Barbie clothes). Though role play is in itself a rich and variable activity, by which creative, social, managerial, and other skills can be acquired (Copier, 2007; Klaver, 2008), one might query the meaning of role play solely by identification with an object which has no other functionalities than enabling this identification.

Compare this to classic toys for boys: the trains, cars, and guns. While these toys enable role playing too, they also embody other things: speed, movement, manipulation, mechanics, and causality. Here, role play does not occur by means of identification with the toys. You do not identify with a train or gun; you imagine yourself being in charge of these objects. You use and manipulate these things as an extension of your

role – driver, cop, good guy, bad guy – within the game setting. The toys are objects to be handled, not so much objects-to-think-with, mirrors of subjectivity. Moreover, these toys are an assemblage of separable parts, constituting a machinery, a system, which can be explored, decomposed, and sometimes rearranged. That is quite different from Barbie’s pseudo-organic coherency. While also composed of movable parts, she is clearly not meant to be decomposed. Taking Barbie as an object, and role play on her (not with her), say, as a surgeon, vivisectionist, or slasher killer, is completely outside the advocated repertoire of Barbie role play. Though probably all girls tried to take a Barbie apart at least once, they soon found out this was inappropriate and irreversible.

No wonder girls stop playing at a certain age. They leave their dolls behind when they go to college and to work, ready to become their own Barbie. As Rousseau already stated in *Emile*:

The doll is the girl’s special plaything; this shows her instinctive bent towards her life’s work. [. . .] she sees her doll, she cannot see herself; she cannot do anything for herself, she has neither the training, nor the talent, nor the strength; as yet she herself is nothing; she is engrossed in her doll and all her coquetry is devoted to it. This will not always be so; in due time she will become her own doll.

(Rousseau, 1762: 421–422)

In due time, playing time is over, for girls – not for boys. Their specific toys, manners of play, and acquired skills can be easily extended into college and work, into the adult world, which turns out to have a proper place for such play: in construction, technology, and, most of all: computing.

Hacking trains and computers

The same year Barbie started to mobilize a new generation of girls, a boy’s toy marked the beginning of another new generation. In 1959, the Massachusetts Institute of Technology (MIT), ‘the repository of the very brightest of those weird high school kids with owl-like glasses and underdeveloped pectorals’ (Levy, 1984: 18), housed the Tech Model Railroad Club, a student hobby club. MIT provided a permanent clubroom, which was filled with a huge train layout including a town, industrial areas, and, of course, lots of trains and tracks. Underneath this layout there was a massive mix of wires, relays, and switches constantly modified, improved, or screwed up by the railroad boys. As Steven Levy writes in *Hackers! Heroes of the Computer Revolution* (1984), here the first computer hackers came into being. A ‘hack’ used to be MIT slang for an elaborate college prank, but the Railroad Club used the word to describe any puzzle-solving project undertaken with wild pleasure in mere involvement. The club members took pride in any hack on the railroad system, but also on other systems: computers, locks, phones, Chinese menus, or the shortest subway route past all stations on one ticket. Every systematic puzzle could be hacked, opened up, and appropriated.

Hacking is thus basically an epistemological and playful attitude sustained by direct action, aimed at opening black boxes. To hack is to appropriate technology, by solving riddles, tinkering around, and creating your own tools.

At that time, the MIT owned a computer, a giant punch card reading machine, which was heavily guarded and only accessible by system operators. When the Railroad Club managed to get hold of a smaller test computer, this was a revelation, yes a revolution: a computer you could lay your hands on and watch while it executed your program. You could feed it with punched paper tape, and you could modify your program. Eventually, the trains were left behind, because the hackers had found a new toy. This was the dawn of the famous Artificial Intelligence Lab at MIT.

The hackers adhered to what Levy (1984) calls ‘hacker ethic’; a set of principles, silently agreed on. Most important was the ‘hands-on’ principle: access to computers – and anything which might teach you something about the way the world works – should be unlimited. The imperative was to share what you got with others, to make it accessible and public. As such, hacking may even be considered a political movement. During the roaring sixties, when other students were protesting against the Vietnam War and demanding rights for blacks, women, students, and gays, these pale nerds constituted an underground movement. A movement which eventually had an impact on the shape of society, which was at least as powerful as the others.

Several, subsequent generations can be distinguished in hacker culture. While the 1960s, MIT generation was about open access to institutional machines, the second generation, organized in home-brew computer clubs, constructed hardware, that is, the computers themselves. In 1975, Stephen Wozniak and Steve Jobs assembled in their garage the first prototypes of devices small and cheap enough to use at home. Steve Jobs finally built his Apple enterprise on these first models, and soon other companies, such as IBM, followed and developed what came to be known as personal computers. The third hacker generation of the 1980s focused on the development and distribution of application programs, especially games. It was the time of the early basement and kitchen-table companies in Silicon Valley, which eventually transformed software development and systems engineering into an established and powerful industry. During the 1980s and early 1990s, the personal computer found its way into offices, factories, and homes. Especially when, from the mid-1990s, Internet access became widely available, which was enforced by a fourth hacker generation aiming at Internet ‘access for all’ (van den Boomen, 1993), computing and tinkering with computers was no longer confined to nerdy hacker subcultures. The computer and the Internet became mainstream and were used by ordinary people, whether for work or for pleasure.

Barbie culture and hacker culture

It would be clear that a historiography framed as the ‘heroes of the computer revolution’ takes the absence of women in computer clubs for granted, implicitly or explicitly assuming a lack of interest. A gender sensitive approach reveals that such a gender dichotomy is not so much empirically grounded, but rather constructed by the very way

the history is told. After all, women have been working with computers from the moment these machines made their entry in history, long before the MIT hackers. In fact, the very first computer hacker was Lady Lovelace who, in the 1830s, wrote programmed instructions for Charles Babbage's analytical machine. And when the first electronic computers were built during World War II, the programmers again were women, the so-called Eniac girls. The very term 'computer' itself originally referred to women working as professional calculators, performing endless mathematical calculations by hand (Hayles, 2005).

In Levy's account of the history of computing, the names of more than a hundred boys and men pass along. A handful of women are also mentioned by name, but only Roberta Williams, who designed the first visual adventure game and ran a kitchen-table company in Silicon Valley, comes near the qualification of hacker, in a chapter with the telling title: 'The wizard and the princess' (the wizard being her husband). To be sure, Levy did address the issue of the absence of heroines in hacker culture:

The sad fact was that there never was a star-quality female hacker. No one knows why. There were women *programmers* and some of them were good, but none seemed to take hacking as a holy calling [. . .] the substantial cultural bias against women getting into serious computing does not explain the utter lack of female hackers.

(ibid.: 84)

Levy does not connect this 'cultural bias' to the gendered material practices around the tools and toys he described. Would it have been imaginable to have a 'Barbie Club House' next to the Railroad Room at MIT? No way. Barbie's non-hackability seems to preclude any playful extension into college culture.

What had happened to the historical association between women and computing? It has been argued that the history of the computer contains a frame shift: from supportive tool towards a framing in terms of high technology and management, and therefore masculinity (Oldenziel, 1999). Yet, such a shift could barely explain why the participation of women in ICT jobs and education has been steadily declining, especially since the mid-1980s (Taylor, 2002; NCWIT, 2007), while other technosciences, such as physics, chemistry, and engineering have been affected by Barbie's quiet revolution: during the same time span, these fields show a general (though slow) increase of female participation in the work force. This is remarkable, considering that during the very same period the computer became popularized throughout society as a multi-purpose tool-toy in one, meeting the hands-on principles of hacker culture. How could a general increase of women's participation in work and education combined with the popularization of computing yield a *decrease* in computer jobs? Does this imply that Barbie culture and hacker culture are deeply antagonistic?

This question is also raised in Douglas Coupland's novel *Microserfs* (1995), which reads like an account of a fourth generation of hackers who are immersed in early corporate Internet culture. The novel also incorporates female computer nerds. Yet, the issue of women hackers puzzles the main character, who suspects Barbie has something to do with it:

I asked Dusty if she grew up with Barbie dolls and she said, ‘No, but indeed I rilly, *rilly* lusted after them in my heart. Hippie parents, you know. *Rill* crunchy. [. . .] *igh**. So instead I played with numbers and equations. Some trade-off.’ The boy continues his Barbie quest: ‘I asked Karla if she grew up with Barbie dolls and she said (not looking up from her keyboard), “This is so embarrassing, but not only did I play with Barbies, but I played with them until an embarrassingly late age – ninth grade. [. . .] But before you think I’m a lost cause, you should know that I gave my Barbie admirable pursuits – I took apart my brother’s Hot Wheels and made Barbie Toyota Assembly Plant, giving Barbie white overalls, a clipboard, and I provided jobs for many otherwise unemployed Americans.”’

(Coupland, 1995: 242–243)

Such literary evidence at least testifies to female hackers’ existence, and appears to argue that Barbie-play does not necessarily keep girls from tinkering with computers, while the combination of Barbie play and computing may involve more diversified gendered behaviours. Still, ICT work and daily computing are predominantly represented and experienced in a binary frame of toys versus tools, echoing play-oriented hacker culture versus work-oriented Barbie culture. Various researchers agree that boys and men are more likely to play games, to program or tinker with programs, and to see the computer as a playful recreational toy; girls and women, on the other hand, tend to view the computer as a tool, a means to accomplish tasks (Ogletree and Williams, 1990, Culley, 1993, Kelan, 2007).

Barbie, as a limited object-to-play-with, may have contributed to such a division by imposing a split between toys and tools. Admittedly, Mattel did undertake serious efforts to extend the Barbie brand into a hybrid tool-toy. Not by creating a Hacker Barbie, but by producing Barbie computers, Barbie cell phones, and Barbie MP3 players. These full-fledged devices all came in the typical Barbie design; the computer (1999) was silver with pink and purple floral accents, and had a flower-bedecked mouse and digital camera; the *BarbieGirl* MP3 device (2008) looks like a flat Barbie doll, and can be ‘re-decorated in a mass of different outfits as well as shoes, purses, and hairstyles’ (Mattel, 2008). Again, such tool-toy Barbies are marked by ambivalence. On the one hand, they represent the plain commodification of gender stereotypes and a non-serious lock-in to pink girls-only technologies, but on the other hand, it may be that such Barbified technologies engender more diversified and extensible notions of both femininity and hacking. After all, why should tinkering with outfits and shoes not count as hacking?

Barbie hacking

Meanwhile, Barbie herself turned out to be not completely hacker-proof. As a toy she was gradually endowed with some technological enhancements which turned her into a cyborg. Talking Barbies have been issued since 1968, at first with a mini-gramophone player inside which enabled her to utter sentences such as ‘Let’s go shopping!’ This was succeeded in 1992 by the Teen Talk Barbie, who came with an implanted

chip which did the same trick more sophisticatedly: it was programmed to say 4 out of 270 possible phrases. One of these phrases was ‘Math class is tough!’, leading to harsh criticism by feminist groups. Mattel eventually withdrew the sentence and offered a return service to anyone with a Barbie denouncing math. Still, Barbie’s repertoire remained obsessed with clothing and shopping, with sentences such as ‘Do we ever have enough clothes?’ and ‘Let’s plan our dream wedding!’ As if to complete the caricatural gender picture, Mattel’s competitor Hasbro sold Talking Duke GI Joe, a doll for boys, which howled sentences like: ‘Attack!’, and ‘Dead men tell no lies!’

In 1993, the so-called Barbie Liberation Organisation decided it was enough. The group bought allegedly three hundred Talking Dukes and Talking Barbies, painstakingly swapped their voice boxes and put the manipulated dolls back on the shop shelves. Now Barbie roared for vengeance, and GI Joe cooed about shopping. The hacked dolls came with a leaflet urging buyers who did agree with the group’s anti-sexist, anti-violent agenda to inform news media in the area. The action received a broad press and Internet coverage, including reports of boys and girls who were really happy with their funny unconventional dolls.

So, Barbie could be hacked, after all. It looked a perfect techno-political hack, not only showing and sharing how it was done – including technical do-it-yourself manuals on the Internet – but also making a firm statement about the absurd gender messages inscribed into children’s toys. However, none of the shops allegedly attacked could find any manipulated Barbies or GI Joes on their shelves, although some hacked dolls had been shown to reporters. While the BLO described itself in the *New York Times* as a ‘loose network of artists, parents, feminists and anti-war advocates’ (Firestone, 1993), the action was probably a media prank, enacted by @TMark, a collective of performance artists. One of their other famous political-cultural interventions was the so-called Toy-war in 2000, an online shareholders game mobilizing an army of ‘Toy-soldiers’ into the domain-name battle of etoy.com, their art site, against etoys.com, owned by the giant Internet toy retailer eToys Inc. Such a deliberate blend of tools and toys, activism, art, pranks, and hacks has been dubbed ‘culture jamming’ (Dery, 1993) and can be seen as a typical form of Internet activism which evolved during the 1990s. Barbie was there, in the front line. The BLO action inspired several spin-offs, such as the Barbie Disinformation Organisation, which pasted stickers such as ‘Barbie Lesbian Barber Shop’ on boxes of Barbie’s Stylin’ Salon, including instructions on how to give Barbie a ‘Dyke Haircut.’ And, of course, on the Internet there are numerous Barbie hacks in the same culture jamming tradition: AIDS Barbie (‘nice girls don’t use condoms’), Terminator Barbie, Teen Pregnancy Barbie, Homeless Barbie, even a Hacker Barbie, and lots of SM and otherwise blasphemous Barbies.

Games for girls and boys

No matter what playful Internet culture did to subvert her image, in the 1990s, the officially marketed Barbies predominantly represented middle-class sweetness and shallow-brained desires for shopping and fashion. Surprisingly, it was Mattel itself that

finally succeeded in swaying Barbie play into the heart of computer culture, while strictly adhering to the pink Barbie frame. In the winter of 1996, the company issued a computer game called *Barbie Fashion Designer*. It was an immediate hit. It sold half a million copies in its first two months, that Christmas outstripping blockbusters such as *Doom* and *Quake*, and finally shipped almost two million copies, probably all to girls. This was remarkable, since gaming was at that time considered a typical boy thing, with only a poor 15 per cent of girl gamers. A negligible market share for the growing game industry, which focused safely on top-selling games in the realm of action, speed, and combat. Female protagonists were usually absent from these genres, unless as a passive princess waiting to be rescued. Roberta Williams (the ‘Princess’ in Levy’s hacker history) was one of the first who incorporated female protagonists in her games, and other companies followed, after they had seen that it did not turn off men and boys. While *Tomb Raider*’s protagonist Lara Croft – a cross-over between Barbie and Indiana Jones – mainly attracted boys and men, *Barbie Fashion Designer* proved that another strategy of Barbiefying could persuade more girls into gaming.

The secret of BFD’s success was not the Barbie brand as such; Mattel had also issued the games *Barbie Storytelling* and *Barbie Rapunzel* (where Rapunzel had to rescue the prince), which did not sell particularly well. Was it in the game itself? BFD in fact just enabled girls to design and create clothes for their physical Barbie dolls: you could select styles and patterns, print the result on paper-backed fabric, and finally sew the outfits together. It had none of the features of top-selling games: no violence, no speed, no competition, no levels, and no adversaries. Sunrahmanyam and Greenfield (1998) argue that these features account for the game’s appeal to girls, but they also wonder whether BFD is a ‘genuine’ computer game at all, for the same reasons: lack of action and predefined goals; lack of obstacles to overcome; and no immersion in a virtual fantasy world. Indeed, BFD is an extension of playing with physical Barbie dolls, more a tool than a game. But it may be that we have to reconsider the very definition of games and action if we want games to be gender inclusive. According to empirical research, girls seek different kinds of complexity and action in games: character development and cooperation rather than violence and competition, familiar real life settings rather than fantasy worlds (Cooper, *et al.*, 1990; Kafai, 1996).

Gradually, the game industry began to realize that girls do play computer games and feminists realized that computer games provide an easy lead-in to computer literacy and ICT jobs (Loftus and Loftus, 1983; Greenfield and Cocking, 1996). This yielded to a ‘girls game movement’, a ‘highly unstable alliance between feminist activists (who want to change the ‘gendering’ of digital technology) and industry leaders (who want to create a girls’ market for their games)’ (Cassell and Jenkins, 1998: 4). Such alliances between the culture industry and counter movements are not unfamiliar in the field of new media, for example, in fan culture and open source software development (Jenkins, 2006; Schäfer, 2008), but in the context of girls’ games it is a tightrope to be walked.

The anthology *From Barbie to Mortal Kombat: Gender and Computer Games* (1998) assembles the debates and perspectives on this tightrope. Barbie as a main actor in the title is no coincidence: she is a pivotal icon of girls’ play, while *Mortal Kombat*

– a violent computer game – stands for boys’ play. Such a binary opposition between masculine and feminine is of course a social-cultural construct, conceived of differently in different cultures, historical periods, and contexts. The issue is whether girls should be encouraged to beat boys, or whether a girls-only place should be protected? The first scenario implies that girls change and ignore their different cultural interests; the second adheres to a stereotypical Barbified frame and confines girls to a separate world. Yet, we should be careful in dismissing traditional girls’ interests. Much feminist scholarship has been dedicated to reclaiming and revaluating the disdained areas of ‘women’s stuff’ (gossip, quilting, romance novels, soap operas), revealing instead the unacknowledged cultural and moral politics of these practices, including subversive uses and readings. And this may well hold for Barbie play and Barbie gaming too. Meanwhile, both scenarios assume games to be ‘boy’s own’, and both may result in the disparaging of girls’ interests, which are certainly more diversified than either *Mortal Kombat* or Barbie. A third scenario, also probed by the girls’ game movement, consists of transforming game genres towards ‘gender neutrality’. As the editors wrote in 1998:

With time we expect that, by pushing at both sides of the spectrum of what games for girls might look like, a gender neutral space may open up, a space that allows multiple definitions of both girlhood and boyhood, and multiple types of interaction with computer games of all sorts.

(Cassell and Jenkins, 1998: 36)

Ten years later, the book was updated. In *Beyond Barbie and Mortal Kombat*, the editors note ‘how little has changed, how much has changed, and how much needs to be done if more meaningful changes are going to occur’ (Cassell and Jenkins, 2008). Gone is the optimism about the ability of female-run start-up companies to transform the game market; they were either bought up (mostly by Mattel), or just went out of business after the dot-com bubble burst. Game stores nowadays do not have a pink corner, there are not many girls’ games – but there are millions of girl gamers, now accounting for 30 to 40 per cent of computer gamers. Online role playing games, such as *World of Warcraft* and *Second Life*, have proved successful in attracting female gamers. Most of all, the offline ‘real life simulation’ game *The Sims* attracts girls and women – more than half of its players are female. *The Sims* ‘shares many of the traits of the girls’ game movement without calling attention to them as such’ (Jenkins, 2001). Particularly interesting is that *The Sims* thrives on a dedicated fan community, which creates and distributes user-generated content in the form of so-called ‘mods’ (modifications) and ‘cheats’ (work arounds) for the re-appropriation of characters, environments, and rule sets. Finally, girls seem to be overtly hacking their dolls, toys, and tools. But there is also bad news. During the last ten years there has been no growth in the number of women working in the game industry, and the total number of women in computer science and jobs had continued to decrease. Girls may be playing and tinkering around more with computers, but this is not converted into computer job participation.

Meanwhile, Mattel struck again with a pink offensive. In April 2007, the company launched the *BarbieGirls* platform, 'a hybrid online-offline play experience that blends a fashion-forward, doll-inspired music player with the first virtual world designed exclusively for girls' (Palmeri, 2007). This Barbie world looks like a pink, cartoon-like cross-over between *The Sims* and *Second Life*: girls can create a personalized virtual character, design their own rooms, shop with B Bucks (virtual money), play games, watch videos, and have real-time chats with other girls. It was an immediate hit, attracting three million users in its first two months, reaching now (September 2008) fourteen million *BarbieGirls*, 85 per cent of which are 8- to 15-year-old girls. Mattel claims this is the 'fastest growing virtual world in history', and this may well be true: *Second Life* took three years to get to one million users, and has now reached fifteen million; whereas *World of Warcraft* now counts ten million users.

While fourteen million *BarbieGirls* still is peanuts, compared to the one hundred million copies sold of *The Sims*, the message is clear: pink, Barbified formatting is still alive and kicking and in urgent need for further research; for example, into the ways girls play nowadays. Though *Barbiegirls.com* is a highly protected, moderated, and predictable world, on several Internet forums, little girls can be found rushing in, screaming for cheats and codes to un-lock special features for their *BarbieGirls*. Maybe, in due time, they will create them themselves. Maybe, in due time, they will become their own Hacking Barbies.

In any case, Barbie, as an object-to-think-with in the triangle of work, play, and computing, continues to be a potent yet highly ambivalent figure. Having developed from a 1960s role model into a cyborged connection between dolls, devices, and virtual worlds, she has taken firm residence in computer culture. Though she is as yet confined to the domain of gossip, fashion, and shopping, this at least indicates that Barbie play can be extended, taken out of her box, into virtual and real worlds. Girls' toys and play modes could surely benefit from such extensions towards participatory Internet culture. And maybe she can be extended even further, brought into college and adult working life, proving Barbie culture is not necessarily incompatible with hacker culture.

Questions for further research

- 1 Check industrial (www.theesa.com) and academic (www.digra.org) resources in order to find current data about the share of girls and women as players of computer games. Figure out differences between countries, and between different game types (online/offline, genres, consoles). Do you find significant gender and age differences related to different types of game play?
- 2 Check demographic and ethnographic surveys (www.pewinternet.org) regarding PC use and Internet use: do men and women enact different activities and pursuits? Can you find indications of a toys versus tools pattern?
- 3 Check out YouTube or other Internet sites for more examples of culture-jamming appropriations of Barbie. What is the main target of their critique or parody?

- 4 Compare the characteristics of Barbiegirls.com with those of *Second Life* and/or *The Sims*. What similarities, and what differences can be found? Do you consider Barbiegirls.com a participatory culture (Jenkins, 2006)? Explain why, or why not. What does this imply for the feminist potential of Barbiegirls.com?
 - 5 Could you think of another contemporary or historical object-to-think-with which functions both as a tool, and as a mirror of subjectivity and identity? What kind of gender constructions are invoked by this object-to-think-with?
 - 6 In the field of computer game studies, several analytical frames of the concept of 'game' circulate, each foregrounding different aspects, such as narrative, ludology, or magic circle. Which frames or definitions are able to give an account of *Barbie Fashion Designer* as a computer game? If you consider none of the existing frames appropriate, could you come up with your own proposal for a non-biased, gender inclusive, and gender sensitive definition of 'computer game'.
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