Laptops and lipsticks: feminising technology

Susanne Gannon*
University of Western Sydney, NSW, Australia

This paper brings learning, mass media and technology together in a critical analysis of advertising and its gendered implications in terms of women’s desires and investments in technology. It uses two advertisements for laptop computers that appeared in the same weekend news magazine as an analytical opportunity to examine collisions and collusion between discourses of femininity and discourses of technology. Each advertisement depicts women as users of computer technology yet rather than aiming for a gender-neutral image, they enact a hyperfeminity in their representation of women and in their appeals to consumers. In these advertisements language, images, ideas and desires associated with cosmetics, designer fashion and maternity are mobilised by advertisers to sell computers to women. They provide an ideal space in which to survey some key ideas in the literature and to interrogate how familiar stereotypes about women and technology are being perpetuated and challenged. The implications of these readings for a larger project on girls and technology are examined in the final section of the paper.

Introduction

In early July 2005, a group of educational researchers began work on a new Australian Research Council (ARC) Linkage project called From high school to higher education: gendered pathways in information, communication and computer technology education or GAIT—Girls and Information Technologies. That same week two unusual advertisements appeared in The Weekend Magazine supplement of The Australian newspaper. Both of them featured young women as users of computers and each was explicitly pitched at women consumers. This paper argues that insights from close readings of cultural texts, such as these two advertisements, can contribute to a more nuanced understanding of the complexities of the field in empirical research into gender and technology education. The GAIT ARC project is a study across three Australian states that aims to map female pathways into and away from higher education.
education and careers in ICTs. From a postmodern perspective, its logic might be seen as somewhat old-fashioned—deriving from equity discourses founded in a liberal humanism that sees subjects as rational and autonomous and where women’s exclusion from the ICT industry is understood as correctable, comprehensible and articulable. The project design assumes that if we ask the right questions of enough of the right people they will tell us what they think and why they do what they do. Our project partners expect that we will then be able to make recommendations about policy and practice adjustments that can help to make the industry more equitable. And so do we. Tangible and measurable outcomes are necessary and essential elements of much research in education. However, the reading I provide in this paper suggests that supplementary research from the perspective of critical cultural studies enriches our understanding of more conventional empirical data.

The initial phase of the ARC project involves extensive surveys, interviews with teachers and focus groups with year 10 and 11 students in multiple sites in NSW, Victoria and South Australia. In its interest in gendered career pathways, it complements research in Europe and the USA, finding that despite industry expansion and excellent opportunities for well-paid and rewarding work, the numbers of women in these industries and academic pathways leading to them continue to fall (American Association of University Women (AAUW), 2000; NSW Department for Women, 2001; Valenduc et al., 2004). These studies argue that technologies remain culturally and socially constructed gendered (male), and that the design of computer education and access at all levels, and features of technology-oriented workplaces are not friendly to women. Traces of all these discourses can be identified in the two advertisements that I feature in this paper. Within ‘the circuit of culture’ (du Gay, 1997), advertisements circulate through technologies of production, distribution and consumption where readings are as likely to be characterised by contestation as by compliance. Their trajectories and effects are unpredictable. My reading of the advertisements does not claim to be definitive, nor to represent the readings that girls or young women are likely to make of them. Rather it is a particular and situated reading of myself, a researcher in a new project about an old problem, reading the images as a way of getting at issues highlighted in current literature on girls and computer technology.

The equity discourses within which our project was devised demand that we critique and reconfigure gendered relations with technology but we are chastened by the knowledge that though feminist interventions into technology education have been extensive and ongoing, they have, thus far, been largely unsuccessful (Clegg, 2001, p. 308). Wajcman describes progress as ‘halting’ at best (2004, p. 109)—despite the diversity of liberal feminist responses over more than 30 years—though she insists that the agenda of inclusion cannot be seen as superseded (2004, p. 110). Rather, the persistent and remarkable sex segregation of the industry demands continuing and urgent attention. The IT industry can of course be disaggregated into a range of different and particular professions, some of which require specialised tertiary preparation, such as software engineer, others of which have multiple routes of entry (Valenduc et al., 2004). Women’s exclusion continues to be most marked in
the ‘high end’ of the industry rather than ‘low end’ use (Valenduc et al., 2004; Wajcman, 2004). Nevertheless, long before women choose to enter a particular industry they are girls making choices about school subjects and leisure pursuits that are driven by pleasures and aversions that, whilst experienced as highly individual, are at least in part culturally constructed and mediated. Advertisements figure as one of the modes of this cultural mediation. The next section of the paper gives a brief overview of explanations of female exclusion from technology given in some of the literature before moving on to close readings of the laptop advertisements.

One of the most striking elements of the work in this field is the familiarity of the explanations. The large European and American reports provide useful overviews of the recurring themes that characterise discussions of technology and the education of girls. The AAUW report—*Tech-savvy: educating girls in the new computer age*—rejects the female ‘computer-phobic’ tag to see this as ‘a choice that invites a critique of computing culture’ (AAUW, 2000, p. x). Girls, they say, imagine that IT professionals live in solitary, anti-social, sedentary worlds and girls do not ‘recognize themselves in the culture of computing’ (AAUW, 2000, pp. xii–xiii). They summarise these ‘contradictions and tensions’ in the title of their first chapter: ‘We can, but I don’t want to’ (AAUW, 2000, p. 7). They talk about ‘the tool/toy divide’ and organise this along a gendered axis: ‘For boys, the computer is inherently interesting. Girls are interested in its instrumental possibilities, which may include its use as an artistic medium … and very interested in the possibilities of using technology to promote human interaction’ (AAUW, 2000, p. 9). They advise campaigns that use popular media ‘to promote real women doing work using computer technology’ (AAUW, 2000, p. 10). They suggest that in schools an incompatibility between traditional femininity and computing competence plays out as girls ‘downplay their competence and skill by engaging in “feminine rituals” in the classroom such as minimizing their successes, gossiping, grooming, or paying excessive or flirtatious attention to boys’ (AAUW, 2000, p. 25). On the other side of the Atlantic, the European Commission report called *Widening women’s work in information and communication technology* (Valenduc et al., 2004) analysed the situation in seven countries noting also a (masculine) ‘gender bias of marketing or advertising campaigns for products and services of the information society’ (2004, p. 27). They describe caricatures of gendered use where boys have ‘action, sport and combat games … joysticks and performance’ and girls have ‘chat, mailing lists, fan-clubs … keyboards and communication’. The stereotypes ‘influence … market studies on new products and services, as well as the design of these products and services and finally, their marketing image’ (Valenduc et al., 2004, p. 32). More than a decade earlier, Sofia gave a psychoanalytic reading of gendered computer use, describing how for girls computers tend to be what she calls a ‘hermeneutic technology’ (1993, p. 104) taken up for particular concrete purposes in the world, whilst boys tend to take up technology as an experience of ‘alterity’, using them as resources to create what she calls ‘a second self’ (1993, p. 104). Despite the risks of essentialism in all these analyses, they resonate with what we have seen thus far in our project of how girls and boys talk about technology. For the most part the GAIT project is designed to gather and analyse qualitative and
quantitative empirical data from human subjects. In 1993, Sofia warned that it would be a ‘strategic error to … politely [ignore] irrational investments’ in such projects (1993, p. 120).

This paper engages with some of these irrational investments in technology. It runs obliquely alongside the empirical data—the data that assumes that young people will tell us rationally and reliably how they use computers—by attending instead to the discursive possibilities and contradictions materialised in specific textual sites where desires are mobilised and mark(eting)ed. The complexity evident in the advertisements reflects the messiness and ambiguity of the complex desires and (ir)rationalities affecting young women’s engagement with ICTs. Even though these advertisements are not pitched at them, the school girls we have spoken to have told us that there should be more advertisements promoting technology to women. These, they suggest, would improve the ‘image’ of the industry. The advertisements analysed in this paper could be considered as direct responses to the void to which the girls drew our attention. They are obvious attempts to ‘feminise technology’ in the workplace and thus might be seen as enticements into such work. But, as Haraway points out, advertisements for technology operate as ‘interpellation, by calling an audience into the story, more than by informing instrumentally rational market behavior’ (1997, p. 169). Thus the paper investigates the range of landscapes and storylines for women that are mapped into these advertisements. Rather than fix a meaning, this paper seeks to explore the dynamism of visual images in consumer culture in the context of the perennial problem of girls’ apparent disinterest in technology.

The interpretive tools taken up in this paper are the grammars of text and image emerging from critical discourse analysis (Fairclough, 1992, 1995, 2001), and the related social semiotic approach to visual images (Kress & Van Leeuwen, 1996, 2001). Although their use may be unusual in research into learning and technology, they are powerful frameworks for close readings of texts and images. Fairclough describes the practice he calls ‘semiosis’ as the study of ‘all forms of meaning making—visual images, body language [and verbal/ written] language’ (2001, p. 122). Every form of meaning-making entails particular interpretive tools and terms for describing the components of texts which, in turn, enable analysis of how texts interact with their readers and viewers in the wider social world. Each can be seen as merely a ‘tool in a box of tools, which can be resorted to when needed and then returned to the box’ (Fairclough, 2001, p. 121) rather than a definitive analytical ‘Method’. These tools works best, Fairclough suggests, when they are adopted in inquiry into social problems aimed at intervention and social change. Kress and Van Leeuwen’s work (1996, 2001) has generated a compatible set of tools for the analysis of visual images that is closely aligned with the work of Fairclough. Their tools describe how images represent things and people in the world, how they interact with viewers of the images, and how elements of images are composed to achieve particular effects.

The research project from which this paper emerges focuses on the long-term goal of reforming large social and economic structures—career paths, educational institutions, corporations—in order to achieve more equitable gendered outcomes.
However, such change is dependent on the choices of individual social actors, the young women of our study, and the other than rational desires that underpin such choices. Our survey questions ask students to report on their choices in the present, such as their school subjects and reasons for choosing them, and, in the final open-ended question, to describe their imagined and desired futures 10 years hence. The young women in these advertisements could each be 10 years older than the young women of our surveys. They already occupy that future space that we asked the girls to imagine themselves into. How might the women in the images intersect with the possible futures of our girls? How might the desires and imagined futures of young women more broadly map on to these images from consumer culture? What sorts of spaces does consumer culture create for young women working with computer technologies? What pleasures are mobilised for women in computer cultures represented in these advertisements? The readings of the advertisements that follow detail elements of the representational, interactive and compositional dimensions of image and text in order to map how each image tends to invite particular meanings and disallow others.

Compact IT Solutions

The first advertisement appears on the inside cover of *The Weekend Magazine*. The tracing (Figure 1) shows the layout of image and text in the two sections of the advertisement. The glossy double-page spread begins, on the left-hand side, with a profile photograph of a slim elegant young woman putting on make-up using a laptop computer screen as a mirror.
She stands before a soft grey wall wearing a khaki knit top, and a flat gold chain that circles her neck and glows against the clear pale skin of her throat and chest. In the bottom section of the advertisement the front of her body merges in shadow with the wall. The light in the advertisement is focused on her head and face, highlighting her auburn hair and white skin. Above her head the corporate logo hovers like a little blue halo. She balances her laptop lightly on the flat surface of her right hand, while with her left hand she applies foundation with a fluffy pale pink sponge to an already perfectly made-up face. She gazes deeply into the screen, long lashes lowered, lips suggestively parted, facial expression immobilised in the intensity of her concentration on her goal: perfection. All the interaction in the image is between her and the screen, which we read as a mirror, reflecting her face back to her own eyes. We are privy to an intimate familiar narcissistic moment. The visual tropes of cosmetics advertising are adopted and parodied in the first half of the image. A faint curve of light (not represented in the sketch in Figure 1) sweeps down the woman’s body and carries the viewer’s eyes across to the right-hand side of the image. This part of the image is clearly separated from the first not just by the fold of the magazine but by a clear demarcation by colour, scene and perspective. The layout operates as a diptych of separate but interrelated images. On the right-hand side, a woman’s feet are propped up and crossed on the edge of a large shiny white desk. Otherwise, red is the colour theme of this side of the advertisement. The tag ‘Samsung Compact IT Solutions’ floats in white text in front of the cherry red wall. The layout invites us to read this woman—through a spatial and temporal narrative logic where left to right equals scenes of then and now (Kress & Van Leeuwen, 1996)—as the same woman who featured in the first part of the advertisement.

Her feet are immaculately manicured, clad in metallic red strappy stiletto sandals, toenails crimson, skin smooth, tanned, buffed and polished. On one side of her desk sits the laptop, now closed to show its stylish red casing. Beside it is a smart little matching red MP3 player. Behind these aesthetic objects is a white printer. On the right hand side of the desk is a flat screen monitor, the desktop image displaying a dark red velvet embossed wallpaper design, just a shade darker than the red wall behind it. There are no icons or toolbars on the screen—apart from a tiny image of the red laptop in the top corner. In the centre of the desk, at the point of convergence of the vectors emanating from her feet, and all the other items on the desk, in the exact centre, is a bottle of dark red nail polish perfectly coordinated in shade with the shoes, toenails, MP3 player, laptop casing and monitor wallpaper. Conspicuously absent from either of the images is any indication of the functionality of this technology. There is no paper in the printer, no files or programs apparent on any of the computers, nothing else on the desk that might suggest any sort of workspace. Rather we have an ideal of design, of perfection, that is contingent on the evacuation of more conventional elements of technology advertising. The text does not mention kilobytes, megabytes, gigabytes, pixels, RAM. The external dimensions of weight or screen size are not given. No detail of hardware such as DVD burners is provided. The virtues of the products are instead described in the text at the bottom of the page in aesthetic and lifestyle terms:
Feminising technology

Cutting edge design and hassle free mobility make Samsung’s ultra compact 030 notebook PC fit easily in your handbag and your lifestyle. (my italics)

The language of the catwalk, of up-market fashion shows and boutique shopping is also mobilised to represent the desirable features of the products:

Match it with the elegant SyncMaster monitor, subtle yet stylish laser printer and ready to wear MP3 player to discover a dream IT solution where fashion meets function. (my italics)

Nevertheless, what is conspicuously absent in this advertisement for high-fashion high-end computer products is any sense of function. The advertisers have adopted and reproduced some of the most stereotypical features of women’s representations in the media. Indeed, their reproduction and exaggeration through the language of fashion, cosmetics and beauty performs a parody of femininity, a hyperfemininity that might be seen as at odds with the sort of empowered and powerful female sensibility that might be valued in industry.

Though the parody appears to trivialise the relations between women and technology, it also references a productive history of women’s ingenuity and artfulness in the ‘creative misuse’ of technology (Terry & Calvert, 1997, p. 5). The ‘feminine rituals’ that the Tech-savvy report (AAUW, 2000) described as avoidance behaviours taken up by girls in computer classrooms are now integral to the technologies themselves. The woman herself is absent, in any significant sense, from the right-hand side of the image. All we have left of her body are her toes, her gorgeous shoes, and the smooth skin of her legs. Her feet are crossed, not quite in the feminine containment of legs crossed neatly at the ankles, but a little more boldly, a little further up her calves. And on the desk. All the better to show off the shoes, or all the better perhaps to show who’s the boss of this office. Reading the text this way we might trace an empowerment discourse that is appealing to young women, to the individualism of new young DIY feminists (Bail, 1996) who can have everything, all of the time. This woman might even be the boss, despite having no apparent work to do. Or perhaps, she is one of the long line of PAs fixing their nails in foyers that popular culture has taught us since the 1930s are more often that not the real boss in any office. Whatever her role, rather than qualifications, she has accessories that make her both professional—with the latest ‘compact IT solutions’—and feminine. The problem for which these commodities are the ‘dream IT solution’ is never named but perhaps it is one of style: the impossible dilemma, perhaps, of having to work with unfashionable office equipment. But we must ask whether this is this even an office. Some of the accoutrements of the office are there—desk, computer, printer, monitor—but there is no telephone, no diary, no paper, no coffee cup.

We assume it is an office because the conventions of left to right reading paths in images (Kress & Van Leeuwen, 1996). She has made up her face in the left-hand frame, in readiness for her arrival at work in the right-hand frame. She is properly accessorised for the job—whatever and wherever it is—and thus we assume that she can do it (if indeed that even matters any more). After all, work nowadays needs to fit into ‘your lifestyle’. And style does equal substance. Skill, competence, experience and other old-fashioned notions are irrelevant in this simultaneously
hypercommodified and hyperfeminised imaginary workplace. Why would any woman need specialised IT education or training to succeed in such a world?

This performance of hyperfemininity in this advertisement is remarkable in the context of the publication. This is not a women’s magazine but The Weekend Magazine. The broadsheet national newspaper The Australian takes itself and its readership seriously with an emphasis on conservative political analysis, even its leisure section takes a serious spin in its features. The feature stories in this issue stress an individualised ideology of the self made man and woman in a capitalist media-saturated economy. Other advertisements in this edition promote plasma televisions, leather sofas, overseas travel and imported Audi and Mercedes Benz cars. Regular columns such as ‘Style’, ‘Taste’ and ‘Home Hunt’ also frame the ‘Compact IT Solutions’ advertisement within a context of upper middle-class ‘lifestyle’ where design and aesthetics are highly valued, highly priced and highly desirable. The woman reader is interpellated in the advertisement and the magazine into a world of style, taste and discrimination. The implied storyline of this advertisement is that style can be bought and that success follows style for the modern young woman. The layout of the double-page spread also conforms to conventions of visual design designed to reinforce consumer desire, where the ‘new’ and the ‘real’ information—the explicit details of the products for which desire has been raised in the visual images—are located in the right-hand lower quadrant of the page (Kress & Van Leeuwen, 1996). What the woman consumer sees last is what she needs to act on: www.samsung.com.au.

In terms of our wider research project, the advertisement inverts the masculine imagery of computing culture. The hardware itself is feminised. The playfulness and lack of reverence for the machine itself has appeal. Considering that some of our low-interest respondents described computers as ‘ugly’, perhaps design features that accessorise more readily may have more appeal for young women.

Because she’s having a baby not a lobotomy

Remarkably, in the same issue of The Weekend Magazine was a second advertisement for a laptop computer directed at women consumers (Figure 2). The woman in this advertisement appears to have it all, but differently, than the woman in the first advertisement. Although she is heavily pregnant, the text tells us that she remains one of the ‘valued employees’ that modern corporations would do well to nurture and retain. In the ‘Compact IT Solutions’ advertisement, femininity was brought into collusion with the discourses of technology; in this image the femininity that is portrayed as compatible with technology is fecund. She is at home but she is working. She is on the telephone, and a notebook and pen sit on the table next to her laptop. She wears a pale blue top and a brown skirt, complementing the shiny timber floors and blue sky that can be seen through the trees at the end of the room. Her shoes, like the rest of her clothing, are stylish but appropriately sensible. A vase of white tulips sits beside her computer. The space of the image collapses domestic and workspaces into each other. She is at home and she is alone. She works at the dining table, the kitchen bench behind her, the wall of the room open to a sundeck and garden. The image
disregards familiar binary splits between nature–technology and domesticity–industry. It resonates with performances of nature, the lush garden in view, a bowl of fresh fruit, sunlight, the earthy glow of the wooden floor, her ripe body. None of these elements is incompatible with work, not with this wireless flexible workplace, indeed the viewer may even interpret her calm, relaxed demeanor as implying that she is more productive and efficient in this space than she would be at a more conventional worksite. The reconfiguration of work practices in this way, Wajcman argues, is an essential component of new work practices that are advantageous for women, however, she stresses that this must also be accompanied by more egalitarian domestic arrangements (2004, p. 113).

The reading path of this image begins on the left-hand side of the double-page spread with written text. In a stylised speech bubble, the tag: ‘Because she’s having a baby not a lobotomy’, in red in the top corner leads the reader down to a large block of text. Here the rationale for the advertisement is unfolded. It collapses together particular assumptions about the nature of contemporary pregnancy and the nature of contemporary workplaces, in an argument that unfolds as a marketing plan through a series of paragraphs labelled: OBSERVATION, OPPORTUNITY, INSIGHT, BOTTOM LINE, ACTION, CONTACT. The language of neoliberalism—of entrepreneurial ideologies and flexible workers—is valorised in the text (Rose, 1999). At first the woman worker seems to be at the centre of the text, but analysis of the grammar of the written text (see Appendix for complete text) locates her in object position in those sentences where she appears at all. The company is the implied actor/subject in most of the sentences. In the ‘OPPORTUNITY’ paragraph, for example, the company is the entity that can ‘Ensure fulfilling continuity’ for employees, and it is the company who aims at ‘retaining good people, strengthening loyalty, … avoiding costs … and getting a return’. In the eyes of the company, throughout the text, the woman generally appears within a larger noun group in object position: she is one of the ‘valued employees starting a
family’, one of the ‘good people’, part of the ‘mobilized workforce’, one of the company’s “human resources”, one of their ‘resourceful (and trusted) humans’. This representation of her in the language is strangely gender neutral, for an advertisement with a heavily pregnant woman in the centre of it, but simultaneously this neutrality signals a discourse of equity and inclusion that typifies liberal feminist arguments about equality in the workplace. After the ‘she’ in the tag at the beginning, the woman worker is located through most of the text inside plural and gender-neutral categories, until the penultimate line where the reader is told that this computer was designed for ‘the professional, well, juggler, who will demand No Compromise for her desktop replacement’ [their italics]. With the ‘well, juggler’ we are—somewhat apologetically perhaps—thrown back into a sort of domestic goddess discourse where the good woman and mother is a super-manager of her house, her children and her job, keeping all the balls in the air, and maintaining standards at least as high as any of her foremothers. The ‘her’ tells us again that this advertisement speaks to, about and for women worker/consumers, and in particular to those who buy computers for them. This advertisement might be read as a re-education of the corporate managers to whom most of the written text is grammatically addressed. Metaphors of healthy growth and corporate care link the written text with the pregnant woman worker in the image. The authority of this text in terms of liberal feminist equity discourses—and of rationality—is grounded in its reference to ‘Research*’ at the beginning of the INSIGHT paragraph. The asterisk leads us to the sidebar reference along the edge of the image which refers us to ‘*Family Friendly Work Practices, Research Report No 7.A, Australian Institute of Family Studies’. The specific recommendations that are referenced from that report are ‘control over start and finish times’ and ‘permanent part-time employment’. These have been key features of feminist workplace activism for decades and are critical, and shamefully tardy, elements of workplace reform. Now these tenets of equity feminism appear as perfect complements of neo-liberal workplaces. The company is a benign yet active agent in the written text. It is represented through the grammar in subject position, as the ‘corporation’ that actively aims to ‘ensure … continuity’. Its goals are ‘retaining good people, strengthening loyalty …, avoiding the high costs of worker turnover and getting a real return on the corporation’s training investment’. Ideal corporations ‘respect individual needs, treat and equip their “human resources” as resourceful (and trusted) humans’. It is the corporation who enables the achievement of ‘the healthy work/life balance’ of the workers. But the BOTTOM LINE is, as always, economic—leading to ‘a continuously healthy balance sheet’. Though the advertisement takes up overtly feminist discourses about inclusion and equity where mobile technologies enable flexibility in workplaces, it simultaneously sells an ideology of apparent corporate care and responsibility that individualises and separates workers, and that may even contribute to the erosion of employment conditions.

In the image, at least, the woman appears at the centre of the advertisement, but another reading might frame this ideal in terms of the ubiquity of the corporate presence. Despite being ‘at home’ the vectors of action and gaze (Kress & Van Leeuwen, 1996) show her looking at the screen and talking on the phone. Her work practices
may not differ much from what she would be doing in the office—but she is alone here and the flexibility of time and space means that she can work different, and possibly longer hours. Workplace health and safety issues are also disregarded when the worker works from home, using her stylish but ergonomically unsound furniture to do the corporation’s work.

Feminist equity discourses might be seen to collude with neo-liberal management discourses in this advertisement. But family-friendly is oddly realised when there is no family evident, apart from in utero. We might ask about the partner of the pregnant woman. What contribution does this person make to her life, and to her household? What about the child? Will she continue to work in this way when the child is born? The text of the advertisement suggests the ‘availability, at least as an option, of permanent part-time employment’. What of affordable and safe child care for working women? Even if she works ‘flexibly’ she might need some concentrated uninterrupted time to do her work—or will she do it, as many of our colleagues must (as office hours spill over and their laptops make them mobile), in the middle of the night when the child is asleep? What protection will there be for such a worker under the euphemistic ‘Work Choices’ legislation recently passed by the current Australian government? There are other questions that might be asked about equity for women in workplaces that are not evident in this advertisement. There are other exclusions as well. This woman is white and middle class. The heteronormative implication is that she is straight. Though we do not see the nature of her work, the language of the text suggests that she is in sales or marketing. In contrast to the other advertisement, we do see the woman working and there are some clues as to the nature of the work she does. The woman in this advertisement seems to be doing more than those ‘novice’, ‘impotent’ and ‘passive’ women traced by Johnson et al. (2006) in home computing magazines. But her role, as a user of technology, looks to be at the ‘low-end’. In my readings of these advertisements, both the women remain more or less locked into the subordinate side of binary pairs related to technology where ‘nature’ is opposed to ‘culture’, ‘low-end’ to ‘high-end’, users to designers, and femininity to masculinity (Terry & Calvert, 1997, p. 3).

In terms of the wider research project, this advertisement highlights one of the persistent problems we have had in speaking to young people. Their understandings of what it means to ‘work’ with and on computers in the present and the future are often indiscriminate. The range of work available in the computer industry is a mystery to many young people. Many sense that they already know all they need to know as computer users. Lucrative ‘high-end’ careers such as software design and development, and systems engineering are unimaginable. These careers, we suspect, are not as conducive to the dining table mobility that is marketed to the woman who works from home in this advertisement.

**Conclusion**

Feminists have been mapping and contesting the ambivalent relationship between femininity and technology for decades now. Yet young women’s interest in
technology—as represented by their presence in sites of technology education and workplaces—remains low. Interventions have included direct recruitment strategies by workplaces, formal women’s support networks such as WIT (Women in Technology), net-based ‘geek-girl’ guerilla feminism and diverse educational interventions. The GAIT longitudinal study into gendered pathways into information, communication and computer technologies (ICCTs) in Australia aims to find out what girls say and what girls do in three states in terms of their trajectories into higher education and the workforce in technology industries. It includes interviews with teachers working in high schools, and surveys and focus groups with school students. It incorporates quantitative and qualitative data-gathering and will map this empirical data against theoretical frameworks and analyses of research elsewhere. The advertisements analysed in this paper provide an oblique angle on that work, a glimpse of how the complex discourses surrounding women and technology play out in a tiny corner of popular culture. As Jewitt and Oyama (2001, p. 154) point out, a social semiotic reading, such as I have presented here, is predominantly a descriptive framework for analysing visual texts. It does not account for the unpredictable situated readings that another viewer, or category of viewers, might be likely to make. Nor does it address questions pertaining to the production and circulation of images in society generally, or via the advertising industry. Nevertheless, it does begin to provide some insights into the ambiguities and contradictions of the relationships between women and ICCTs. It opens up a potential new research line where we might ask girls who say that the ‘image’ of computing should be more girl-friendly to design advertisements for their own preferred magazines and media outlets, advertisements that might engage girls’ imaginations and mobilise their desires in ways that are inclusive of technology in more powerful ways. Thus we might engage in cultural production as a strategy of reconfiguring desires. As Sofia (1998, p. 31) argues, we must attend to the irrationalities of computer culture, to excesses of meaning, to hopes, fears and desires that are instantiated in computer cultures if we are to better understand their tendency to exclude women. However, such interventions would be naïve if they did not recognise that imaginations and desires—human subjects themselves—are always already shaped by the discourses within which they (we) are interpellated as social subjects.

The recommendations made by the reports in Europe and the USA with which this paper began include a call for ‘a more inclusive computer culture that … reflects the ubiquity of technology in all aspects of life’ (AAUW, 2000, p. x). Both the advertisements emphasise the ubiquitous nature of computers—the laptop becomes a handy, handbag-sized fashion item for the young style queen and it creates the flexible wireless worker who is the ideal of both equity feminism and the neoliberal corporation. The advertisements both meet the recommendation that girls should ‘recognize themselves in the culture of computing’ (AAUW, 2000, p. xii–xiii)—indeed the culture of computing has been thoroughly hyperfeminised in each of them. The ‘tool/toy divide’ has been overturned in the first advertisement, where the image itself plays with the idea that girls may be interested in its ‘use as an artistic medium’ (AAUW, 2000, p. 9). As a hermeneutic technology the computer becomes a useful tool for
applying makeup. It accessorises like other fashion and lifestyle choices. Neither of the advertisements really meets the recommendation of the American study that media campaigns should ‘promote real women doing work using computer technology’ in order to ‘change the entrenched stereotype of the “computer person” as male and as socially isolated’ (AAUW, 2000, p. 10). Although the woman in the second advertisement is visibly at work, she is socially isolated and in a familiar female domestic space. The masculine ‘gender bias’ noted by the European study in advertising campaigns has been thoroughly overturned in both these advertisements, though they articulate another set of stereotypes of female life as organised around the imperatives of fashion and maternity. What the advertisements do invite from women viewers, however, is a sense of play and pleasure, of rightness and of ease with technology which must be prerequisite to shifts in gender-inclusivity in technology industries and representation. The irrationalities of pleasure, feminine play and creative misuse of technology begin to bring women into a culture characterised by its stubborn persistence as masculine (Sofia, 1993, 1998; Wajcman, 1991, 2004; Clegg, 2001). We might conclude therefore that these advertisements demonstrate the efforts being made to shift the stereotypes that influence ‘new products and services, …the design of these products and services and finally, their marketing image’ (Valenduc et al., 2004, p. 32). The contradictions within them result in part from the mobilisation of alternative stereotypical discourses about the natures of women’s lives, particularly of some of the (ir)rational elements of technology. The implications of these advertising campaigns for broader interventions into the persistent problem of women and technology are perhaps that correctives may be excessive, and that the necessary feminisation of technology carries unpredictable risks and pleasures. For our particular research project on gendered educational pathways into ICCT careers, this analysis underscores again the ambivalence and complexity of young women’s relations with technology. Despite the mass of data that we are gathering—the transcripts from interviews and focus groups, the databases of subject choices and survey responses—and despite our assumptions that our respondents are telling us truths, there is always more going on than can be easily articulated. Our empirical research must also recognise that irrationality, desire and imagination impact upon ‘choice’, and that these are themselves not pure internal or psychological capacities but capacities that are shaped by the social worlds in which we live, including the image-saturated consumer cultures within which we make sense of our lives.

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Notes

1. ARC Linkage project managed by the University of Western Sydney in partnership with Deakin and Charles Sturt Universities, the NSW Department of Education and Training, the Office of Women, Premier's Department NSW; Department of Education and Children's Services, South Australia; and Department of Education, Victoria.

2. Samsung did not respond to communications requesting permission to reproduce the image for submission to an academic journal, whilst Toshiba denied permission. Accordingly, tracings of layout and detailed descriptions of each image are provided in this paper.

3. Prices and model numbers for all items of Samsung hardware are provided in the fine print in the block of text in the top right-hand corner of the page.

4. The cover story is about the business acumen of Australia’s newest multimillionaires, ‘The Wiggles’.

5. See forthcoming monograph Boy nerds, girl nerds: gender relations and the curriculum for information, communication and computer technology (ICCT) education in Australian high schools (2007) to be published by the Australian Curriculum Studies Association.

Notes on contributor

Susanne Gannon is a senior lecturer in education at the University of Western Sydney. Much of her work engages with issues of equity and social justice in education and beyond.

References


NSW Department of Women (2001) Girls in IT choices (Sydney, NSW Department of Women).


**Appendix. Text of the Toshiba advertisement**

**OBSERVATION:** Advanced pregnancy is demanding, and it’s just the beginning.

**OPPORTUNITY:** Ensure a fulfilling *continuity of contribution* for valued employees starting a family. Thereby retaining good people, strengthening loyalty both ways, avoiding the high costs of worker turnover and getting a real return on the corporation’s training investment.

**INSIGHT:** Research* shows that workplace flexibility, which truly enables work/family balance, is highly valued. Specifically, control over start and finish times in order to meet the new and growing demands of family life; and the availability, at least as an option, of permanent part-time employment.

**BOTTOM LINE:** Managerial discretion plus a mobilised workforce is a powerful combination. Corporations that respect individual needs, that treat and equip their ‘human resources’ as resourceful (and trusted) humans, can achieve the healthy work/family balance critical to a continuously healthy balance sheet.

**ACTION:** Investigate where Toshiba mobile computing is now in 2005. The new Tecra S2, for instance, powered by Intel© Centrino™ Mobile Technology. Designed and engineered for the professional, well, juggler who will demand No Compromises from her desktop replacement.