are about devolution of responsibility at the workplace. This representation reflects the importance of labour in the productive process viewed within the context of the past, the present and the future. As Milkman says, 'Traditional, top-down forms of organising work have increasingly been criticised in favour of such innovations as employee involvement, quality circles, pay-for-knowledge, multi-skilling and teamwork' (p. 25). Expressed in colloquial terms, currently, to varying degrees, organisations are proceeding from 'top down' patterns to the 'top down–bottom up' approach.

Several contributors refer to the stated aims of management regarding their intentions of devolution and in what results. Milkman, for example, illustrates the gap between rhetoric and practice by citing the introduction of a more participative system at GM-Linden. Here, she says, a 'wide gulf opened up between the managerial rhetoric of participation and the reality of the shop floor' (p. 33). Milkman accounts for this by reference to 'managerial intransigence' (p. 37) and asks the question, 'Can traditionally authoritarian businesses really learn to encourage autonomy and intellectual development among workers?' (p. 32). Whether they can or not, it is useful to learn from this case study and to apply it to matters in other relevant chapters. Evidence submitted in Milkman's chapter suggests that the reason for the 'intransigence' may be twofold—short term production pressures and a misplaced perception by management of the results of devolved and non-devolved power.

Overall, the book achieves its stated aim. It helps to ground us in reality. It does this in a subtle, if not perfect way, by helping us to understand the present by looking to the future. However, as indicated by many of the contributors, we need to know a lot more about the labour process in terms of devolution before we can proceed, in a meaningful way, to meet the demands of the future. As the editors say, 'Powerful forces *have* been reshaping the world of work' these being 'intensified competition within a more global political economy, expanded technological and information resources, new managerial ideologies and practices, and the spread of market relations within the state sector and large private firms' (p. 19).

If not to be overwhelmed by these forces, we need, as a high priority, to address and understand much better management's resistance to devolution. Strategies releasing the untapped potential of employees will follow. Employees are receptive to integrit and competent innovation. As the editors also say, 'For all the hassles and hardships at work, employees at all levels, when and where encouraged to participate and innovate in a climate of trust and reasonable security, welcome real change' (p. 21). This message is most relevant to managers, not only for the positions they hold, but also, for themselves as individuals—because are not managers also employees?

With its liberal referencing, this book is recommended reading for those who recognise, not only the centrality of work, but also the essential part that work plays in our lives.

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From Barbie to Mortal Kombat: Gender and Computer Games

Justine Cassell and Henry Jenkins (Eds)

Cambridge, MA, MIT Press, 1998, xviii + 360 pp., US$35.00, ISBN 0-262-03258-9

The issue of girls and computers has long been a vexed one, raising questions particularly

about whether computers afford less opportunities to girls than to boys because of some intrinsic design at the hardware or software level or whether girls have simply not been sufficiently encouraged to avail themselves of opportunities to attain computer-literacy at play which might benefit them in later life.

Cassell and Jenkins' book is an important one, looking especially at computer games, which are a major medium through which boys become acquainted with and enthusiastic about computers while many girls remain relatively more distant from them. A number of puzzles and dilemmas are thrown up as part of the discussion. Do computers themselves embody male values with their appeals to rationality and their denial of intuition and social negotiation? Is the culture surrounding computer games alienating to girls? Are girls too meek to tackle the software in the way that boys do? Or have designers of computer games designed for boys and shown too little interest in girls? In acknowledgement that this last point is at least part of the problem, many games companies are now trying to design games with the girls' market in mind. The results have been varied but include such offerings as Barbie Fashion Design which has appalled some, though not all, feminists.

On the one hand such specialization can be seen as yet another attempt to delineate a narrow range of women's roles, and trivial ones at that, and to 'cash in' on the separation of spheres. In the case of games revolving around Barbie, it can be argued that these, like the Barbie doll itself, offer girls a culture of shopping, fashion, beauty, nurturing and narcissism and socialize girls into the very domain from which feminists have been trying to rescue them for several decades.

For some protagonists, strongly opposed to yet another demarcation in the gendered lives of children, it is merely a case of encouraging and enticing girls to play with the games already available, to get them to join in the 'fun' that is so obviously offered by games such as Street Fighter, Quake and Mortal Kombat. After all, boys wouldn't become so engrossed, so excited, so obsessed with these games if they weren't fun, would they? This is the line put by the representative of Sega interviewed in the book, though it has other adherents.

But, of course, as Rosalind Coward[1] long ago pointed out in relation to women's culture and culture in general—and it applies vividly to boys and computer games—pleasures are constructed and the role of gender has been one of the chief influences in how it is constructed for collectives. Hence it is not surprising that many of the contributors to this book insist that to try to get girls to accept the games widely available is in fact to foist boys' culture on them since these games have been designed primarily around boys' culture as if it were, *ipso facto*, children's culture. To suggest that what is good for boys is necessarily good for girls (though whether some of these games are good for anybody is itself a contentious issue) is to say that girls should default to the male way of understanding the world, an understanding of the world which feminists have tried to question and analyse and which has, in many cases, been linked with social problems such as over-competitiveness, insensitivity to nature and inability to express inner feelings.

It is these questions and arguments that unravel over the course of the book but they are unravelled in interesting ways. The volume has three main sections, the first introducing the issues and assembling some key arguments, the second a series of interviews with people working on the production of computer games for girls, and the third section exploring some of the broader issues which are all too easily hidden in the controversy. Much of this third section is particularly useful, exploring such issues as gendered play spaces and the importance of storytelling in play. It gives the discussion

a much richer contextual basis and opens up further issues about play in general and not simply computer games.

The interviews are useful in that they give a range of viewpoints but the strength of the perspectives is somewhat uneven. It is clear that, while some of the software designers have thought at length about girls and their needs, others have approached their projects with both eyes on the market and only a superficial grasp of feminism, if that. Nonetheless, some of the research undertaken about what girls look for in computer games is illuminating and highlights the inadequacy of some of the original steps taken to open up computers for girls, such as the inclusion of female characters. Unfortunately, some of these characters have been designed, it seems, to appeal to male players rather than to offer genuine role models to women. Moreover, they do little to interest girls if the game play is still structured in a way which girls find alienating. The second step was to make the games nonviolent, perhaps a move in the right direction but still insufficient to actively interest girls. Indeed, Kinder points out that the game industry has tended to equate violence with action and so games made for girls were often lacking in action (p. 52). Then there was the idea of simply packaging existing games in pink and pretty boxes, hoping that girls would find the contents more appealing if they were packaged so.

The answer seems to lie in tapping into girls culture while still offering as broad a range of options as possible and carefully avoiding the sorts of stereotypes too easily dangling with their quick tie-ins to pre-sold characters such as Barbie. So what do girls want? Of course we need to be careful not to presume that all girls want the same thing. They, like boys, will have a plethora of tastes. Notwithstanding this, girls and boys have been sufficiently encultured by the time they encounter computers that they show marked differences along gender lines. Much of the research indicates that girls like games which allow social interaction and in which the player controls the timing as well as the direction of the game, unlike boys who frequently place a high priority on being given set times to complete their game tasks. Whereas winning or losing is very important to boys, it is much less crucial to girls who place higher priority on flexibility, writing, design, mysteries and facility for persuasion rather than outright conquest.

But if the content is differently appreciated by each gender, it seems that the approach to the computer is also of a marked difference. One of the chapters suggests that women think of technology as a tool and look to it to facilitate sharing, exploration and empowerment, whereas men often think of technology as a weapon and use it for purposes of autonomy, exploitation and transcendence. This may be too cut and dried but it at least opens up a discourse about how ways of viewing technology and different perceptions of how it can and should be used lead to different sorts of relationships to it. Thus it is with boys, girls and computers.

Overall the book meets its objectives well in outlining the issues, their complexities and the problems that arise in knee-jerk solutions. It moves beyond some of the more general issues dealt with by Provenzo,[2] whose study was confined to the content of video games, and it goes beyond and is more accessible than Marsha Kinder's 1991 book.[3] Although the interviews work well to cover a gamut of approaches, some of these are longer than their rather shallow philosophies probably warrant. The main weakness, however, is the last chapter which serves to undermine much of the care taken to avoid denigrating female culture. This chapter, a commentary by 'Game Grrlz' rather puts on a pedestal all the fighting, competition and power-grabbing that is so dominant in existing computer games and which most girls have tended to eschew, presumably for those reasons. It is not simply a case of being opposed to female culture. The tirade appears to characterize all the worst aspects of self-gratification, self-aggrandizement and

selfishness, which many of us would prefer did not feature in computer games for either gender. Take this excerpt, for example: 'I want to be King! ... I want all the best stuff and I want it all for me and I will knock the hell out of anyone who tries to take a piece of my action' (pp. 332–33). Admittedly, Game Grrlz are overstating the way they want women to be, in order to draw attention to their case that women do not have to be involved in social relations and caring, but this final piece in many respects belittles the skills of diplomacy, negotiation and compromise which, Subrahmanyan and Greenfield suggest in their chapter, are more central to girls' play (p. 54) but which have often been trivialized in the wider world.

The contributors of this last chapter also attempt to strengthen the argument for games' developers to move away from eroticized female characters, by claiming that boys would like different female models better. Surely that is not the issue. Female models should be developed to break stereotypes and to be representative of girls and empowering to them, not to succumb once more to thinking about how men and boys would like women and girls to be portrayed. Thus I found this final chapter, despite its provocativeness, disappointingly weak. The anthology would have been much better served by a crisp conclusion that drew together the many worthy themes dealt with over the three sections.

The final chapter may detract from the book but it does not negate its value as a rich and detailed exploration of the important questions surrounding girls and computer games.

Notes and References

1. Rosalind Coward, *Female Desire: Women's Sexuality Today*, Paladin, London, 1984.
2. E. Provenzo, *Video Kids: Making Sense of Nintendo*, Harvard University Press, Cambridge, MA, 1991.
3. M. Kinder, *Playing with Power in Movies, Television and Video Games*, University of California Press, Berkeley, 1991.

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The Growth Warriors: Creating Sustainable Global Advantage for America's Technology Industries

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This is a perplexing, but well written, monograph which on the one hand argues that the globalization of world trade and industry competition is inevitably leading to some degree of convergence, and on the other preaches for the competitive advantage of American IT policy over all others. Whilst accepting that the cause of much economic change lies with the introduction of IT and globalization, Mascitelli accepts that the extent of real reform is less than the political rhetoric suggests. He argues that there are still 'significant barriers to trade and investment in many countries' (p. 47). It is the recognition of these realities that creates the great paradox of this book. On the one hand he is arguing that America's technology industries can create competitive advantage using an alternative set of strategies, whilst accepting that there are innumerable