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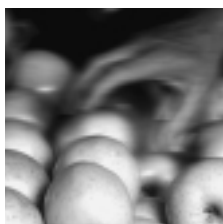
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ARTICLE

How Everyday Life Became Virtual

Mundane work at the juncture of production and consumption

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Abstract. This article takes as its starting point the mundane work of constructing 'virtual identities' and 'virtual' cultural practices in the course of 'everyday' participation in virtual reality technologies. The article explores how participation takes place, detailing in particular the work practices of staff and the interactions of staff with participants, which make 'virtual reality' possible. The article seeks to demonstrate the crucial role of staff as mediators translating technology into culture, and techno-culture into economics, in the distribution and institutionalization of virtual reality in everyday life. As such, the article argues that staff *embody* the juncture of technology production and consumption and perform key roles that embed new technologies of culture in ongoing social interaction.

Key words

consumption • culture industries • new media technologies • techno-culture • virtual reality (VR)

INTRODUCTION

IN THE SPECULATIVE DISCOURSES OF RECENT YEARS (both popular and academic), attention to the (over-hyped) potentials and problems of virtual reality (VR) technologies has tended to obscure the mundane social activities that incorporate 'the virtual' into everyday life. How 'virtual reality technologies' are made meaningful (Cowan, 1987) *outside* military installations and research labs, how 'virtual subjects' are made through them in everyday public space, how this 'virtual subjectivity' might be linked to the

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distribution and institutionalization of new techno-cultural objects in mundane social practice, remain issues with wider implications in techno-cultural economies. This article argues that attention to relatively unremarkable activities in everyday life (Terry and Calvert, 1997) can identify specific, transformative social mechanisms whereby 'virtual subjectivities' are made available through new technologies, and their creation is linked to specific interactional, cultural and economic (often commodified) contexts (Markley, 1996).

Studies in consumption have pointed to the ways in which new technologies require learning in much the same way as other cultural commodities (see, for example, Silverstone and Haddon, 1996). At the same time, the study of new technologies in particular draws attention to widespread socio-cultural change in the organization of information and communication practices not confined to 'consumption' per se. Attention to the *junctures* of technical production and consumption, and how technologies are reworked and reproduced in cultural and economic practice, requires an analysis that does not assume a priori determinism in regard to either 'technology' or 'consumption'. To illustrate the importance of mundane activities in the socio-cultural *institutionalization* of new technologies, this article focuses on how VR systems become embedded in publicly accessible leisure sites. Its first aim is to document the mundane work, in everyday spaces, that institutionalizes VR technologies; to demonstrate how virtuality is *achieved* in everyday life. To this end, this article outlines the daily activities undertaken by staff in 'location-based', commercial entertainment enterprises. These sites were identified in the course of conducting 'multi-sited' ethnographic research which investigated a range of public and private locales where VR technologies are produced and consumed, including arcades and bars, museums, galleries, theme parks, computer conferences and individuals' homes (Green, 1999a). The fieldwork for this research was conducted from 1996 to 1998, at sites in the USA, Europe and Australasia. This article focuses particularly on the body work and knowledge work performed by staff, who provide information to participants about appropriate forms of perception, action and interpretation within digital worlds, and interpret the images, stories and activities that participants witness and experience in those 'places'. Their work is simultaneously material and symbolic, comprising both action and interpretation.

The second aim of this article is to demonstrate how examining the everyday labours surrounding the achievement of 'virtuality' can further our understanding of how technology and culture, production and consumption, are linked in new media and communications technologies. This

article outlines how a techno-cultural object of consumption also becomes a commodified set of economic relations through the activities carried out by staff. Specifically, the article argues that those who carry out the work that connects the production of media technology with the consumption of culture are not only 'knowledge workers' in the production of a 'virtual society', but crucially *embody* the complex juncture of production and consumption in their everyday activities. On the one hand, they are competent consumers, and encourage and discipline others to become so. On the other hand, their precarious employment conditions, and their regulation via the economic values of the machines and their markets, mean that attendants are located in contradictory relations that have very 'real' economic implications for themselves and their livelihoods within the 'virtual cultures' they help to create.

CONSUMING VIRTUAL REALITY

Contrary to approaches that argue that 'there is no interface to design' (Bricken, 1991), virtual realities – as both instrumental objects and as cultural commodities – require significant learning, just as other forms of technology and popular culture require pedagogies which reproduce them (Giroux, 1994). Like Becker's (1963) *Outsiders*, who learned the appropriate techniques and perceptions, bodily habits and interpretations in marijuana use, VR participants must learn the machines, their parameters of use and the interactive pleasures they can provide. They are assisted in doing so through 'pedagogies of the virtual', enacted through the mediation of staff.¹ Participants' main bodily, spoken interaction with people beyond their immediate interpersonal milieu is with the 'attendants' who help people in and out of the machines, explain and interpret digital worlds, instruct on behaviour, and make connections between images, sights, sounds and sensations. In this article I want to focus on pedagogies of the virtual as they are enacted by staff and participants through mundane practices, by bringing together VR systems and people in public, commercial and location-based entertainment sites – thereby instituting and maintaining VR systems as techno-cultural commodities.

Immersive virtual realities attempt to simulate immersion in digital or 'cyberspace' – the 'space' created by information. Human perception is linked to computer graphic simulations of virtual worlds through head-mounted displays (HMD), data gloves or other navigation devices such as 3D joysticks. The head-mounted display consists of computer graphics run through stereoscopic video screens, which are viewed by the user as three-dimensional images. Aural stimulation is provided by stereo headphones

that provide computer-generated sound in three dimensions. Data gloves (or other input devices) provide a sense of touch when moving in virtual space. Through attached 'trackers', input devices such as the HMD or data gloves feed information to the computer as to the orientation of body parts, and simultaneously provide visual, aural and tactile feedback of objects in the virtual world.

Virtual reality systems are located at a variety of sites, including game arcades, amusement centres, bars, museums, theme parks, cafés, 'edutainment' centres and shopping malls. Arcades were initially a common place to find VR systems, spaces that are packed full of electronic machines, and encourage an intense and physically active consumption often associated with masculinity. These public spaces of consumption have long histories,² and combine the pleasures of game mastery and skills, of crowds and noise, of imagery and spectacle (Debord, 1995; see also Bahktin, 1984; Bennett, 1983).

Increasingly, however, VR machines have also come to be found in another kind of leisure space. The 'moral panics' historically associated with amusement and video arcades prompted a widespread reorganization of leisure sites towards a more controlled and regulated consumption (Price, 1985; Shuker, 1995). This regulated pleasure has so far found its most famous and developed expression in leisure spaces such as Disneyland (Bryman, 1999; Eco, 1986). Accordingly, what were once video-game arcades in downtown areas of cities are now becoming suburban 'family entertainment' or 'leisure' centres, or urban bars and cafés. These entertainment centres create controlled and predictable spaces which encourage adults and family groups to participate, and produce environments for consumption which, although they share with arcades the spectacle of the crowds, encourage *ordered* crowds and *controlled* spectacles (Hawkins, 1990; see also Gottdiener, 1997). As one VR centre manager in the USA put it, the 'vision' for the VR store he managed

. . . was kind of like the Disney store, where you can just walk into any city . . . you'd walk in and you'd know exactly what to expect when you came to [the store]. They'd be dressed the same, they would have the same uniforms, they'd have similar games, same price structure, and it would be just a new big thing in every major city.

While predictability is created through franchising chains of stores in this way (Ritzer, 1993), another mechanism for sustaining that predictability is the addition of spectacular 'theming' (Green, 1999b), which in

the context of this study was the creation of spaces devoted *exclusively* to the consumption of VR technologies and their associated products. When merchandising is also introduced, these themed VR centres also become retail stores that sell holograms, books (often on cyberspace, VR and computers), game disks for home-based VR systems (with associated sponsorship for companies), even T-shirts and sweatshirts. Merchandising is intended to support ongoing or repeated in-store VR game play by keeping consumers in the location, securing their loyalty, and providing free advertising for the location itself.

As sites of consumption, these locales are positioned at the nexus of techno-cultural production and consumption. Hawkins (1990) suggests that consumption of all kinds should be considered

. . . a practice marked by the cultural relations and processes which consumers bring to a commodity *and the conditions under which they use it*. The meanings and pleasure of leisure emerge in the relationship between leisure commodities and their consumers, such that patterns of distribution and reception are as important as the nature of production. (p. 215, emphasis in original)

The different pleasures on offer at the sites I have described here – competitive sociality, eating and drinking, buying merchandise, knowledge as pleasure, the development of ‘cultural capital’, as well as technical mastery and skill – render virtual realities familiar and make them accessible for mass consumption at the same time that they configure the consumption of technically mediated experiences in new and often commodified ways. When VR technologies become integrated into the social worlds of bars, arcades and leisure centres, those particular sites shape the ways the technologies are delivered. Of significance here are the networks of capital deployed in this industry. Just as important, however, is the mundane work, performed by the staff at sites of distribution, which bring together these aspects of technology and culture, production and consumption.

WORK IN MEDIA/CULTURE SPACES

Staff in distribution sites such as arcades, themed leisure centres, and family entertainment centres perform both material and symbolic work in the course of their everyday activities: one is work with the machines, bodies and environments that comprise leisure spaces; the other is work with knowledge, representation and interpretation. These dimensions together describe the transformation of technology into culture (and vice versa), and

the transformation of consumers into knowledgeable virtual subjects. These 'pedagogies of the virtual' (Giroux, 1994) involve creating a knowledgeable audience of consumers who will continue to participate in the digital worlds created by new media technologies. The staff in VR sites therefore have the tasks of regulating access to and participation in the technology, imparting knowledge about how to act and interact appropriately with the interface, and providing interpretations of the representations and stories of digital worlds. In short, they have the tasks of inciting the desire to consume, imparting knowledge about how to consume, and regulating consumption practices.

The staff and management in VR centres initially control participation in VR technologies by regulating access to the technologies: sometimes before potential participants even come through the door. Some of the staff in *Cyberworlds* (a pseudonym), one of a chain of location-based entertainment centres in the USA, commented that they frequently went outside the store into the mall to draw in customers who are standing and looking:

They just look, and they look completely terrified, and then I ask them to come in and check out the TV screens to see what they're doing. When they stand there and they look at that, they start to get interested.

The staff actively invite in those they consider appropriate participants. Others who might be in the vicinity (the manager mentioned homeless people) are explicitly discouraged by security in the wider perimeter of the mall, and at least implicitly discouraged by the staff through boundary policing and cultural hygiene. In other video gaming arcades I visited, certain people were excluded in specific times and places. For example, in the process of managing public and community relations, regulations are formulated to exclude school-aged children during school hours. In other cases, access to virtual realities is regulated via the relative accessibility of urban consumption sites such as suburban shopping malls or downtown showrooms. Some have more ready access to these sites than others (Banister et al., 1998; Shields, 1992).

Access to leisure spaces is complemented by access to the machines themselves – and the worlds they create – once participants are within the centre. The work of integrating bodies and VR machines is not unlike the 'body work' enacted in gyms, where instructors ensure the coupling of bodies and exercise machines in technical systems that embody culture through the inscription and incorporation of normative habit and gesture (Crandall, 1998). There are very pragmatic activities associated with 'fitting'

a particular human body to a particular technological system, and staff ensure that the body disciplines of machine interaction are carried out in order for VR to 'work'. Staff 'dress' participants in the VR interface, and control the beginning and end of the experience. Staff will put on and adjust the head-mounted display for participants, put on and adjust the belt, and check that all the equipment is working properly. The role of the staff is therefore to accommodate a range of different and diverse human beings to a relatively standardized technical interface, and adjusting all the equipment is a sometimes laborious process. Ill-fitting bodies are rendered at least problematic, if not 'abnormal'. The incomplete fit of particular human bodies to generic or standardized systems, and the work of making them fit, seems to be one of the most important tasks in making VR technology part of the everyday landscape (Star, 1991).

Physical 'access' is not the only way participation is regulated, however. Participation and consumption are also regulated through inciting the *desire* to consume. This can be achieved through the arrangement of spectacular spaces (Ritzer, 1999). One San Francisco store, for example, has walls of glass. Before a potential customer even enters the store, the machines, television sets and themed consumables are on display to be viewed from the outside, a parade of pleasures enticing the consumer (Benjamin, 1973; Debord, 1995). Equally, however, interactions with staff also incite the desire to consume. Such mediating work on the part of attendants simultaneously presumes and directs the behaviours that will produce pleasure, and the behaviours appropriate and tolerated in VR sites.

Once inside a venue such as the San Francisco-themed VR store, for example, staff provide the interpersonal motivations to consume, while ordering the behaviours of participants as they enter, participate in, and leave virtual realities. Two staff members in the store described this work:

I explain [to potential participants] what people are doing, what they're going through and I tell them all about the game and all about what they actually would be experiencing and what they would physically have to do to do the game, what's going to happen to them physically. I also put them into the machines, make sure that they do everything correctly so that they don't damage the machine or themselves.

I ask 'are you fully immersed in the game? You're actually creating everything you're doing in it.' But I think if you lead them in there and they don't really know what they're doing, are not really sure what is happening, you have more of a tendency

to be scared and disoriented, which won't make it fun at all . . .
You want to get out and it just won't be as fun as if you had
somebody there.

Familiarity with VR technologies and the worlds they create is learned not only through placing oneself in a technical interface, but also through acting and interacting in digital simulations. For example, one of the most widely encountered location-based VR systems is a system produced by Virtuality LtdTM called the CSTM ['CyberSpace'] 1000 unit, running games such as 'Dactyl Nightmare'TM, 'Legend Quest'TM, 'Gridbusters'TM, and 'Zonehunter'TM.³ One of the earlier games I encountered in my reconnaissance of entertainment sites, for example, was Dactyl Nightmare, in which the objective of the game is to score multiple 'hits' by 'shooting' other characters, thereby scoring as many points as possible. The participants play across a chessboard suspended in space, while a recurrent threat is a pterodactyl that attempts to pick up, and then drop (thereby 'killing') the players in the game (Green, 1999b).

Staff verbally and physically cajole participants into acting in these digital realities. They tell participants what they should do, what they should look at, how they should be moving, and they monitor participants' ongoing activity. They will interpret the characters and stories for participants both before and during the sessions, telling them who they are, what they're doing in that world, and why they are there. The staff thereby see themselves as integral to the process of producing 'fun' for consumers. Staff aim to ensure that participants' physical and cognitive experiences both in the game and in the site are such that pleasure will result.

Selling experiences as a set of social and cultural, as well as physical, effects is hardly new. The history of leisure has demonstrated that there have always been spaces where 'experiences' of various sorts are constructed and consumed as commodities. The expectations that the staff have as to what constitutes a pleasurable experience, however, are formed by their prior knowledge. For example, staff are often the most frequent 'consumers' of such experiences. As such, they acquire the skills and knowledge to guide initiates past ritualized liminal zones (Tomas, 1991), and into the realms of VR. They are often assisted in these tasks of explanation and interpretation by video briefings, equipment briefings and live 'real time' digital action, which play on television sets adjacent to the VR machines. According to Virtuality's promotional materials, for example, the replay station is

. . . specially designed to provide highlights and action replay
sequences . . . [that] provide the group with the opportunity to

avidly recount their game whilst watching edited highlights and encourages them to throw down the gauntlet for a repeat play challenge . . . best of three . . . best of five . . . (Virtuality, 1993: 16)

The extent to which these arrangements might achieve the effect of 'fun' is also witnessed in media that promote Virtuality's products to the owners and management of location-based centres. Promotional magazines are full of images of participants who are watching others, who are watching game play on monitors, who are clustered in crowds. Those who are connected to the machines are portrayed actively, their heads swivelling, their arms out, gripping the handset and turning, pointing, their mouths open, or with their arms up in signals of victory. All of them are either concentrating, or smiling (Virtuality, 1993: *passim*).

This sense of activity and movement is reinforced in promotional video images. One Virtuality promotional video depicts a young woman in a Virtuality pod as she engages in leaping and turning in large, almost frenzied, body movements to indicate her 'interactivity'. In this way, appropriate actions and responses in participants become standardized in the repertoire of staff understanding of pleasurable virtual activities. Sometimes extreme measures must be taken to get consumers to behave appropriately:

I've seen some people who work here just go up and grab a person, and turn them around . . . because they're just standing there staring out into space and not doing anything and because they're frustrated at yelling at them and they don't hear it. And they freak out because all of a sudden there's this hand holding them that [isn't] there, that they can't see.

'Not doing anything' is not an appropriate behaviour in a medium that is supposed to be 'interactive'. 'Misuse', as defined through inactivity, becomes if not pathologized, at least the focus of remedial measures, thus normalizing specific bodily habits and gestures. Through these promotional materials, operators and their staff understand appropriate bodily behaviours for a satisfying consumption experience, and therefore attempt to reproduce/reinscribe those behaviours on the bodies of participants in centres (especially as each consumer acts as an advertisement for others).⁴

The staff are often aware that the knowledge that they have constitutes power in this context, and that they are not only explicitly teaching people how to use the game, but that participants' bodies need to be directed and physically disciplined to learn the rules of its consumption:

You're the one that actually holds all the knowledge and you have to let them know what's happening . . . Sometimes we'll just have to take their gun and lead them the right way, or tell them how to push their thumb down.

The cases described here indicate that when staff impart particular kinds of knowledge, when they regulate access to the machines, when they physically encourage participants to move or act in certain ways, they are, as cultural mediators with particular kinds of cultural capital, engaging specific disciplines of the body. The production of digital embodiment in virtual worlds therefore entails redefining what *counts* as virtual embodiment and subjectivity in everyday life, and how that is achieved in local contexts. It entails the production of collective knowledge about and practice of embodiment, as these are worked through micro-social enactments of physical and cultural production and reproduction.

The notion of discipline as Foucault (1973, 1979) used it described techniques of the body (and technologies) as a form of individual and collective control of populations. While the governance of populations was historically enacted through physical force and centralized surveillance, 'discipline' instead employs not only *consent*, but the *desires* of the individual in disciplinary operations at the level of the (conscious and unconscious) bodily activity of the organism itself. Whereas Foucault described state governance and regulation of whole populations, other theorists have more recently focused on how subjective desire operates to discipline individual bodies at micro-sociological levels in everyday life (see, for example, Sawicki, 1991). These disciplinary practices are not a matter of working the body en masse, 'wholesale', as if it were an indissociable unity, but of working it 'retail', individually; of exercising upon it a subtle coercion, of obtaining holds upon it at the level of the mechanism itself – movements, gestures, attitudes, rapidity: an infinitesimal power over the active body (Foucault, 1979: 136–7).

Whereas other exercises of power can destroy the body, this discipline and training 'can reconstruct it to produce new gestures, actions, habits and skills, and ultimately new kinds of people' (Rouse, 1994: 95); in this case, 'virtual people'.

As is apparent in the social worlds described here, disciplinary pleasures are predicated on the 'naturalization' of particular bodily habits and gestures. The sense of reality or naturalness in the construction of 'the virtual subject' is organized around familiar techniques, already learned (often unconsciously) over a lifetime of living in highly mediated cultures.

Technologically mediated relationships are translated and incorporated as bodily, subjectively defined competencies. These 'techniques of the body' (Lyon, 1997; Mauss, 1973) create physical, symbolic and subjective assemblages, which are simultaneously biological, cognitive and social/cultural in nature. These techniques 'aim to render the individual both more powerful, productive, useful *and* docile' (Sawicki, 1991: 67).

Local disciplinary practices of physical production and reproduction constrain some kinds of bodily attributes and identifications, and enable others. The construction of virtual realities draws on these social assemblages to construct a virtual system that assumes or promotes some competencies, some kinds of attributes and identifications for virtual personhood, over others. This is explicit in the formulation of regulations within centres for handling equipment and behaving appropriately while using it. Consider the following instructions, placed on a sandwich board alongside one machine in a family entertainment centre:

WARNING! DO NOT PLAY THIS GAME IF YOU: Are less than 110 cm tall – Are pregnant or may be pregnant – Are under the influence of alcohol or drugs – Have high blood pressure or heart ailment – Have neck or spinal pain – Have eye disease – Need assistance when walking – Have experienced muscle twitches, loss of awareness while watching TV, playing video games or being exposed to strong light stimulation – Before Game – The MVD (Mega Visor Display [the HMD]) is to be used without eyeglasses. This may cause difficulty in focusing for some individuals – Some hairstyles may keep the MVD from fitting properly – Please wipe off any perspiration before putting on the MVD – Please refrain from playing this game without a break – During Game – If you experience dizziness or discomfort while playing this game, immediately discontinue play – In case of mechanical difficulties, please call a nearby attendant – After Game – If you experience eye fatigue, drying of the eyes, flickering or dizziness after playing this game, be sure to rest until fully recovered – Do not drive automobiles immediately after playing this game – Replacing the MVD – When replacing the MVD onto the holder, insert the MVD firmly until the red light goes off – ATTENTION – The MVD is a sophisticated piece of machinery. Please do not hit, drop, pull or otherwise damage the MVD.

At the same time, staff in VR centres are themselves consumers, and are

subject to these disciplines. They are some of the most knowledgeable consumers of VR as they play while at work (*as work*), as well as outside work hours. Whereas the technical disciplines of the machines, with their unfamiliar restraints, can be potentially constraining for consumers in their pursuit of leisure, these same disciplines can become, if not a freedom, at least a temporary release from the strictures of other bodily labours in the context of paid work, while contributing to a skills and knowledge base that is highly specialized, if not widely marketable. These competencies, skills and knowledge – the *habitus* of everyday VR – are situated and cultivated in the context of the contradictory positions staff occupy within culture industries.

WORKERS IN A VIRTUAL SOCIETY: AT THE JUNCTURE OF PRODUCTION AND CONSUMPTION

Not only do technical objects such as virtual systems become meaning-making objects in consumption spectacles at particular sites; they also become economic objects in the work and value that is constructed at those sites. Such cultural articulations draw together the work of institutionalizing a new media technology and of embedding that technology in culture industries (Hirsch, 1972: 642; see also Becker, 1982: 122–9) through the processes of commodification in which staff are implicated.

The staff in such venues are crucial resources in the process of transforming a techno-cultural object into a commodified economic object. The combination of commodification techniques that are employed differs across sites depending on the economic model that is a point of reference. The distribution of Virtuality machines, for example, is organized around a return on investment economic model that maximizes short-term consumer turnaround. As in other entertainment and leisure industries, ‘successful’ consumer pleasures are those products that maximize ‘throughput’ and change rapidly and flexibly to encourage repeat business based on novelty, but which also maximize familiarity. In sites such as leisure centres, maximizing short-term profit is the goal of ownership and management – to receive a return on capital investment in as short a time as possible, and to minimize capital risk. The fact that participants progressively learn to consume and to maximize the experience derived from consumption therefore coincides with ownership and management interest in making a return on their investment.

As a manager in a VR development firm notes, it is commercially important for both producers and operators to recognize that

. . . they [the customers] don't even know how to use this new interface – so you can't have a great time until you're comfortable with other navigational techniques or playing techniques, comfortable with the fact that you can work it out.

Staff are therefore required not only to transform technology into culture, but techno-culture into economics. They become salespeople, to assist in the revenue generation process (and if they are to continue in employment, they have to sell):

Basically my job is . . . I sell the games . . . I sell people into wanting to play the games and I teach them what the games are . . . trying to make them sound as attractive as possible, or as least fearsome as possible.

In commercial or retail centres, selling is the top priority. Marketing is therefore at the heart of VR as much as any other commodity-based cultural elaboration. One manager of a themed franchise venue, for example, described his job in the following way:

My goal was to make sure that everybody who walked into the centre left after spending some money . . . with the best time they'd ever had in any centre. I would do whatever I could to make sure that they would leave thinking [the store] is cool . . . The goal was a fifteen percent return rate. They were catering to tourists and to people who just wanted to come in and sample what VR was like and then never come back. And I guess that's OK, but my experience with customer service has been the opposite. The goal is to make sure people come back again, and again and again.

As the manager indicates here, the premise of accumulation generates a number of strategies to secure audiences, and the combination of economic and cultural strategies operates unevenly amongst sites. Another attendant is more resistant to being cast as a salesperson or marketer: 'I don't like the idea of pushing it. [I like] talking about it, letting people be informed on what it is . . . '.

According to one centre manager, however:

I trained my staff to sell better because to stay in business, just to pay the salaries of the people I had in the centre, I had to force each of them to sell at least three times what they were being paid that day, in merchandise or in games. So I laid out an

infrastructure to reward them for better sales and teach them how to sell . . . Top priority was to turn these guys from attendants, which is what they were called before, into a sales team.

The staff in leisure centres are disciplined as subjects of this 'return on investment' model of business organization, which gives rise to sometimes contradictory roles and identities for staff. Their roles as knowledgeable, critical and reflexive consumers of the technologies can conflict with their activities in collaborating with management to produce particular kinds of experiences for their audiences.

Staff employment requires them physically to maintain both themselves and the machines as elements of the spectacle, and maintain the standards set in centres. These expectations mean they are regulated in their work practices as staff in service industries. For example, staff are familiar with operational procedures for technical equipment to maintain standards of health and safety, such as first aid and emergency procedures. Coincidentally, this means that attendants are effective at getting people in and out of the system at a rapid rate, and efficient in their use of the machine, thereby contributing to the economic demands of return-on-investment. Furthermore, staff themselves act as an advertisement for the games through their bodily presence (both inside and outside the machine). For this reason, one common form of regulation found across professions in service industries – staff appearance – is reproduced in theme centres where selling is important. One manager describes how the owners of a themed centre concentrated on the appearance of staff:

When I first started, [the] priority was to make sure everybody was dressed correctly. He apparently had never got anyone to dress the way he wanted them to . . . told me to go on in and if I needed to fire everyone, to hire people who knew how to dress properly, to do that. And I assured him, I could probably figure out a way to get people to dress correctly without having to fire them all . . .

In addition to disciplining the appearance in sales and marketing occupations, there are the specific service and emotional tasks inscribed in job descriptions and centre management. Service work requires appropriate interactional skills that include emotional labour (Hochschild, 1983). There are also physical labours specific to VR technologies. For example, the 'Manual of Safe Operation' for Virtuality machines (Turner, 1993: 25) outlines sanitation procedures to reduce the risk of 'cross infection':

The Visette™ is designed for multi-user operation and for this reason should be kept visually clean as described in the equipment cleaning procedures included in this manual. If any user, for personal hygiene reasons requests that the Visette™ be cleaned, this should be carried out immediately with the provided medical wipes.

I have never seen such a concentration of blue and white plastic towel-ette wipe packets as I did in VR centres. This 'dirty work', identified by Hughes (1958) and Strauss et al. (1985), is the counterpoint to skilled labour in many professions. In dirty work, the hidden and devalued (often gendered and privatized) work practices associated with cleaning are shifted into the public sphere as work for attendants.⁵ The physical and emotional work of selling and attending is undervalued and, as is the case in many service industries, staff job security in arcades and themed centres is fragile.⁶ The economic model through which such local operations are run means that staff represent high overheads, and their cost adds directly to the capital cost of the machine and its maintenance. The issue of having staff at all is therefore fraught, and operators play a trade-off game between the costs of staff and the costs of equipment damage. Sometimes the staff can do their job too well. Because location-based virtual systems are simple to operate and often automated, it is possible for consumers to get so good that all they need to do is obtain the appropriate game disk, and it progressively cuts down on the cost of attendants for the centre. For consumers, this is the process of becoming a *self*-regulating and *self*-disciplining virtual subject. For staff, it represents potential unemployment.

There is therefore a high level of uncertainty and risk in economic investment on the part of cultural intermediaries (Lewis, 1986; Traube, 1996: xv) and their staff, especially in the case of VR systems where the 'product' as such is still emerging (and which can be cast as a number of different possible products). In the construction of long-term, knowledgeable and competent consumers, then, many 'popular' sites of cultural distribution meet in their desire to construct long-term audiences. One attendant at a retail space phrased the point in this way:

I think this whole gaming attraction is trying to make the technology appealing to everybody. I'm sure there's millions of things that are used, advanced technology, but this is advanced technology that is made available to a lot of people – and it's making it attractive. With technology anyway, the more widely known it is the more available it is, the cheaper it becomes in

the future . . . Right now, home VR goes up to nine hundred dollars, but maybe in five years, it can be used for useful things – for things around the house, for stuff in your workplace – and it won't cost as much. So right now, it's just a way for people to get to see what maybe will be available to them in the future – like video cameras. A long time ago, they were very expensive and nobody knew how to use them.

Consumption, however, is a difficult practice to control. While 'the logic of profitability dictates that the sale is more important than the use of a product' (Hawkins, 1990: 215), what one *makes* of the products of culture industries in everyday life is unstable (de Certeau, 1984). There are people who consume enthusiastically many times over. But not everyone 'buys' – and not everyone who buys an experience 'buys' any particular ideology about 'the virtual'. This in turn renders the exchange value in such circulations precarious, and the construction of 'the virtual' in everyday practice a site of struggle.

CONCLUSIONS: THE MUNDANE ASPECTS OF VIRTUAL REALITIES IN A 'VIRTUAL SOCIETY'

What VR sites share is a studied and structured organization of physical and social spaces and interactions that foreground the pleasures of virtual systems as experiential commodities. What is sold and consumed in these sites are not tangible objects, but rather a series of effects: pleasure, entertainment, spectacle, fun and thrills (Hawkins, 1990: 210–11). What makes these effects compelling is the opportunity to rework embodiment and subjectivity through the collapse of distinctions between body and technology, in sites that encourage these boundary crossings in everyday life. It is in the economic interests of commercial public site operators to organize their sites in such a way as to elaborate and sell the cultural *concept* of VR in sites coded for the consumption of bodily and cognitive experiences as commodities.

Virtual reality distributors act as cultural intermediaries in culture industries, in which profit-seeking firms produce culture for distribution. The management and staff of leisure centres, arcades and 'edutainment' venues therefore transform virtual realities from technical objects/economic commodities into techno-cultural systems (and vice versa), in the process of integrating virtual realities into particular sites. As a consequence of enacting such (reciprocal) transformations, consumption activities in these spaces become highly regulated. Sites can be either thematic or diverse, but are constructed around the arrangement of spaces, the activities specifically proscribed and the activities made available.

Staff are central practitioners in location-based consumption because they act through interpersonal relations both to incite the desire to consume, and to pass on skills and knowledge about how to consume. In doing so, they institute a particular form of consumption designed to maximize both economic and cultural profit for the location at which they work. Examining the role of staff in these sites makes explicit what often remains implicit in everyday life – that the virtual is not only produced in the genesis of a new technology, but that mundane cultural and economic work of transformation is required to teach and learn the new conventions available for virtual bodily activities and digital identities. Learning VR is also a process of learning particular culture(s) and economic systems, and staff interact with consumers in physical and interpretive ‘pedagogies of the virtual’. Through *learning* new technologies, participants themselves discipline their bodies (self-discipline) to the requirements of the technologies. Participants get to ‘know’ what virtual embodiment ‘is’, how ‘it’ is enacted, and assemble ‘experience’ as an effect of such practices.

Staff in these sites are therefore both brokers of new technology, and simultaneously subject to the disciplines of cultural practice in leisure industries. As such, they crucially *embody* the junctures of techno-cultural production and consumption by bringing together bodies and technologies, and reciprocally transforming technology into culture, and culture into technology. In doing so, they become important knowledge workers in a virtual society, instituting and maintaining what it means to ‘become virtual’ in everyday life.

Notes

1. ‘Pedagogies of the virtual’ here echoes Giroux’s (1994) ‘pedagogies of the popular’, in which young people learn the habits and interpretations of popular cultural forms. More specifically, both Provenzo (1991) and Kinder (1991) have described related dynamics in learning video games.
2. Video arcades are related in kind to amusement parks such as Coney Island (Weinstein, 1992) or Blackpool beach (Bennett, 1983), or to the pool halls or pinball arcades that preceded them (Price, 1985; Shuker, 1995), all of which remain different in kind – as instances of the ‘carnavalesque’ – from the more recent theme parks and themed entertainment centres.
3. The company name, as well as system and software names cited here, are registered, trademarked and copyrighted to the respective artists and development companies, including Virtuality LtdTM.
4. See Green (1999b) for a discussion of the particular disciplinary mechanisms constructed through the institutional regulation of spectacular consumption, and the normalizing practices through which consumers watch each other.
5. In this context, the visibility of the towelettes both acts as an advertisement for the

- careful hygiene practices of the store, and the cleaning work takes on the aspect of ritualized sanitation as the intrusion of the 'natural'. This 'natural', associated with the privatized and feminine, is in the form of skin, of hair, of human parasites and bacteria, and is policed and prevented from taking hold in the technical realm. The workings of the body are implicitly acknowledged in the presence of the towelettes, but its effects are simultaneously denied in the eradication of its traces.
6. Several weeks into my research at one themed store, the manager called me and told me not to bother turning up for the next day at work. The store was to be closed – the equipment was all dismantled and removed within 24 hours, and the staff had two days' notice of the loss of their jobs.

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