FCJ-025 Precarious Playbour: Modders and the Digital Games Industry

Julian Kücklich.

2 The digital games industry comprises a significant part of the creative industries, with revenues comparable to the box office intakes of the Hollywood film industry. A recent report published by British market research firm Informa Media values the global games market in 2003 at 33.2 billion US dollars (Thomas, 2004). Loren Shuster notes: 'To put those figures into context, the size of the gaming industry is now approaching the music industry, which is worth around $38 billion, and has already surpassed the motion picture industry in terms of box office revenue. Moreover, gaming is growing, and may actually exceed the value of the music industry by the end of 2004′ (Shuster, 2003).

3 This success has led to an industry-wide concentration process, in the course of which smaller developers and publishers have either been taken over by large corporations such as Electronic Arts and Ubisoft, or pushed out of the market altogether. But even for the big players, profit margins are so slim that they rely increasingly on licenses and sequels to ensure profitability (see Kline et al., 2003). However, this risk-averseness is counter-balanced by the growing number of players who are not content just to consume games, but prefer to create their own games using the tools provided by the games' manufacturers, or, in the absence of these, creating their own tools and utilities.

4 Computer game modification, or "modding", is an important part of gaming culture as well as an increasingly important source of value for the games industry. The example of Counter-Strike, originally a modification of the first-person shooter Half-Life, and subsequently sold as a stand-alone product for Xbox and PC, shows that "mods" can not only increase the shelf-life of the games industry's products, but also inject a shot of much-needed innovation into an industry seemingly unable to afford taking commercial risks.

5 Modders, however, are rarely remunerated for taking the risks the industry itself shuns. While successful modders, such as Counter-Strike's creator, Minh Le, enjoy a celebrity status that enables them to find employment in the games industry, many modders are either uninterested or unable to translate the social capital gained through modding into gainful employment. The precarious status of modding as a form of unpaid labour is veiled by the perception of modding as a leisure activity, or simply as an extension of play. This draws attention to the fact that in the entertainment industries, the relationship between work and play is changing, leading, as it were, to a hybrid form of "playbour".

6 The following paper analyses the relationship between the modding community and the games industry from a political economy perspective, without disregarding the pleasures and rewards individual modders may derive from their work. Within this context, the questions of whether modders can be regarded in terms of a "dispersed multitude", and how the power that comes with this status can be realised more fully, deserve special attention. At the same time, this paper seeks to gain insight into the changing relationship between work and play in the creative industries, and the ideological ramifications of this change.

The History of Modding

7 Since the early 1990s, the relationship between the digital games industry and the consumers of digital games has changed significantly. To a large extent, this is due to the emergence of computer game modification, or "modding", as a widespread cultural practice. While Castle Smurfenstein (1983), a modification of the classic Castle Wolfenstein, is commonly seen as the first mod, modding did not come into its own until after id Software's publication of the Doom source code in 1997, and the subsequent development of level editors such as WorldCraft by the players themselves. In a Popular Science article on modding David Kushner (n.d.) notes that '[t]he Doom Editor Utility was a watershed in the evolution of the participatory culture of mod making. Anyone with the interest could create a level of a complex game, the equivalent of writing a new chapter into a book, and then, via the Internet, publishing that creation'.

8 The unplanned and unexpected proliferation of Doom mods turned out to be a stroke of luck for id Software, since the mods required the original software to run on players' computers. As James

Wagner Au (2002) points out: 'Not only did this tradition of communal self-policing create a bond between id and their best fans, it benefited the company commercially – to enjoy all the free fan-created content now coming available, you first had to pay your toll to id and Apogee'. As a consequence, subsequent id products such as Quake and Quake II were shipped with powerful level-editors that allowed players to make their own mods.

9 The most successful Quake II mod, however, was not a fan-created modification, but a commercial product: '[T]wo former Microsoft programmers were investing their time and money in a new venture. They called it Valve Software, and without any prior industry experience, Mike Harrington and Gabe Newell were hoping to transform the state of games with a title that would become "Half-Life" (1998). After a visit to the id offices in Mesquite, Texas, they chose to build the game on top of the original "Quake" 3-D rendering "engine"' (Au, 2002).

10 And of course it was Half-Life itself that gave rise to the most successful mod in computer game history: Counter-Strike (1999). Created collaboratively by Minh "Gooseman" Le and some of his fellow students, Counter-Strike quickly became the most popular online game – a title it still holds at the time of this writing, almost five years after its release. Le eventually found employment at Valve and sold Counter-Strike to his employer for an undisclosed sum. Counter-Strike is now a well-established Valve brand, with over a million copies sold, and a single-player version (Counter-Strike: Condition Zero) an instant success.

11 In the light of this success, it is hardly surprising that Valve remains dedicated to strengthening the ties between the modding community and the games industry. In 2002, Valve launched Steam, a distribution network that 'will create a smoother transition between the amateur world and the professional world' (Au, 2002). This smooth transition, however, comes at a price. Valve's Gabe Newell explains the business model behind Steam as follows: 'We are going to be offering mod teams a $995 engine license plus royalty to allow them to distribute their mods over Steam....Once a mod team has developed an audience they could think about either being aggregated into some other offering or going all the way to publishing their game over Steam' (quoted in Au, 2002).

The Economy of Modding

12 The fact that game developers frequently license other companies' game engines – as in the case of Valve licensing the Quake engine for Half-Life – draws attention to the close similarities between the modding community and the games industry. In effect, a game like Half-Life is no less derivative than some of the more ambitious products of the modding community. However, while Valve was able to capitalise on its creation due to their payment of a licensing fee to id Software, modders are barred from this option by the very restrictive end user license agreements (EULAs) they have to agree to when installing the games. The EULA for the Half-Life SDK ("software development kit"), for example, states that:

> 13 Valve hereby grants Licensee a nonexclusive, royalty-free, terminable, worldwide, non-transferable license to:
>
> 14 (a) use, reproduce and modify the SDK in source code form, solely to develop a Mod; and
>
> 15 (b) reproduce, distribute and license the Mod in object code form, solely to licensed end users of Half-Life, without charge.

16 In effect, this means that the game developer retains the intellectual property rights of all mods created using the SDK shipped with the game. On the surface, this looks like a fair deal – modders are granted the right to play with the source-code of the game, but cannot sell the products thus created. But a closer look reveals that this is by no means a straightforward agreement – after all, Valve benefits immensely from its large modding community. But what exactly are these benefits? I will illustrate this using the example of Counter-Strike.

17 First of all, the game's developer and publisher did not have to create and establish the Counter-Strike brand: this was done for them by the creators and players of the game. In a highly competitive market such as the games industry, in which marketing costs often comprise one of the largest slices of a game's budget, this is an invaluable asset. Once a brand is established, it becomes quite easy to sell a game – as evidenced by the industry's growing reliance on film and other licenses. The importance of successful branding in the digital games industry is highlighted by Kline et al., who assert that 'Nintendo, Sega, and other games companies became pioneers of

branding on the electronic frontier, enveloping game play in a branded ambience of custom, myth, status and craft-lore' (Kline et al., 2003: 57).

18 A prime example of the effect of successful branding is the game Enter the Matrix, which was released simultaneously with the second instalment of the Wachowski brothers' Matrix trilogy, Matrix Reloaded. The predetermined shipping date led to a premature release of the game, which left it riddled with bugs and glitches. Despite these shortcomings, several million copies of Enter the Matrix were sold – purely on the strength of the Matrix brand. Similarly, established videogame brands such as Doom, Tiger Woods Golf and Colin McRae Rally do not require extensive marketing, but sell on the strength of previous products.

19 Secondly, mods add to the shelf-life of the original product. 2004 saw the release of Half-Life: Generation – a reissue of the original title bundled with the two add-ons Opposing Force and Blue Shift as well as the two most successful Half-Life mods: Counter-Strike and Team Fortress Classic (the latter was originally a Quake mod, which was re-implemented in the Half-Life SDK). While it is not unusual for successful games to be re-released at a bargain price a year or two after the original publication, Half-Life: Generation was exceptional insofar as it sold as a "full-price" product, despite being more than five years old. Compared to a game's average shelf-life of around six months, this is a truly outstanding performance. In Kushner (n.d), Gabe Newell of Valve is quoted as saying: 'A mod extends the shelf life of the product over time'.

20 Thirdly, mods increase customer loyalty. Valve's support for the modding community has gained the company an online cult following that monitors the company's every move with rapt attention. The hundreds of websites dedicated to Half-Life and Counter-Strike are witness to this strong loyalty. While this is certainly to a large extent due to the company's own products – according to the Valve website, the game has won 'more than 50 Game of the Year awards' – the many mods available for Half-Life add immensely to this appeal. The fact that Half-Life 2 mods were available even before the game's release is strong evidence that the "modability" of Valve's games lends the company credibility and kudos in the gaming community. As Hector Postigo points out: '[M]ods can play a role in extending the sales of the original game or developing a devoted fan base' (Postigo, 2003: 596). In effect, this can be seen as an effective branding strategy that aims to "'close the loop" between corporation and customer [by] reinscribing the consumer into the production process' (Kline et al., 2003: 57).

21 Furthermore, modding is an important source of innovation in the digital games industry. Without the creativity of modders, developers would be hard-pressed to come up with new ideas, and it would prove hard to implement these ideas in the high-risk gaming market were it not for the huge "test-market" the modding community provides. It could even be argued that Valve's decision to cast Half-Life 2's physics engine in a central role is at least partly due to modders' experiments with the rudimentary physics of the prequel, such as changing gravity and friction. In the case of Counter-Strike, team-based combat proved to be such a strong gameplay idea that the market was soon flooded with dozens of similar products.

22 In effect, the creativity of modders significantly reduces game developers' R&D and marketing costs. Postigo puts it succinctly when he says that 'this process manages to harness a skilled labour force for little or no initial cost and represents an emerging form of labour exploitation on the Internet' (Postigo, 2003: 597). The importance of this "free" source of innovation can be hardly overestimated. As Kline et al. note, the digital games industry is part of the 'perpetual innovation economy' (Kline et al., 2003: 66), which is characterised by 'the need for constant creativity in finding new ways to build audiences' and a 'constant reworking of genres and styles' (Kundnani, 1998-99, quoted in Kline et al., 2003: 66).

23 Finally, the modding community is used as a recruiting pool for the games industry. As Wagner James Au (2002) points out: '[Valve employees] Keranen, Carlson, and many more would be hired by game companies largely on the strength of their mods'. The modding community produces highly trained programmers, 3D-artists and animators without the industry having to spend money on training facilities and teachers. The employment of Counter-Strike's creator, Minh Le, is a point in case. Modders do not even have to be provided with the requisite software, as many modders will be content to use cracked software obtained through file-sharing networks. The fact that high-level modding requires costly software tools such as 3Dmax and Maya, and the legal consequences of using pirated software are rarely acknowledged by the games industry.

24

The games industry's use of modding culture as a recruiting pool also results in a feedback loop that effectively prevents the industry from embracing new market segments outside the core audience of young males. In regard to Counter-Strike, Kline et al. point out that

25 > [f]rom one perspective, this pattern of consumer-led game modifications is an inspiring story of participatory and democratic design, with developers facilitating a series of player-led initiatives in a mutually beneficial manner. But it is not coincidental that the participants come from a young male technoculture fascinated by scenarios of violence – for it is exactly there [...] that the game industry has cultivated its most devoted and technically adept consumers. (Kline et al., 2003: 253)

26 While it is impossible to estimate the monetary value of these benefits from modding, the sale of 1.5 million copies of Counter-Strike by the end of 2003 (Computer Gaming World, 2003) indicates that modding is an important economic factor in the digital games industry: 'From a labour theory standpoint, it seems that modders add a considerable amount of value to commercial games' (Postigo, 2003: 602). Some even claim that '[p]layer-created additions to computer games aren't a hobby anymore – they're the lifeblood of the industry' (Au, 2002). Nevertheless, modding is still primarily seen as a leisure activity that modders engage in for fun rather than profit.

Modding as "Playbour"

27 The problem with that is that the modders' leisure is being commodified by the games industry. While the commercialisation of leisure is hardly a new phenomenon – for example, Fulcher notes that '[l]eisure was [...] the creation of capitalism [...], through the commercialization of leisure' (Fulcher, 2004: 8) – it seems a radical departure from the established business models of the leisure industries that the games industry not only sells entertainment products, but also capitalises on the products of the leisure derived from them.

28 In order to gain a firmer grip on this slippery issue, it seems necessary to differentiate forms of "productive leisure" from unproductive leisure. While there have always been forms of productive leisure – crafts such as knitting and woodworking as well as hunting, gardening and fishing come to mind – the products of these activities may have never made a significant appearance in the marketplace in capitalist societies. Arguably, this has only changed with the advent of affordable digital technology that enabled their consumers to mass-produce high-quality digital artefacts at low cost and without loss of quality.

29 In this respect, modding is quite similar to another form of collaborative digital production – open-source software development. Both forms of cultural production are usually collaborative project that result in a non-commercial product – although the example of Linux has shown that clever packaging and marketing can ensure the commercial viability of open-source software, even in a highly competitive marketplace, such as the PC operating system market. However, large-scale open-source productions such as Linux and its various distributions are more similar to independent game development than modding.

30 A closer kinship exists between mods and homebrew macros and plugins for commercial software. But while the former usually remain the property of the makers of the original game, the latter are frequently published under a General Public License (GPL). A December 2004 post to the [gameprogrammer] mailing list, for example, advertises a shell extension for Windows XP that allows users to view thumbnails of game-specific image formats such as DDS, TGA and PCX. The author asserts that '[i]t's open source, GPL' (Johansson, 2004) and points to a download website on sourceforge.net. Sourceforge itself lists hundreds, if not thousands, of "open-source" plugins for commercial software such as Microsoft Windows, Microsoft Office, Internet Explorer, etc.

31 The most important distinction, however, between open-source software development and modding are to do with the cultural status of these activities rather than the intellectual property regimes they fall under. Partly due to the commercial success of open-source software such as Linux and StarOffice, the development of "free" software has come to be seen as a valid, if slightly eccentric, form of work. Modding, on the other hand, still has to struggle to free itself from the negative connotations of play: idleness, non-productiveness and escapism. And while the digital game industry increasingly acknowledges the contribution of modders, they have no incentive to contest this view: the perception of modding as play is the basis of the exploitative relationship between modders and the games industry.

32

While the industry faults "piracy" and file-sharing for their dwindling revenues, the digital games industry actually benefits from the fact that mods can be produced on personal computers and distributed at negligible cost over the Internet. More importantly, however, it benefits from a perception that everything to do with digital games is a form of play, and therefore a voluntary, non-profit-oriented activity. There are strong indicators, however, that this concept of play is no longer appropriate. Due to the fact that work has been rendered more "flexible" in regard to its temporal, spatial and institutional contexts, more and more people can now be said to "play for a living".

33 The shift from disciplinary societies to societies of control noted by Gilles Deleuze (1992) has led to a "deregulation" of work in which the primary source of coercion is no longer the institution an individual works for, but the individual herself. It is this regime of self-discipline that allows us to describe new forms of labour in the information society in terms of play, or, more specifically, in terms of freedom and rules. The solitary player is the archetype of the individual who upholds the rules simply for the sake of the pleasure she derives from submitting to them, since, paradoxically, her freedom results from her submission to the rules of the game.

Modding as Precarious Labour

34 Arguably, the precariousness of modders "playbour" lies in the fact that it is '[s]imultaneously voluntarily given and unwaged, enjoyed and exploited' (Terranova, 2000: 32), because this renders it unclassifiable in traditional terms of work and leisure. Modding and other, similar forms of "free labour" do not fit the categories of wage labour, freelance or voluntary work, and neither do they fit the categories of leisure, play or art. While free labour, or "playbour", shares traits with all of these occupational types, it can only be understood on its own terms.

35 Modding and productive forms of waged labour are comparable in regard to the fact that the creators of the produced goods do not "own" their products. By the terms of the original game's EULA, mods usually remain the property of the game's manufacturer, and while some modders have received payments by game developers, they are usually barred from receiving royalties, as explicitly stated in the Half-Life SDK's EULA quoted above. This draws attention to the fact that mods enjoy a rather dubious status in terms of intellectual property rights, as they are usually created under terms that prevent their creators from claiming these rights. Nevertheless, some regard modding as 'an attempt to transcend alienation' (Postigo, 2003: 601). Drawing on the work of Thomas (1997), Postigo argues that '[o]wnership of the productive process, even when this process is not physical, is what makes the workers in Thomas's study non-alienated from their work, and I believe it is the same process that compels modders to work hard for and identify with their labour' (Postigo, 2003: 601).

36 At the same time, modding can be seen as similar to freelance work, as modders bear the full financial and legal risk that results from their activity. The Half-Life SDK's EULA states in no unclear terms that the

37 > Licensee shall defend, indemnify, and hold harmless Valve [...] against any and all claims, damages, losses, or liabilities whatsoever arising out of Licensee's creation, distribution, or promotion of the Mod' and that '[n]either this Agreement nor the disclosure or receipt of Information shall constitute or imply any promise to or intention to make any purchase of products or services by either party or its affiliated companies or any commitment by either party or its affiliated companies with respect to the present or future marketing of any product or service [...].

38 Modding shares some traits with voluntary work as well, as it is neither motivated directly by financial motives or coercion. Furthermore, as Postigo points out that one of the most important motivations for modding is the 'sense of community they derive from the experience' (Postigo, 2003: 599) a motive that also plays a part in many forms of voluntary work. However, voluntary work is usually confined to non-profit organisations, while modding is closely aligned with the highly profit-oriented digital games industry. One of the reasons why this industry has been able to recruit such a large number of voluntary workers might be the fact that the industry has been careful to project an image of itself that highlights its dedication to high-quality games and deemphasises its dedication to profit.

39 Simultaneously, the games industry 'tries hard to maintain the impression that computer gaming constitutes "a people's technology which encourages and enables participation by all who wish to

participate'" (Huhtamo, 1999, quoting Skirrow, 1986). But, Huhtamo continues, 'it is becoming more and more evident that such a position constitutes a fabrication and, above all, an ideology'. This ideology contributes to the precarious status of modders, as it disguises the power structures within which the modding community operates. This is also evident in Will Wright's assertion that game production will become 'a very collaborative process between the game developers and the players' (quoted in Au, 2002). This statement is hardly surprising, considering the fact that Wright's The Sims has profited immensely from player-created content.

40 In total, these factors – modding's uncertain status in respect to traditional notions of work and leisure, the deprivation of modders of their intellectual property rights, the game industry's outsourcing of risk to the modding community and the ideological masking of modding as a collaborative process – make modding appear as a very precarious form of labour indeed. However, the games industry's increasing dependence on the modding community gives rise to the question of whether modders are at least partly responsible for the precarious status of their work. The modding community is divided in respect to whether collaborating with the games industry constitutes a form of "selling out", and, as a result, they lack the necessary political organisation to improve their status.

The Modding Community as a Dispersed Multitude

41 In respect to modding and other forms of free labour on the Internet, Postigo has pointed out that 'perhaps information communication technologies have allowed hobby and leisure to become commodities that are massively produced and consumed, a process by which cultural forms are created by the masses for the masses' (Postigo, 2003: 605). While the mass production of leisure is hardly a new phenomenon, the logic of digital media has indeed led to a change in its economic structure. The capital investment necessary to mass-produce leisure has decreased to the point where small groups of individuals have access to the necessary technologies and practices. In effect, this means that the number of media producers has grown significantly in relation to the number of consumers, leading, as it were, to a new pattern of "prosumption".

42 However, the metaphorical figure of the "prosumer" is misleading insofar as it suggests that every user of digital media is simultaneously a consumer and a producer, and by implying an empowerment of the user that is, in reality, counteracted by the shift from production to distribution that characterises the new media economy. As Douglas Thomas has pointed out, 'reproduction, as a function of movement, has become synonymous with distribution. As a result, piracy and ownership in the digital age, from software to emergent forms of new media, are more about the right to distribute than the right to reproduce' (Thomas, 2002: 85). While the Internet functions as a vast distribution network for mods and other products of free labour, it also effects a dispersal of these products that can only be neutralised through the investment of financial or social capital.

43 While the games industry is rich in financial capital, which is mostly used for the marketing of new products, the modding community itself commands huge social capital due to the tightly woven networks it has developed. As evidenced by successful mods such as Counter-Strike and Day of Defeat, mods can reach a vast audience simply by virtue of innovative gameplay mechanics and the support of the modding community. However, it seems as if modders are scarcely aware of the position of power this puts them into. As a dispersed multitude, they are vulnerable to exploitation by the games industry, and the different motivations and ideological positions within the modding community further add to their inability to realise their potential as political actors.

44 The different positions within the modding community are summed up succinctly, albeit simplistically, by the following two quotes from Kushner (w/out year): 'The whole point of making a mod is to be free and not have some company telling you what to do', says Chris Rogiss, a programmer who worked on the popular Quake mod, Urban Terror . On the contrary, says Tom Mustaine, a mod maker whose work led to a full-time job at Ritual Entertainment, a game company: 'The secret desire of every mod creator is to get recognition from the companies who are making the games'.

45 These two standpoints seem almost impossible to reconcile, but in the long run the stance modders take vis-à-vis the games industry will determine whether modding can survive as a counter-culture or whether it will fall prey to the neo-liberal ideology of the games industry.

Already, professionalisation and commercialisation are beginning to take their toll on modding: "'The trend seems to be toward higher and higher production value, larger teams and longer development times", says Valve's Keranen. 'In other words, mods are becoming very similar to commercial games in all but the way they are [not] funded'" (Au, 2002).

46 After all, "higher production value" seems nothing but a thinly veiled euphemism for "commercial viability", and once modding becomes market-oriented, their motivation to innovate is likely to go out the window. Wagner James Au (2002) sums up these concerns succinctly when he asks game designer Rich Carlson: 'What happens when modders begin paying to download and make what they once built and traded with each other just for the community spirit and the pure love of creating?' And Carlson's answer is far from reassuring: 'It's kind of frightening', he says, 'but the popularity of mods could spell the eventual doom of freeware levels and modifications' (quoted in Au, 2002). Au suggests that a mutually beneficial 'partnership of inspiration and investment' might be possible in the future, but in the light of the games industry's aggressive courting of the modding community, this seems highly doubtful.

The Future of Modding

47 If the modding multitude were able to play their dispersal to their advantage – for example, by collaborating with other free labourers on the Internet, the result would be a genuine democratisation of the production of digital games. But this would require awareness on the modders' part that their work is indeed a form of precarious labour, and that a politically organised position vis-à-vis the games industry is indispensable for the survival of modding as a creative digital counter-culture. The obstacles the modding community faces – recognition of their status as creators of value for the industry and gamers alike, claiming their intellectual property rights and overcoming the ideological representation of modding as a mere hobby – seem like a tall order.

48 Nevertheless, there are signs of hope. In 2003, Second Life developer Linden Labs changed its terms of service 'to recognize the ownership of in-world content by the subscribers who make it'. At the State of Play conference in New York, Linden Lab founder and CEO Philip Rosedale declared that 'our new policy recognizes the fact that persistent world users are making significant contributions to building these worlds and should be able to both own the content they create and share in the value that is created'. In response, IP rights activist Lawrence Lessig stated that 'Linden Lab has taken an important step toward recognizing the rights of content generators in Second Life. […] As history has continually proven, when people share in the value they create, greater value is derived for all' (Linden Lab, 2003).

49 This development could spell a brighter future for modders as well. As the modding community 'move[s] toward the center of the game industry', (Kushner, n.d.), it is becoming harder for the industry to uphold the claim that modding is merely a marginal activity that has no economic implications. Once the gaming community at large wakes up to the fact that much of the innovation in the world of digital games stems from modding, the industry will be forced to acknowledge this, and grant modders more extensive rights to their creations. Ultimately, this is a matter of self-interest if the digital games industry does not want to be caught in a vicious circle of ever more derivative products.

50 As precarious labourers, then, modders are caught between a rock and a hard place. Recognition of their work will not come easy, and will require a firm stance against the profit-hunger of the digital games industry. But modders are also in a unique position to challenge the way we think about the relationship between work and leisure in the post-industrial age, and to explore new modes of non-alienated labour. Modding could emerge from its dilemma as a cultural practice that extends beyond the confines of digital games. After all, modding is a practice that transcends the rules we have come to take for granted, and this attitude should prove invaluable in dealing with the challenges society will face in the future.

Author's Biography

Julian Kücklich is a currently a part-time game researcher and PhD candidate in the Centre for Media Research, University of Ulster. His research interests include all areas of gaming culture, especially computer game modding, cheats and products of fan culture. He is the author of an MA thesis on computer games and literary theory, and has published several articles on this subject.

He regularly contributes to Medienobservationen and Game Research as well as Philologie im Netz and Dichtung-Digital .

References

Au, Wagner James. 'Triumph of the mod', Salon.com, 16 April (2002), https://www.salon.com/tech/feature/2002/04/16/modding/print.html.

Computer Gaming World. 'The Creators of Counter-Strike', Interview with Jess Cliffe, October, 2003, https://cgw.1up.com/do/feature?cId=3110900&did=4.

Deleuze, Gilles. 'Postscript on the Societies of Control', October 59 (1992): 3-7.

Fulcher, James. Capitalism: A Very Short Introduction (Oxford: Oxford University Press, 2004).

Huhtamo, Erkki. 'Game Patch: The Son of Scratch?', Switch 12 (1999), https://switch.sjsu.edu/nextswitch/switch_engine/front/front.php?artc=119.

Johansson, John-Philip. 'SV: Re: ad for my GPLed software?', email to the [gameprogrammer] mailing list, 18 December (2004).

Kline, Stephen; Dyer-Witheford, Nick; and de Peuter, Greig. Digital Play: The Interaction of Technology, Culture, and Marketing (Montreal: McGill-Queen's University Press, 2003).

Kundnani, Arun. 'Where Do You Want to Go Today? The Rise of Information Capital', Race and Class 40.2/3 (1998-1999): 49-71.

Kushner, David: 'The Mod Squad', Popular Science Online (n.d.), https://www.popsci.com/popsci/computers/article/0,12543,281377-1,00.html.

Linden Lab. 'Second Life Residents to Own Digital Creations', Press Release, 14 November (2003), https://lindenlab.com/press_story_12.php.

Postigo, Hector. 'From Pong to Planet Quake: Post Industrial Transitions from Leisure to Work', Information, Communication & Society 6.4 (2003): 593-607.

Shuster, Loren. 'Global Gaming Industry Now A Whopping $35 Billion Market', Compiler, July (2003), https://www.synopsys.com/news/pubs/compiler/art1lead_nokia-jul03.html.

Skirrow, Gillian. 'Hellivision. Gender and Fantasy in Video Games', in Colin McCabe (ed.) High Theory/Low Culture (Manchester: Manchester University Press, 1986), 115-142.

Terranova, Tiziana. 'Free Labor: Producing Culture for the Digital Economy', Social Text 18.2 (2000): 33-57.

Thomas, Douglas. 'Innovation, Piracy and the Ethos of New Media', in Dan Harries (ed.) The New Media Book (London: BFI, 2002).

Thomas, Adam. The Dynamics of Games, 4th edition (Informa Media, 2004).

Thomas, R. What Machines Can't Do: Politics and Technology in the Industrial Enterprise (Berkeley: University of California Press, 1997).

The Fibreculture Journal (ISSN 1449-1443) — Issue 5, 2005-12-05.

This article is published under CC BY-NC-ND. The author retains copyright.

This PDF is an archival offprint generated from the journal's text archive on 2026-11-15. It is not the publisher's version of record; the published article is at https://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry/. Page numbers here are not the published pagination. Where paragraph numbers appear in the margin they are the journal's own and are the citable unit.