



King's Research Portal

Document Version
Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Saunders, R. (in press). Computer Generated Pornography and Convergence: Animation and Algorithms as New Digital Desire. *CONVERGENCE (LONDON)*.

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Computer Generated Pornography and Convergence: Animation and Algorithms as New
Digital Desire

Rebecca Saunders

King's College London

Abstract

This article is the first to consider the digital phenomenon of CGI pornography, a highly significant site of convergence that combines the technologies, cultures and aesthetics of digital animation, video games and pornographic film. As much of this controversial new content is produced through the hacking of licensed video game franchises, CGI pornography typifies the democratic possibilities of the digital economy. However, this bizarre digital subculture exemplifies too the tension between ludic and labour-intensive digital practises: its production is embedded simultaneously in the anti-productive play of gaming, hacking and pornography, and in the intensive, neoliberal labour practises associated with free labour and the video game industry. This article explores CGI porn as a specific site of convergence that fundamentally alters the aesthetics and function of digital pornography, and relatedly the libidinal subject that is interpolated in this crucial aspect of digital culture. The filmic genre of pornography has a long tradition of producing affective engagement through vicarious access to the material body; its evocations of veracious materiality and presence are only amplified in a digital culture of virtuality and dematerialisation. This article analyses how the technological construction of CGI porn is foregrounded in its images and films, highlighting the codes and patterns of the genre and blending them with a stark revelation of the restrictions and capabilities of CGI technology. The article explores how multiple instances of hypermediacy and hypersignification in CGI porn expose and affectively engage with the fact of convergence itself: that is, revealing technological capacities and limitations of digital animation and eroticising its interpenetration with the films' diegeses, aesthetics and representations of movement become the central function of this new cultural output. The libidinal focus of this type of digital pornography fundamentally shifts, then, away from the human body and the attempt to gain vicarious imagistic access to it through digital technologies. Instead, the labour of the animator, and the coding and characters they borrow from video game designs, become the libidinal focus of computer generated pornography. As this new digital phenomenon uncovers and eroticises the workings of computer generated imagery, so it dismantles the veracity and materiality promised by 'real body' digital pornography: CGI porn's stark foregrounding of its technological constructedness clarifies the artificiality of its 'real body' counterpart. This article posits, then, an important new site of convergence. Pornography is a central node in the culture, politics and economics of digital technology, and the ways in which its convergence with CGI practises and video game culture has not only produced an entirely new digital phenomenon, but has fundamentally altered digital pornography's conception of the desirous subject and bodily materiality, is crucial.

Keywords: convergence culture digital animation digital pornography
 digital labour sexual culture video game culture

Word Count: 9,093

Introduction

Filmic pornography, video games and comic book ‘universes’ have long been intertwined. Sex has been central to the content and critique of games, from early products such as Custer’s Revenge to major contemporary series like *Grand Theft Auto*, *The Witcher* and *Mass Effect* (Wysocki 2015; Brown, 2018). Pornography has similarly well-established associations with gamification. Virtual reality sex games have been developing since Jenna Jameson’s *Virtual Sex with Jenna* (1999). 1980s products like Mystique’s *Beat ‘Em and Eat ‘Em*, where the player controls pixelated feminised blobs who catch sperm in their mouths, have developed online into the ‘free’ mini games which abound at sites like Playporngames.com and Sexyfuckgames.com. The somatic plug ins of Fleshlights and Kirroos and the touchscreen capabilities of so many digital devices, blur too the voyeurism of digital sexual activities with the tactility of game play: ‘Tap Here to Slip Your Dick in Her Ass’ (Gamcore.com), and so on. Major porn companies like Vivid Entertainment and Wicked also produce filmic versions of the Marvel Comics franchises, the ‘Comixxx’ (Screencrush.com) of Thor, Deadpool and so on, themselves also all produced as video games. Such convergences of the technologies and cultures of porn, games, comics, and relatedly themes of fantasy and science-fiction, clearly constitute strategic transmedia initiatives which are corporately driven. However, a digital subculture has emerged over the last decade where users combine these same media and genres in ways which proffer aesthetics and functions that differ significantly from such corporate-led pornographic convergences. What is defined here as user-generated, computer generated pornography (UCGP), operates on the margins of economic and cultural legitimacy, circulating in a seedy tangle of imageboards, free sites and subscription platforms and with much of the content created through ripping licensed game and television content. A rhetoric of a moral and sexual subversion that transcends both ‘mainstream’, heteronormative porn (Smith, 2014; Maina, 2014) and video games, pervades these online spaces: one site, Lewdgamer.com, sports the tagline ‘Taking the Internet from Behind’ (Lewdgamer.com); NaughtyMachinima describes itself as ‘where video games go to be bad’ (<https://www.naughtymachinima.com/>); HentaiHeaven declares that ‘Everything Else is Irrelevant’ (<http://hentaihaven.org/>). These spaces constitute important new sites of convergence not only in their techno-cultural syntheses, but in the grassroots nature of their production. They typify what Henry Jenkins and Mark Deuze describe as the shifting ‘flow of media content’ so that it is now ‘shaped as

much by decisions made in teenagers' bedrooms as it is by decisions made in corporate boardrooms' (2008, 7). In its toying in particular with the strictly policed borders of the games industry, UCGP embodies the cultural and economically subversive possibilities of user-driven practises of convergence. Where Susanna Paasonen has focused on the sexually perverted nature of 'monster toon porn' (2017) and Anna Madill has explored the history of digital and gamified erotic manga (2018), this article is the first to explore UCGP as a site of convergence which subverts the media industries from which it draws. Because the content is most consistently and prominently concerned with the pornographic, this article analyses ways in which mainstream, heteronormative pornography is undermined by its appropriation and transformation into digital animation, while acknowledging the continuing impact of heteronormative porn culture on these user-made and ostensibly subversive online spaces. Examples are drawn principally from two sites which epitomise the DIY, communicative and subcultural aspect of UCGP: Rule34 and Tumblr, with their content also then circulated on major free porn sites like Pornhub and XTube. This article considers not only, however, how this quasi-covert, communitarian phenomenon undoes the hegemony of sanctioned video game and porn companies, but how it exemplifies the tension between ludic and labour-intensive digital practises, and relatedly between the avant-garde and commercial aspects of convergence. It therefore also considers the types of content which are circulated on economised platforms such as Patreon and Deviant Art, with Section Three focusing on more professional individuals who create dedicated websites and blogs to sell their content.

Section One

UCGP is Useless: How UCGP Subverts Gaming and the Porn Industry

Two of the biggest and first UCGP imageboards are danbooru, Gelbooru and Rule34. Here, video game characters like Lara Croft (Tomb Raider, 1996-2015) and Elizabeth (Bioshock, 2007-13) are recast in sexually explicit contexts that would otherwise ‘place the game[s] outside of regulatory systems’ (Krzywinska, 2015, 111). They are joined by anime creations and beloved cartoon characters and figures from childhood stories: Winnie the Pooh becomes a muscle-bound sexual aggressor with a giant penis and Homer Simpson rapes his daughter. These sites demonstrate the capacity of computer generated content to surpass the extremes sought by pornographic film. Another site which describes itself as ‘the premier online community for 3d erotica,’ allows viewers to adjust their ‘Violence Level’ to find material that focuses on amputation, torture or ‘acts causing death’ (Renderotica.com). The painterly medium of computer generated pornography allows for infinitely more sexist and racist content to be created while remaining legal (Mills, 2015). WIRED magazine, for example, in an article introducing computer generated porn over ten years ago, asks elatedly:

Imagine what you could do with erotic entertainment if you weren't bound by the laws of physics [the limitations of gravity, proportion, body mass] or 18 U.S.C. 2257 [...] the federal law that requires [...] [age] records on every performer appearing in an adult film. (Wired.com, 2006)

The sexually transgressive possibilities of animated content melds with the economic subversion of representing copyrighted characters. As Sherman Young and George Meikle explain in *Media Convergence*, by ‘reconfigur[ing] the relationships between professional and amateur [convergence] [...] challenges the industrial systems of production and the associated assumptions of copyright on which the monetization of media production has been predicated’ (2012, 80). The anti-authoritarian associations of ripping commercial game code – media theorist Michael Parkes describes the perception of piracy as ‘a way of protesting against media institutions [a] [...] revenge on the industry’ (2012, 28) – combines with the saucy illegitimacy of the hardcore sexual content so that UCGP provides a particularly potent demonstration of the capacity of user-made content to undermine hegemonic media ownership. Sebastian Deterding considers that the hyper-economisation of the video game

industry in particular has fostered a desire to dismantle its hierarchical structures of ownership. He predicts that '[g]amers will revolt' against the economic 'instrumentalization of games':

They will reassert their autonomy and playfulness in gaming the system and in seeking out new, yet unknown spaces and forms of nonfunctionalized [...] resistance [...] into the places and practices they feel 'belong to them' and retreat into new, 'hardcore' places and practices.' (Deterding, 2014, 51, 47, 52).

UCGP is the ultimate demonstration of this revolt: in its creation by users, its hardcore content and its pirating of established video game characters and scenarios, it rejects top-down media ownership in multiple ways. The parodic status of UCGP, with its ludicrous amplifications of common porn film features such as penetration and money shots (Attwood, 2007; Edelman, 2015), and its bizarre sexual reimaginings of familiar video games, further undercuts the media from which it draws. The inevitable connection cultural theorist Bethany Klein asserts between a digital culture of 'parody, pastiche and caricature' (Klein et al, 2012, 12) and 'vibrant user-led online communit[ies]' that circulate pirated material describes precisely the irreverent, anti-authoritarian world of UCGP.

The porousness of video game culture is often emphasised. Games theorist James Newman describes contemporary video games, for example, as 'co-created [malleable] media [...] [where] rules [are] to be bent and broken,' by players as well as developers (Newman, 2013, 140). However, in its affirmation of more rebellious types of play than are offered by video games themselves, UCGP does more than augment legitimate games: in its rejection of the very notion of playability itself and the purpose of games as success through progression, it undermines the fundamental functions and meanings of game play.

The filmic homages to video games circulating between Tumblr and Pornhub are unplayable. In the place of player agency and interactivity, is an entirely spectatorial, passive mode of engagement. In one fifteen-minute scene ripped from the series *Elder Scrolls*, the vampiric female protagonist alternates between having sex with and being raped by a frost troll in a repetitive series of pornographic sexual numbers (Williams, 1999, 72) that build to nothing. With no discernible beginning or end, and without any progression towards the money shot which constitutes the most common diegetic structuring of heteronormative porn films (Williams, 101) the scene does not effectively function as pornography. Nor does the content function as a game. The viewer cannot affect the movements of the female

protagonist or influence how she interacts with the troll and that absence of player agency is made starkly apparent. Various trappings of interactivity and game progression are maintained in a gesture towards functional gameplay: metrics denoting energy levels are displayed at the top of the screen, sometimes randomly changing; speech options appear as if the female figure is embedded in a broader narrative; the protagonist turns left and right and waits at various junctures as if agentially connected to a player who can control her. This disconnect between the notion of directed gameplay and the inability of the user to *do* anything but watch, precisely produces the frustration at what Daniel Johnson calls ‘disobedient games’ (2015, 595), where the usefulness of a game is impaired, and which designers seek above all else to avoid. That UCGP revels in such anti-functionality is part of its rejection of the fundamental utility of gameplay. Instead of the purposeful, directed play of either game play or porn consumption, UCGP proffers a properly carnivalesque mode of play that celebrates its uselessness.

Just as UCGP eliminates the interactive logic of gaming, so it dispenses with the temporal logic that operates at both individual game and industry level. These creations are generally characterised by a ludicrous shortness, often lasting less than a minute or a few seconds as gifs. They can therefore only be consumed in extremely brief and truncated flashes that make little sense in relation to the games they reference. Circulating in non-sequential chaos, these nonsensical imagistic bursts lampoon the objective-driven progression through levels and sequels that motivates gameplay, as well as the consumptive rhythms of the video game industry and its economised cycles of hardware and software production. What Elizabeth Freeman terms ‘gaming culture’s [...] chrononormative ideas about ‘the value and meaning of time’ (2010, 2) is expressive of a broader temporised rhetoric of technological progress which the brevity and futility of UCGP eschew. The content of sites such as Rule34 proffer a profound pointlessness instead, bending technological capabilities not to drive improvements – the modding culture of gaming communities, for example, seeks to improve the functionality of gameplay for others or feeds into company-led innovations as a ‘rationally accountable creativity’ (Deterding, 2014, 47) – but to produce a celebrated anti-functionality. One of the most consistent aspects of UCGP, an otherwise largely scattered and heterogenous genre, is its triumphant uselessness, a feature which undermines both the forward momentum of video game play and the economic impetus of its industry.

The utility of these films as arousing or masturbatory material is similarly troubled. Their brevity and the ridiculousness of the content, in terms of both design and theme, mean any excitement they produce is droll and self-conscious. UCGP subverts the live-action porn from which it grows less on economic grounds of copyright infringement – the porn industry has already been fundamentally altered by the dominance of user-generated material (Mowlabocus, 2010; Paasonen, 2013; Tarrant, 2016) – and more through an aesthetic expression of its peripheral status. The aforementioned brevity and, for the most part, flagrantly crude design of UCGP troubles its capacity to arouse, thus rejecting too the functionality of arousal customarily appended to pornographic content (Lacquer, 2003, 282). Figures move jerkily and through sudden shifts in colour saturation; clumsily made splines mean buttocks, breasts and thighs jut out at jarring angles; aspect ratios are warped; and Russian, Japanese, Chinese and Hungarian voices float in untranslated incoherence across clips. The majority of the content that circulates across the aforementioned imageboards and major free porn sites typify what Francesco Casetti terms the ‘poor images’ of the digital era, ‘made in a hurry [...] fuzzy, pixelated [...] and incessantly in transit from one platform [and] [...] format to another’ (Casetti and Somaini, 2013, 420). Laine Nooney and Laura Portwood-Stacer similarly talk of the ‘Internet Ugly’ that develops when ‘there are no gates to keep ‘unpolished [...] “unpublishable” works out of the public view’ (2014, 251). It is an aesthetic roughness that endows UCGP with its own peculiarly squalid sexual atmosphere. Its part in this trend towards the imagistically imperfect produces a comic effect that works against any earnest efforts at arousal, and compounds the studied uselessness of UCGP. In one modified clip from the video game *Skyrim*, for example, a scene between characters Maramal and Serana on their wedding night unfolds. After some rewritten dialogue that demonstrates UCGP’s subversive pleasure in compelling familiar characters to behave with unconventional rudeness - ‘I want you to suck my cock,’ ‘My mouth is watering at the thought’ etc. (https://www.pornhub.com/view_video.php?viewkey=907126014) - the most prominent element of the film is its poor construction. When Maramal’s penis appears, it is a shapeless grey blob that has had no colour or detail; it lifts and descends in a single, ludicrous movement as if swinging on a hinge. Serana moves suddenly, exorcist-like, from a standing position in front of her husband, to hovering around his waist. A motorboarding scene has been inserted, but each time Serana shakes her chest in Maramal’s face, her jagged breasts disappear inside his head. Such awkward gestural discontinuities are common in UCGP, where the ‘standardised’ rate of movement customarily sought in digital animation that allows the ‘world-creating hand of the animator’ to ‘disappear[] between frames’ (Schaffer,

2008, 202) giving way instead to a clunkiness that brings construction always to the forefront of the viewer's consciousness. This attenuates the capacity of UCGP to function as a serious tool for sexual arousal, and foregrounds amusement instead as one of the principle draws of the content. As Olga Goriunova explains, the 'aesthetic [of] [...] new media idiocy' typified by UCGP, savours the 'absurd, simple, humorous,' as part of its assertion of 'playful [...] worthless creativity' (Goriunova, 2012, 224, 228, 231). UCGP's troubling of pornographic film's functionality as a masturbatory aid demonstrates again its celebration of the ludicrously useless.

The parodic deemphasising of arousal as an objective is not the only way in which the ugliness of UCGP undermines its live filmic counterpart. Its poor design also serves to deconstruct the veracity so crucial to the historical and generic development of pornographic film (Williams, 31) Traditionally film, and pornographic film especially, seek to erase the presence of the medium; the apparatus of film making must be hidden to proffer transparency. Jay Bolter and Richard Grusin describe the same objective at work in digital filmic developments, where animation, 3D and virtual reality also strive to remove any 'traces of [programmers'] presence in order to give the program the greatest possible autonomy [...] to diminish and ultimately to deny the mediating presence of the computer and its interface' (1999, 119, 23). In place of the seamless convergence sought in immersive virtual reality sex such as, contemporaneously, the London-based company VRGirlz, or the studio-quality porn parodies of Vivid Entertainment, UCGP proffers an overtly 'failed' convergence. UCGP foregrounds its constructedness and its mistakes. Indeed, it becomes the most prominent feature of its consumption. This emphasis on construction serves as an aesthetic rejection of the sleek, corporate perfection of studio-made pornography. DIY productions emphasise their 'ragged [...] style,' as Jenkins points out, as a 'direct challenge to the polished look of a big-budget screen production' (2006, 566). The ugliness of UCGP proffers a greater authenticity, not only on the basis of its articulation of grassroots production. Its foregrounded aesthetic failures refuses the illusion of transparency that so defines pornography, from its growth in the 1970s into a clearly defined film genre through twenty-first century developments such as amateur, alt and gonzo (Attwood, 2010; Moorman, 2010; Smith, 2018, Stella, 2016), so that the crudeness of UCGP fundamentally undermines the truth claims that fundamentally define pornography's broad generic purpose. The inadequate attempts at photorealism and naturalistic movement create gaps in the hegemony of pornographic representations. They constitute what Jihoon Kim calls 'glitches', 'break[s]

from an expected or conventional flow of information or meaning' (2016, 108) in digital communication systems, that fracture the perceptual wholeness and immersion pornographic film has established over the last fifty years. The graceless visual style of UCGP provides space for critique, then, demanding a greater critical engagement from the viewer. It constitutes a style of visual representation Bolter and Grusin famously termed as hypermediacy, which, by foregrounding the medium renders the viewer 'hyper-conscious of our act of seeing' (1999, 272, 21). Where we have learned to 'look through' those pornographic conventions which have come to constitute such a static and monolithic idea of sex – that it can best be understood in visual terms, that pornography provides the transparent truth of sex, that representations such as penetration and heteronormative modes of sexual interaction are the way sex is and so on - the inaccuracies of UCGP bring those conventions to the surface, denaturalising the film genre from which this DIY subculture grows. The following section analyses how this critical space opened up by the crudeness of UCGP, fractures the unproblematic transparency of pornographic film. It explores the rupture of the pornographic real which UCGP enacts, a reality already worried at by the genre's transition into digital culture and the broader interpolation of the digital into film.

Section Two

UCGP: Better Than the Real Thing

In an alliance of technology and form, pornographic film has been generically founded on the conception of film and photography as providing a mechanical reproduction of reality. Echoing theorists and filmmakers like Balazs, Kracauer, Vertov and Epstein, Andre Bazin states seminally of film that 'between the originating object and its reproduction there intervenes only [...] an impassive lens' (2000, 13, 15). Pornography is the raunchy successor to this Bazinian ideal: in its thematic focus on hardcore sexual interaction, its medicalised genital close ups (Saunders, 2016), and its generic function to arouse through vicarious access to sexual interaction, pornography epitomises the belief in the indexical power of film. Developments in amateur porn, web cams and gonzo constitute new stylistic strategies that promise an unproblematically transparent access to the real. Pornography does not present itself as a construction, but as a particular, visual type of experience with bodies themselves. The 'objects' of bodies, to use Jean Mitry's semiological terminology, are understood to 'signify themselves,' so that what is captured on screen is not a sign, but the bodies themselves, as 'living expression[s]' (Mitry, 2000, 32). This closeness to a sexual event, the capacity for an unmediated 'direct, causal, and existential bond between sign and object' (Morgan, 2010, 106), is the basis of what pornography sells: vicarious access to the truth of a sexual event. Pornography's signifying function has been erased, and the visual medium has come to be understood as reality, or at least that the ways in which it is not 'real' or realistic are of no importance. The veracity so associated with pornography derives in part from the explicit nature of its content, pornographic film seeming to display the unvarnished truth of sexual interaction in opposition to its covert status in broader culture or its euphemistic representations in other media forms. Hardcore pornography's lingering shots of the consummately physical also epitomise what Laura Marks considers to be those objects understood as 'too material to be encoded' (Marks, 2003, 38). Pornography's focus on come, saliva, female ejaculate and so on, seem so irretrievably physical that they are seen to surpass any representational construction. Such 'invisibil[ity]' is the 'first strategy' in the construction of 'The Real' (Marks, 2003, 38).

UCGP proffers a different real, one based not on the materiality of bodies but on the foregrounded materiality of the digital medium itself. The hypermediacy of this user creation reveals, in Jihoon Kim's terms, the 'inner structure and functionality of [...] digital codes [and algorithms] that lie beneath the digital image' (2016, 109, 116). The foregrounded ugliness of these sites exposes the materiality of digital animation, endowing its pornographic content with a different kind of corporeality. Its blatant constructedness proffers a physicality on the basis of the exposed materiality of digital making itself. The prominent, physical status of the digital medium expresses too the attenuation of celluloid film's privileged hold on indexicality. The existence of UCGP testifies to the ascendancy of the 'postphotographic era' (Bolter and Grusin, 1999, 106), where film's perceived capacity to offer unproblematically transparent access to prefilmic reality is damaged by its intertwinement with digital technology. The conspicuous artificiality of UCGP speaks to the broader simulations now at work in film. They lay bare the fact that, as Kim declares, 'digital technologies transform the filmic image into a data object subject to the manipulation of codes and algorithmic procedures of postproduction and display.' (Kim, 2016, 143). The algorithmic aesthetic of these subcultural creations, with obviously digitally constructed bodies moving in starkly coded patterns, clarifies the way in which all pornography is now embedded in a digital culture of algorithmically defined interaction and extensive image manipulation.

The dominant trend towards science fiction themes and aesthetic, often because of the types of video games the UCGP is based on such as *Bioshock* and *Final Fantasy*, means this move away from pornographic realness is compounded by 'postbiological' (Terranova, 2000, 273) and cyborg figures and scenarios. Bodies shine with an eerie unreality, their glassy eyes staring out unseeing, from the screen. The skin of female figures in particular is frequently incandescent, and glowing with a futuristic blue or white hue. Figures are often studded with metal plates that take the place of limbs and torsos, and gesture towards next-generation amalgamations between human and machine. In ways reminiscent of some of the most prominent contemporary filmic representations of digital bodies, like Alex Garland's *Ava* (*Ex Machina*, 2015) and Villeneuve's *Joi* (*Blade Runner 2049*, 2017), women's bodies are often partially constituted by vaporous emptiness, flashing electronic signals replacing the hyperphysical fleshiness common to pornographic film. The worlds in which these figures exist, are generally apocalyptic and futuristic, sex taking place on the metallic floors of space ships or in wastelands of glass and steel. UCGP is, then, the raunchy contemporary iteration of a posthuman aesthetic which Tiziana Terranova traces back to the high-tech modernist

avant-garde of Italian Futurism and German Dadaism and then to the cyberpunk science fiction of the 1980s (Extropy, 1988; Mondo, 2000). UCGP illustrates what Terranova calls the ‘wired variety’ of the posthuman body that subsequently developed in relation to digital culture, ‘one thoroughly invaded and colonized by invisible technologies’ (Terranova, 2000, 269). Films often show female bodies becoming completely pervaded by light and disappearing into the white ether of virtuality. Another frequent theme is penetration by physical manifestations of ‘the digital’ itself, with semi-cognizant metal tubes emerging from metallic walls to penetrate female figures who glow blue in otherworldly ecstasy. In place of pornography’s traditional associations with consummate physicality, UCGP proffers the disembodied emptiness of digitality. It represents what Deborah Lupton describes, echoing writers and theorists like William Gibson, Allucquere Rose Stone and Donna Haraway, as the ‘potential offered by computers for humans to escape the body [...] The dream of cyberculture to leave the ‘meat’ behind and to become distilled in a clean, pure, uncontaminated relationship with computer technology’ (Lupton, 2000, 479). Techno-utopian George Gilder similarly states that the ‘central event of the twentieth century is [...] the overthrow of matter’ (Gilder, 1989, 17). That these images and films are presented as a type of pornography, circulating and advertised on mainstream porn sites as an innovation of live-action hardcore, demonstrates the diminishing contemporary significance of physicality. Lev Manovich gestures towards the devaluing of physicality as a result of the digitalisation of cinema with his references to terms like ‘organics’ and ‘soft fuzzies’ (2016, 245) to describe real bodies in film. Pornography itself contributes to the often hackneyed status of sweaty, fleshy, fucking human body. As Paul Virilio asserts, like Baudrillard and Ranciere before and after him, by ‘multiplying “proofs” of reality, photography exhaust[s] [reality]’ (1994, 22). UCGP is a symptom of and solution to the ways in which the saturation of live action pornography has rendered heteronormative representations of sexual interactions tedious and ‘exhausted’. In his book on virtual cinema, David Rodowick describes this function of computer generated imagery more broadly, as ‘cod[ing] itself as contemporary, spectacular, and future-oriented; a sign of the new to bolster sagging audience members’ (Rodowick, 2007, 5). As porn studio revenue continues to be severely affected by the explosion of free online content and a Virilion imagistic overload, UCGP offers novelty precisely in its rejection of ‘real’ bodies.

This receding of the real constitutes an obvious paradox for the function, aesthetics and technologies of pornographic film, a profoundly physical genre historically delineated by its indexical link to real bodies. UCGP demonstrates the fundamental change in what we look at

pornography to see. Evidentiary proof of a veracious sexual event no longer forms the foundational drive of the genre. Instead, UCGP demonstrates as it constructs the erotic pull of the blatantly artificial. They are the ‘matterless [visual] signs’ of post-industrial culture, not just ‘separat[ed] from the material vehicle which carries them’ (Lister, 2003, 46-7), but dispensing with any sense of materiality other than that of the animated medium itself. In what Anne Balsamo calls the ‘body-free universe’ (2000, 495) of digital media, the libidinal draw of UCGP derives from its very distance from the physical world. These images move away from the finitude and messiness of physicality and towards the algorithmic perfection and electronic light of digitality.

Fittingly, then, Susanna Paasonen writes of the ‘affectless bodies’ (2017, 10) of computer-generated porn. Yet crucially, UCGP is not without somatic impact. As these films eroticise the animated figures’ pervasion by the virtual, so, despite their governing rationale of parody and absurdity, they do also seem to aim at arousing the viewer. A VICE reviewer of computer generated porn games wonders at how anyone could be turned on by female figures who are so ‘mad deep in the uncanny valley’ (Winkie, 2013), and doubt as to the masturbatory function of particularly the crude and incredibly short UCGP scenes is inescapable.

However, it is important here to consider the views of UCGP’s prosumers, where available. Because of the largely communicative rationale of Rule34, with the interactions between users constituting more content than the images themselves, this site provides an excellent opportunity to understand how UCGP is appreciated by users. While they demonstrate an abiding pleasure in the irreverent ludicrousness of the content, they also frequently gesture towards an arousal based in a libidinal investment in the act of construction itself, and in their often competitively showcased familiarity with the specific video game and comic book characters represented. Sentiments on Rule34 often suggest the image is arousing on the basis of the viewers’ existing desire for and general interest in a well-known character are very common: ‘Damn Morrigan is so sexy.’

(<https://rule34.xxx/index.php?page=comment&s=list#>), about one of the sorceresses from Bioware’s role-playing game *Dragon Age: Origins* (2009-2014) and comments that show UCGPs role in expanding the diegetic world they borrow from: ‘I’ve always had the feeling that Pyra and Mythra are virgins. I just dont think they had the time or even much of an interest in having a relationship before they met Rex’ and ‘I can see [Reizei and Sono] sharing the cock if its from Saori’ two users say of the *Xenoblade Chronicles* (Nintendo, 2010-2015) and *Girls und Panzer* (Actas, 2012-2014) respectively

(<https://rule34.xxx/index.php?page=comment&s=list&pid=40>). Users often express a wry pleasure too at the freedom to imagine previously unsanctioned and often childish sexual interactions with the animated possibilities of UCGP provide: ‘I would love to be fucked by Beat Boy’s elephant cock and let him eat me out,’ a user says of DC Comics Teen Titans (DC Comics, 2016) comic series (<https://rule34.xxx/index.php?page=comment&s=list#>); ‘I’d happily let Sarada fuck my tight asshole,’ of manga and anime series Naruto (Shueisha, 1999-2014); or of New Super Mario Bros (Nintendo, 2012) ‘Mmm this is the real Bowser I want. Rule me <3’ (<https://rule34.xxx/index.php?page=comment&s=list&pid=20>). There is also an obvious pleasure taken in the mastery that comes from animating a character to behave sexually in ways beyond their ‘will’: ‘Good doggo, swallow that nut,’ a user says of Isabelle, a cutesy puppy from Nintendo’s Animal Crossing series (2012); ‘Good girl, Ahri’ another user says ‘to’ a penetrated Ahri from League of Legends (Riot Games, 2009) (<https://rule34.xxx/index.php?page=comment&s=list&pid=10>). These comments demonstrate the libidinal draw of the patently artificial and unreal, where it is precisely the animated fictitiousness of UCGP which provides its somewhat tongue-in-cheek excitement. Users often explicitly acknowledge this, with comments such as ‘at least no need for protection with her’ (<https://rule34.xxx/index.php?page=comment&s=list&pid=10> and ‘this is awesome and adorable xD makes me wish I was a drawing ;P’ (<https://rule34.xxx/index.php?page=comment&s=list&pid=90>). On problematic content regarding the young age of some of the represented female figures, a user states: ‘The moment you’re masturbating [...] and realise cartoon characters don’t have age because they’re imaginary’ (<https://rule34.xxx/index.php?page=comment&s=list&pid=220>). When one user questions the morality of a cheating female persona, another responds: ‘She did it because it’s the content of the art.’ (<https://rule34.xxx/index.php?page=comment&s=list&pid=230>).

Users enjoy binding the affective intensity of sexual arousal with the painterly, as well as with the materiality of the aforementioned digital constructedness of UCGP. Where real body porn bases arousal on transparent access to the bodily objects themselves, the conspicuous construction of UCGP shifts the libidinal investment to the medium. As Bolter and Grusin explain, ‘the logic of hypermediacy is to represent the desire for transparent immediacy by sublimating it, by turning it into a fascination with the medium [...] striv[ing] to make the viewer acknowledge the medium as a medium and to delight in that acknowledgement’ (Bolter and Grusin, 1999, 122, 41). Here, pornography’s generic epitomisation of this desire

for 'transparent immediacy' is expressed through an investment in the capabilities and limits of the medium itself. Users frequently exchange views on the animator's choices of bodily proportions, skin colours, and perspective and how closely they match the characters being copied, linking their arousal to such specific details of image construction. Pornography's development into such computer-generated forms demonstrates that its particular mode of visual arousal is no longer necessarily expected to derive from viewing real sexual interaction, and that there exists a new erotic imperative to engage with the digital animated medium itself.

UCGP deconstructs the hegemonic realness of live-action pornography not only through its provision of these non-bodily modes of materiality. By replicating the iconographies and tropes of live-action porn in its context of artificiality and foregrounded errors, these films and still images further trouble the pornographic hegemony of the real. UCGP employs the same perspectives, sexual numbers and types of emotional interaction used in heteronormative, live-action pornography. The meaning and the potential erotic force of UCGP does not derive from an external relationship to the real, but from its internal references to pornographic film: they are not signs of sexual referents, but of pornography's signs of that referent. The familiarity of the often extremely bizarre content of UCGP derives from its embeddedness within the iconographies and attitudes of heteronormative, live-action pornography. The viewer's ability to decode UCGP, and its appeal to viewers, rests on a familiarity with these now well-established tropes of hardcore. Pornographic film forms what Elizabeth Evans calls a 'larger, coherent diegesis and [...] familiar narrative world' (Evans, 2016, 572), on which UCGP relies in both its parodic and titillating functions: it is crucially a remediation of porn, not of sex. As Christian Metz states, '[a] representation bearing too few allusions to reality does not have sufficient *indicative* force to give body to its fictions' (1974, 13). The conventions of pornographic film remain a necessary reference point to endow UCGP with sufficient context to mean. In their attempts to amuse, stimulate or at the very least, to be understood, in mostly extremely brief and decontextualized moments of animation, UCGP act as a distillation of those elements which pornographic film has deemed most necessary to the visual production of desire: penetration as desirous movement, sexual interaction as a power dichotomy and androcentric heteronormativity, most prominently. The most consistent theme across UCGP is its strong emphasis on female passivity, fear and humiliation, and on masculine supremacy and violence, replicating the most defining trait of heteronormative, live-action pornography.

UCGP displays sex, as it has come to be represented with increasing stability in heteronormative pornography, in its abstraction. Stripped of diegetic contextualisation and the ostensible spontaneity of human interaction, these components of pornography which make and maintain its generic veracity, become starkly visible and therefore more vulnerable to critique. Simply through their simulated approximations of heteronormative pornography's formal elements, UCGP begins to denaturalise what have become such well-established signifiers of the real. Where 'real body' porn derives its associations of authenticity from 'a style of depiction' that presents the picture as '*taken*, rather than *made*,' (Susanka, 2012, 106) UCGP foregrounds its 'made-ness', and problematises the notion of authenticity altogether. These formalisations of pornographic sex lay bare the mechanisms of its construction that have become so naturalised. Grayson Cooke says of Eva and Franco Mattes' portraits of Second Life avatars, that their 'sexy artifice' and 'exaggerated seductiveness' become parodic, 'a seductiveness performed too well,' that reveals 'the illusion of seduction, or rather, the seductiveness of illusion' (Cooke, 2010, 396, 402). As the faces of the women who people UCGP are made to exhibit the familiar traits of naivete, sexualisation or pain, giant, anime-esque eyes looking beseechingly into an imaginary camera or mouths pouting childishly, the artificiality of such representations as they appear in the 'real' pornographic equivalent is made clear. Drawing attention to the filmic devices that construct the supposed 'truth' of bodies and sexual interaction, sees, as Fredric Jameson puts it " "realism" [...] stand unmasked as a [...] realism-effect, the reality it purported to deconceal falling at once into the sheerest representation and illusion' (2007, 158). UCGP's formalisation and imitation of mainstream pornography's filmic features illuminates the unreality of what it copies: in the multiple senses of the need to construct sex in visual terms the filmic apparatus can provide, in its manipulation of the actors' behaviour in order to produce particular constructed signs of eroticism, and in the partiality and troubled nature of any 'real' such representations can ever provide. Hardcore is revealed to be not the unbiased by-product of the camera's mechanical transference of the real, but a set of highly ideologically constructed conventions. UCGP's formalisation of the elements of heteronormative pornographic film shows how '[i]ndexical causality is ordered, engineered [and] cultivated [...] by virtue of deliberate signification programmes' (van Loon, 2007, 73). This denaturalisation of pornographic realism is dependent on UCGP as a convergent phenomenon. It is the DIY aesthetic of these short films which bring the questions of construction to the fore; and it is the very fact of their appropriation of the dominant narratives of pornographic media which invite critique. As Casetti states, media 'hybridizations' like UCGP foster a 'reflective consciousness of what

media are and do,' with the adoption of 'poor images' in particular allowing film to become a 'thought machine', just as it was able to become an 'illusion machine' by working in 'high definition' (Casetti and Somaini, 2013, 420).

UCGP's melding of pornography with video game content in particular enacts a further deconstruction of the pornographic real. The gaming context in which these short films are placed speaks to the growing ludification of live action pornography itself. Just as the clips reflect the repetitious actions of gameplay, starkly revealed in the basic and highly repetitive loops of UCGP, so they gesture towards the increasingly repetitive structure of their live filmic counterpart. Pornography is shown to be embedded in the casualisation of games and, like developments in app, mini and freemium games, is exposed as similarly basic and temporally compressed, designed like its online game corollaries to be 'consumed in seconds or minutes' (Grainge, 2011, 2) in 'dead time' (Evans, 2016, 569). Porn's predictable simplicity demonstrates its development too within what Mercedes Bunz calls the 'infantiliz[ation] [of] [digital] interfaces' (2015, 197); in place of psychological realism and sexual maturity, UCGP's convergence with video games clarifies pornography's growing childishness and its ludic brutality. The anti-diegetic bursts of UCGP strip away any meaning but the programmed movements of penetration; their acutely algorithmic patterns clarify the mechanistic nature of bodily interaction in their live-action corollary. The real bodies of hardcore are shown to interact with a rapidity and emotional automation which bears far more resemblance to avatars than to a naturalistic sexual interaction, their programmed and dehumanised status further emphasised through their video game convergence. These manufactured figures, moving with the predictable rapidity of coded algorithms, are shown to be not oppositional to but on a continuum with real body porn's sexual representations. Through the foregrounded gamification of UCGP, the artificiality of live action porn is further clarified.

Section Three

Dark Play is Hard Work

This deconstruction of the very foundations of transparent veracity and physicality of the porn film genre relies on the rudimentary aesthetics of UCGP to open up spaces for critique. However, there is another parallel trend in UCGP towards photorealism which requires consideration. Though sites like Rule34 often jokily aspire – in vain – to photorealistic standards, the broad church of UCGP also describes a more professional seam of creation, where individuals such as Nicole Heat (NicoleHeat.com) and Ero (Erogenesis.blogspot.com) create coherent series of more carefully produced work for money. Such work tends to favour still images to avoid the uncanny artificiality that emerges when images are animated into movement and are motivated less by humorous convergences with video games and more by attempts at ‘perfect photographic credibility’ (Rodowick, 2007, 101). Though this may seem a paradoxical drive within content with such extensive imagistic inadequacies, there is a reciprocal relationship between the rejection of and simultaneous aspiration for ‘graphic fidelity’ (Krzywinska, 2015, 107). The exaggerated artificiality and obvious ‘made-ness’ of much UCGP incites the desire for realism, fostering a pleasurable oscillation between humorous larks in digital making and more earnest and impressive feats of naturalistic bodily representations. Given the frequently taboo nature of the content, it is even reassuring that the possibility of being aroused by moments of UCGP’s verisimilitude that repeatedly give way to a patent artificiality that excuses moral responsibility. Bolter and Grusin describe contemporary culture as containing ‘contradictory imperatives for immediacy and hypermediacy [...] between looking *at* and looking *through*,’ so that the blatant constructedness of UCGP can itself be understood as a ‘play [on] the desire for [...] transparent immediacy [...] [p]recisely because [the image] fails, [it] heightens our desire for immediacy rather than satisfying it’ (Bolter and Grusin, 1999, 5, 41, 21, 128). David Boyle finds similarly that:

Far from reducing the importance of the real [...] the prevalence of simulation [...] further reemphasise[s] and intensif[ies] a preoccupation with locating the authentic [...] the ubiquitous hype of virtual life [...] has left artists with an absolute fascination with real bodies and body fluid. (2004, 128)

With startling naturalism, UCGP can represent individual beads of sweat, the texture of skin, strands of hair, the rumples in clothing and the minute complexities of shadow and light. Anatomical precision and signs of real physicality are sought in incredible approximations of the tactility of real pornographic intercourse: the subtle colour changes within one vein of a penis are depicted, or miniscule goosebumps on a shaved vulva. Spittle and come fall in gooey drips, reflections of tiny windows and camera rigs suspended in each perfectly drawn droplet. When these images circulate on free, mainstream porn sites like Xhamster and Redtube, it is often impossible to tell them apart from stills featuring real bodies.

In one sense, such verisimilitude aims to erase the medium. In place of the starkly DIY aesthetics explored in the previous sections, these images seek to efface their status as made images. However, their perfection simultaneously exalts in the capabilities of digital making. The way in which its painterly, surface status seems to disappear, functioning instead as a window onto the real object itself, produces a concomitant marvelling at the capacities of design read on the surface of the image. The surface rather than an original bodily referent, remains the focus of these films, not this time for its failures but for its success in replicating pornographic reality so perfectly. Here, it is the extent to which technology can approach the real and erase itself as a medium that is eroticised. The response of users demonstrates this different libidinal engagement with the technologies of digital animation. One user states ‘My god, those feet..drawn so well..AUTO HARD ON!’ Other users state of various perfectly drawn figures: ‘I love the art! Would totally lick the juice off of her,’ and ‘[t]he quality...just...wow. I would give an embarrassing amount for an hour long video of these two’ (‘Comments’, Rule34xxx). Arousal is partly derived from the technology’s capacity to approach the real. A number of sites describe themselves as superior to real body porn precisely because they can look real while being digital creations. Adult Empire declares that ‘No real female can be compared to these exciting fully 3D babes who can drive you mad with stunning beauty.’ (Adult-Empire.com). 3D Erotic Art proclaims similarly: ‘Horny and seductive! You can find anything you like in females drawn to perfection. They are better than real ones!.’ (3DEroticArt.com). In the ability of a computer-generated image to look entirely real, it becomes superior to a digital photograph; a greater value is bestowed on images which can simultaneously exhibit indexicality and the power of digital technologies to completely invent. This aspect of UCGP gestures towards the need to critique this subcultural phenomenon in relation to its ostensible subversion of top-down pornographic iconographies. Just as these types of computer-generated porn seek to ‘optimiz[e] rather than challeng[e]

[...] the norms of depictive credibility,' (Rodowick, 2007, 103) so they uncritically replicate the dominant conventions that have developed in pornography's filmic development over the last fifty years.

The simplicity and lack of narrative already noted in UCGP does not only parodically call attention to the increasing primitiveness of live-action pornography. It also demonstrates the assumption that viewers come to these sites already equipped with a significant knowledge of pornographic conventions: its gender dynamics, what sexual numbers denote regarding gradations of the taboo, and which cinematographic styles and types of interpersonal interaction the viewer is expected to find arousing. That these decontextualized, and most often ludicrously badly made films, offering no bodily referent can still arouse the viewer, testifies to the power that pornography's signs of the sexual have accrued. UCGP's reliance on and replication of heteronormative, live action porn's culturally dominant modes of representing sex troubles this digital subculture's ostensible subversive function. By replicating the tenets of pornographic representation, its 'visual vocabularies' (Krzywinska, 2015, 109), UCGP offers as much an uncritical perpetuation of hetero porn's ideologies as it does an excavation. It demonstrates Meikle and Young's assertion that 'the convergent media environment is characterized by both contestation and continuity' (2012, 10), where the ways in which UCGP can undermine the fundamental functions of gameplay and pornographic film operate simultaneously to UCGP's perpetuation of pornography's generic imperative for bodily veracity. The image albums of Nicole Heat for example, resemble rotoscoped stills rendered from real porn films. The women look almost identical to specific porn stars, and the positions of the figures mimic precisely those predictable sexual numbers of live-action porn: multiple deepthroat blow jobs, no oral sex performed on women, penetration from various gymnastic angles and facial come shots. The realism sought by this identical replication sees these computer-generated images reproduce too the entrenched heteronormative gender roles of the majority of contemporary porn. A dynamic of male supremacy and female naivete and powerlessness is expressed in each image, with the man always a powerful, penetrating entity while the female is drawn in pain, passivity and victimhood. Heat draws her images to mimic the same shots and perspectives as cinematographic porn too, alternating between genital close up, close up of the female figure's face and a wide shot to show the full act of penetration. Perspectivally, the images imply the existence of cameras, the sex act represented as if it can only be observed from certain fixed positions. This replication of porn's filmic perspective bolsters the normativity

and rightness of heteronormative pornography's specific ways of representing sex. Though it is the case, as Jenkins states, that new 'knowledge culture[s] cannot be fully contained by previous sources of power [...] media monarchies [...] and international economic networks' (Jenkins, 2006, 140), UCGP, despite its subversive, user-built elements, continues to demonstrate and strengthen the powerful influence of industry-driven media iconographies. UCGP's replication of the perspectival conventions and iconographies of mainstream porn, when unbounded new ways of representing sex are potentialized by animation technologies, bolsters the iconographic stability of porn's often misogynistically heteronormative conventions and testifies to the looming influence of the mainstream porn industry on these user-created digital spaces. As David Morley states, 'the power of viewers to reinterpret meanings is hardly equivalent to the discursive power of centralized media institutions to construct the texts which the viewer then interprets' (1992, 31). This replication across genres reinforces these norms as a universal language of eroticism. These modes of sexual representation come to seem implicit: an unchallengeable grammar of sex, rather than just one, particular language of filmic construction. As Jameson states, realism 'is somehow governed by all of [the genres] together [...] by their implicit generic relationship to each other. The unreal – the not-said, the repressed – is then what falls outside of the system as a whole and finds no place in it' (2007, 175-6). In the coexistence of live action and computer animated pornography, the 'not-said' is the possibility that there are modes of representing the sexual that differ radically from these dominant conventions. UCGP does not present an alternative to heteronormative porn, and so the possibility of a sex that exists outside of these entrenched representational strategies is further disappeared. Further, as Jameson suggests, this construction of a singular paradigm of the pornographic real impacts on the reality of twenty-first century sex itself, a set of practises and ideologies which are also historically and culturally conscribed:

[R]ealism and its specific narrative forms construct their world by *programming* their readers; by training them in new habits and practices [...] which also preside over what will now come to be thought of as reality. Indeed, such narratives must ultimately produce that very category of Reality itself, of reference and of the referent, of the real, of the 'objective' or 'external' world. (Jameson, 2007, 166)

While UCGP appears as an absurd and subversive subculture, then, it is just as much an homage to heteronormative porn and function as humorous and innovative adverts of sorts for the most dominant, mainstream and ultimately corporately produced content. As Olga

Goriunova asserts '[t]here is not always and not even often a crystallization of the subversive through the idiotic' (Goriunova, 2012, 232), of which UCGP is such an obvious example. Pornography's central place in the sexual culture of the twenty-first century is strengthened by UCGP not through vertical business strategies, but through organic, peer-to-peer play.

UCGP's rootedness in the hegemonic iconographies of porn gesture too towards its creators' interpolation in economic productivity. Like a huge range of other online activities that involve users contributing time and effort to create digital content and communities, making UCGP constitutes both free (Terranova, 2000, 36) and immaterial forms of labour (Lazzarato, 1996). Though the circulation of UCGP is bound up with the workings of the digital attention economy – online advertising, network value, lucrative click throughs and so on – the majority of users make their content for fun, and so expect no payment for the sites and blogs they build. In shoring up the authority of pornography as a singular iconographic system of sexual representation, these activities also form what Maurizio Lazzarato calls the 'cultural content of the commodity', in this case that of the heteronormative porn film (Lazzarato, 1996, 132). Jenkins has identified the contradictory economic status of convergence: it is both 'a top-down corporate-driven process and a bottom-up consumer-driven process' and user-generated content 'exists both within and outside commercial contexts' (Jenkins and Deuze, 2008, 6-7). In emphasising the construction process, the materiality of UCGP also draws attention to the creators themselves and to the expertise, training and time they must provide in order to create this content. Where Casey O'Donnell describes software as 'a forgotten aspect of what game development looks like' (2011, 279), the glitches of UCGP denaturalise the software and expose the difficulties of digital animation. Where analogue recording techniques are thought to provide an umbilical cord between the real world and film (Kracauer, 1960, 71), the materiality of UCGP fosters an indexical relationship between the film and its creator that draws attention to the labour practises on which these apparently subversive sites are built. In blogs created by individual users who eschew the anonymity that characterises UCGP, the presence of the creator and the ways in which their activities echo the labour-intensive practises associated with the games industry and software development can be clearly seen. Erogenesis is a good example of UCGP's embeddedness in economised online networks, 'Ero' selling his pornographic 3D comic books on Patreon and Deviant Art and explicit addons on sites such as Renderosity and Content Paradise where consumers can buy software and training to create their own UCGP. The mysteriously named Ero also provides regular updates on the work process itself, where

the link between UCGP production and the demanding work patterns of computer and gaming industries is starkly shown. His blog posts employ a language of professional software development, with titles such as ‘Progress Report’ and ‘TaB Tester Complete. In Testing’ and he states of the software modifications he made in order to create ‘Lali’, his first pornographic comic book: ‘I developed ‘The Lali System’ for DAZ’s Victoria 4 figure [...] Lali’s Bits hit the market in 2013 [...] Currently I am developing [...] ‘Project E’ that is replacing my V4 system’ (Erogenesis.blogspot.com). Such language demonstrates Ero’s tangential connections to software and game development, and his perception of his comics as serious, industry-adjacent work.

Describing himself as working as a ‘C# .NET software developer’, alongside work as a geologist, musician and wildlife photographer, he frequently references the difficulty of finding the time to create and the pressure that comes from not wanting to let consumers down, often berating himself for not working harder and apologising to other users. He has placed a ‘Progress Bar’ on the margin of almost every page of his extensive blog that charts in urgent oranges and reds how far from completion his various projects are and how much he has fallen short of his timetable goals. Posts which emphasise the exhaustive work of designing his 3D comics are common. In one entitled ‘Think positive!’ he states:

Seriously I hope I can get Lali's Bits up and running by Christmas, I just never expected it to be such a bloody mission. I do have someone helping me but he's also very busy with other shit. I can code but usually there's enough information, software, and official documentation for me to learn complex stuff. I managed to write a whole form generation application in SQL Server without any prior knowledge of the system in two weeks. I taught myself C# and ended up #1 programmer in my surveying department in half a year. (Erogenesis.blogspot)

The huge amount of work involved in creating his material is foregrounded, another post consisting of pages and pages of lists of all the vaginal morphs it was necessary for him to create what he calls ‘Project E’: ‘vaginal distension, open genital fold in, labia majora closed and thick, inner labia fat/fan out/long/fan wide/fan top’ and so on (‘Project Evolution: Wrapping Up’, Erogenesis.blogspot.com). The sexual subversion and grassroots production of UCGP does not, therefore, place it outside the productive systems either of productive platforms such as Patreon or of software profoundly intertwined with the games industry. The 3D animation software Ero uses such as Poser and DAZ Studio, have a dual status as both

professional and amateur tools. Daz's website quotes famous digital film artist Ron Mendell who describes the software as 'a go-to solution on Captain America, Thor and Iron Man' (Daz), as well as defining itself as a creative tool for amateurs. UCGP's use of these tools, as well as the intensive work patterns required to produce the material, demonstrates its place within the thoroughly mainstream and precarious working world of the cultural and media industries. UCGP demonstrates, then, what Jenkins and Deuze describe as the 'dialectical production process' of media industries, whereby individuals and economised digital platforms and sites generate both 'unconventional new media formulas [and] hybrid genres' and legitimate, 'linear' products (2008, 8, 9). UCGP is not only a bizarre and subcultural digital phenomenon; it demonstrates the way in which the forms of economic and cultural productivity at work in twenty-first century porn culture encompass and neutralise attempts at subversion and innovation.

Conclusion

In both its technologies and aesthetics, UCGP demonstrates the 'global digital culture [...] of remix' (Jenkins and Deuze, 2008, 7), combining video game content, anime and cartoons with hardcore pornography. This article demonstrates the ways in which this largely user-generated digital subculture deconstructs the heteronormative, studio-produced, live-action pornography from which it draws. These animated films proffer a pornographic formalism that highlights the conditions of pornography's construction and troubles the transparent veracity on which the film genre is historically founded. It is both the cause and the consequence too of an affective and libidinal investment not in the physicality of bodies, but in an eroticised artificiality, and in the capacities of digital animation itself. However, the production of UCGP is embedded simultaneously in the anti-productive play of gaming, hacking and porn consumption, and in the intensive, neoliberal labour practises associated with free labour and the games industry. Though UCGP testifies to the 'new configurations of media power' that have emerged through 'convergence of the cultures of production and consumption' (Jenkins and Deuze, 2008, 7), its parodic crudeness opening up the potential for critique, ultimately its replication of dominant pornographic conventions demonstrates its cultural and economic links to hegemonic media narratives of sexual culture.

References

Attwood, F. 2007. 'No Money Shot? Commerce, Pornography and New Sex Taste Cultures.' *Sexualities*. 10 (4): 441-456.

Adult-Empire.com. Accessed 30 May 2018. <http://sites.adult-empire.com/6935/index.html>

Animal Crossing. 2012. Nintendo.

Attwood, F. 2010. '“Younger, Paler, Decidedly Less Straight”: The New Porn Professionals.' In *Porn.com: Making Sense of Online Pornography*, edited by Feona Attwood. New York: Peter Lang, pp. 88-105.

Balazs, B. 2010. 'Visible Man, or The Culture of Film.' In *Film Theory Reader: Debates and Arguments*, edited by Marc Furstenau, 69-79. London: Routledge.

Balsamo, A. 2000. 'The Virtual Body in Cyberspace.' In *The Cybercultures Reader*, edited by David Bell and Barbara M. Kennedy. 489-503. London: Routledge.

Baym, N. 1998. 'Talking about Soaps: Communication Practices in a Computer-Mediated Culture.' In *Theorizing Fandom: Fans, Subculture, and Identity*, edited by Cheryl Harris and Alison Alexander. 111-130. New York: Hampton Press.

Bazin, Andre. 1967. *What is Cinema? Volume 1*. Berkeley: University of California Press.

BioShock. 2007. 2K Games.

Blade Runner 2049, 2017. Dir. Denis Villeneuve.

Bolter, J. and Grusin, R. 1999. *Remediation: Understanding New Media*. London: MIT Press.

Boyle, D. 2004. *Authenticity: Brands, Fakes, Spin and the Lust for Real Life*. London: Harper Perennial.

Brown, A. 2018 'Videogames and Sex.' In *The Routledge Companion to Media, Sex and Sexuality*, edited by Clarissa Smith and Feona Attwood. 239-247. New York: Routledge.

Brown, S. 2010. *Tokyo Cyber-punk: Posthumanism in Japanese Visual Culture*. New York: Palgrave.

Bunz, M. 2015. 'School Will Never End: On Infantilization in Digital Environments – Amplifying Empowerment or Propagating Stupidity?' In *Postdigital Aesthetics: Art, Computation and Design*, edited by David M. Berry. Basingstoke: Palgrave Macmillan.

Casetti, F. and Somaini, A. 2013. 'The Conflict Between High Definition and Low Definition in Contemporary Cinema.' *Convergence* 19(4): 415-422.

CD Projekt Red. 2007. *The Witcher*. Atari.

Comments, Rule34xxx.com. Accessed 15 March 2018.
<https://rule34.xxx/index.php?page=comment&s=list&pid=20>

Cooke, G. 2010. 'De-inter-facement: 0100101110101101.org's Portraits of 'Second Life' Avatars.' *Convergence* 16(4): 395-410.

Core Design. 1996. *Tomb Raider*. Eidos Interactive.

Crandall, J. 2013. 'Precision + Guided + Seeing.' In *Critical Digital Studies: A Reader*, edited by Arthur Kroker and Marilouise Kroker, 87-105. Toronto: University of Toronto Press.

Daz. Accessed 5 August 2018. <https://www.daz3d.com/technology/>

Deterding, S. and Walz, S, editors. 2014. *The Gameful World: Approaches, Issues, Applications*. Cambridge MA: MIT Press.

Dissidia Final Fantasy NT. 2018. Square Enix.

Dragon Age: Origins. 2009-2014. Bioware.

Edelan, E. 2015. 'The Cum Shot: Trans Men and Visual Economies of Ejaculation.' *Porn Studies*. 1(2): 150-160.

Ero. 2012. Erogenesis.blogspot.com. 14 December. Accessed 14 June 2018.
<https://erogenesis.blogspot.com/2012/>

Ero. 2012. 'Project Evolution: Wrapping Up.' Erogenesis.blogspot.com. Accessed 14 June 2018. <https://erogenesis.blogspot.com/2018/07/project-evolution-wrapping-up-and.html>

Evans, E. 2016. 'The Economics of Free: Freemium Games, Branding and the Impatience Economy.' *Convergence* 22(6): 563-580.

Everett, A. 2010. 'Digitextuality and Click Theory: Theses on Convergence Media in the Digital Age.' In *The New Media and Cybercultures Anthology*, edited by Pramod K. Nayar. 29-45. Oxford: Blackwell.

Ex Machina, 2015. Dir. Alex Garland.

Freeman, E. 2010. *Time Binds: Queer Temporalities, Queer Histories*. Durham: Durham University Press.

Freemonsterporn.com. Accessed 30 May 2018. <http://www.freemonsterporn.com/>

Gaboury, J. 2015. 'Hidden Surface Problems: On the Digital Image as Material Object.' *Journal of Visual Culture* 14(1): 40-60.

Gamcore.com. Accessed 30 May 2018. <http://gamcore.com/>

Gelbooru.com. Accessed 15 June 2018. <https://gelbooru.com/>

Gilder, G. 1989. *Microcosm: The Quantum Revolution in Economics and Technology*. New York: Simon and Schuster.

Girls und Panzer. 2012-2014. Actas.

Goriunova, O. 2012. 'New Media Idiocy.' *Convergence* 19(2): 223-235.

Grainge, P. 2011. *Ephemeral Media: Transitory Screen Culture from Television to Youtube*. London: BFI.

Gurney, D. and Payne, M. 2016. 'Parody as Brand: The Case of [adult swim]'s Paracasual Advergemes.' *Convergence* 22(2): 177-198.

Hentai Heaven.com. Accessed 15 June 2018. <http://hentaihaven.org/>

Jameson, F. 2007. *Signatures of the Visible*. London: Routledge.

Jenkins, H., and Deuze, M. 2008. 'Editorial: Convergence Culture.' In *Convergence* 14(1): 5-12.

Jenkins, H. 2006. *Fans, Bloggers, and Gamers: Exploring Participatory Culture*. New York: New York University Press.

Jenkins, H. 2006. 'Quentin Tarantino's Star Wars? Grassroots Creativity Meets the Media Industry.' *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press.

Johnson, D. 2015. 'Animated Frustration or the Ambivalence of Player Agency.' In *Games and Culture* 10(6): 593-612.

Kim, Jihoon. 2016. *Between Film, Video and the Digital: Hybrid Moving Images in the Post-Media Age*. New York: Bloomsbury.

Klein, B. et al. 2012. 'Framing the Consumer: Copyright Regulation and the Public.' *Convergence* 19(1): 9-24.

Kracauer, S. 1960. *Theory of Film*. New York: Oxford University Press.

Krzywinska, T. 2015. 'The Strange Case of the Misappearance of Sex in Videogames.' In *Rated M for Mature: Sex and Sexuality in Video Games*, edited by M. Wysocki and E. Lauteria. 105-118. New York: Bloomsbury.

Lacquer, T. 2003. *Solitary Sex: A Cultural History of Masturbation*. New York: Zone Books.

Lazzarato, L. 1996. 'Immaterial Labor.' In *Radical Thought in Italy: A Potential Politics*, edited by Paolo Virno and Michael Hardt. 132-147. London: University of Minnesota Press.

League of Legends. 2009. Riot Games.

LewdGamer.com. Accessed 5 March 2018. <https://www.lewdgamer.com/category/gamenews>

Lister, M. et al, eds. 2003. *New Media: A Critical Introduction*. New York: Routledge.

Lupton, D. 2000. 'The Embodied Computer/User.' In *The Cybercultures Reader*, edited by David Bell and Barbara M. Kennedy. London: Routledge. 477-488.

Maina, G. 2014. 'Grotesque Empowerment, *Belladonna's Strapped Dykes* Between Mainstream and Queer.' In *Porn After Porn: Contemporary Alternative Pornographies*, edited by Enrico Biasin, Giovanna Maina and Federico Zecca. Mimesis, pp.83-106.

Manovich, L. 2013. *Software Takes Command*. London: Bloomsbury.

Manovich, L. 2016. 'Digital Cinema and the History of a Moving Image.' In *Film Theory and Criticism: Introductory Readings*, edited by Leo Braudy and Marshall Cohen. 245 – 254. New York: Oxford University Press.

Manovich, L. 1995. 'What is Digital Cinema?' Manovich.net. Accessed 15 March. <http://manovich.net/index.php/projects/what-is-digital-cinema>

Marks, L. 2003. 'Invisible Media.' In *New Media: Theories and Practises of Digitextuality*, edited by Anna Everett and John T. Caldwell. 33-46. London: Routledge.

Marsh, T. 2003. 'Presence as Experience: Film Informing Ways of Staying There.' *Presence: Teleoperators and Virtual Environments*. 12(5): 538-549.

Metz, C. 1974. *Film Language: A Semiotic of the Cinema*. Oxford: Oxford University Press.

Madill, A. 2018 'Erotica Manga: Boys' Love, shonen-ai, yaoi and (MxM) shotacon.' In *The Routledge Companion to Media, Sex and Sexuality*, edited by Clarissa Smith and Feona Attwood. 130-140. New York: Routledge.

Manojlovic, M. 2008. 'Demonlover: Interval, Affects and the Aesthetics of Digital Dislocation.' In *Cinema and Technology: Cultures, Theories, Practices*, edited by Bruce Bennett, Marc Furstenau, Adrian Mackenzie. 142-156. Basingstoke: Palgrave Macmillan.

Mass Effect. 2007. Microsoft Game Studios Electronic Arts

Mills, D. 2015. 'Explicit Sexual Content in Early Console Video Games.' In *Rated M for Mature: Sex and Sexuality in Video Games*, edited by M. Wsocki and E. Lauteria. 75-101. New York: Bloomsbury.

Mitry, J. 2000. *Semiotics and the Analysis of Film*. London: Athlone.

Moorman, J. 2010. 'Gay for Pay, Gay For (e)play: The Politics of Taxonomy and Authenticity in LGBTQ Online Porn.' In *Porn.com: Making Sense of Online Pornography*, edited by Feona Attwood. New York: Peter Lang, pp. 155-169.

More, M. and Bell, T. (1988) *Extropy: Vaccine for Future Shock*. Extropy Institute.

Morgan, D. 2010. 'Rethinking Bazin: Ontology and Realist Aesthetics.' In *Film Theory Reader: Debates and Arguments*, edited by Marc Furstenau, 104-130. London: Routledge.

Mowlabocus, S. 2010. 'Porn 2.0? Technology, Social Practice, and the New Online Porn Industry.' In *Porn.com: Making Sense of Online Pornography*, edited by Feona Attwood. New York: Peter Lang, pp. 69-87.

Mystique. 1982. *Beat 'Em and Eat 'Em*. Mystique.

Naruto. 1999-2014. Shueisha.

Naughty Machinima. Accessed 30 May 2018. <https://www.naughtymachinima.com/>

Newman, J. 2012. 'Illegal Deposit: Game Preservation and/as Software Piracy.' *Convergence* 19(1): 45-61.

Newman, J. 2013. *Videogames*. New York: Routledge.

New Super Mario Bros. 2012. Nintendo.

NicoleHeat.com. Accessed 12 June 2018. <http://nicoleheat.com/>

O'Donnell, 2011. 'Games are Not Convergence: The Lost Promise of Digital Production and Convergence.' *Convergence: The International Journal of Research into New Media Technologies*. 17(3): 271–286.

Nooney, L. and Portwood-Stacer, L. 2014. 'One Does Not Simply: An Introduction to the Special Issue on Internet Memes.' *Journal of Visual Culture* 13(3): 248-252.

Paasonen, S. 2017. 'The Affective and Affectless Bodies of Monster Toon Porn.' In *Sex in the Digital Age*, edited by Isabel K. Dusterhoft and Paul G. Nixon. 10-24. New York: Routledge.

Paasonen, S. 2013. 'Online Pornography: Ubiquitous and Effaced.' In *The Handbook of Internet Studies*, edited by Mia Consalvo and Charles Ess. Chichester: Blackwell Publishing Ltd. pp. 424-439.

Parkes, M. 2012. 'Making Plans for Nigel: The Industry Trust and Film Piracy Management in the United Kingdom.' *Convergence* 19(1): 25-43.

Porngames.com. Accessed 30 May 2018. <http://porngames.com/>

Rodowick, D.N. 2007. *The Virtual Life of Film*. Cambridge MA: Harvard University Press.

Rule34.xxx. Accessed 5 March 2018. <https://rule34.xxx/>

Renderotica.com. Accessed 5 March 2018.
http://www.renderotica.com/gallery/cat/443_Works-In-Progress?page=3

Saunders, R. 2016. '“Open Wide and Say Aaahh!” Female Ejaculation in Contemporary Pornography.' In *The Sexualized Body and the Medical Authority of Pornography: Performing Sexual Liberation*, edited by Heather Brunskell-Evans, pp. 95-116.

Schaffer, B. 2008. 'Inbetweening: Animation, Deleuze, Film Theory.' In *Cinema and Technology: Cultures, Theories, Practices*, edited by Bruce Bennett et al. 201-213. Basingstoke: Palgrave Macmillan.

ScreenCrush.com. Accessed 5 March 2018. <http://screencrush.com/superhero-porn-parodies/>

Sexyfuckgames.com. Accessed 30 May 2018. <https://www.sexyfuckgames.com/>

Smith, C. 2014. '“Its Important That You Don't Smell a Suit on this Stuff” Aesthetics and Politics in Alt Porn.' In *Porn After Porn: Contemporary Alternative Pornographies*, edited by Enrico Biasin, Giovanna Maina and Federico Zecca. Mimesis, pp. 57-82.

Sirius, R.U. and Nagel, B. (1989) *Mondo 2000*. Canada.

'Skyrim – Sex with Serana'. Pornhub.com. Accessed 5 March 2018. https://www.pornhub.com/view_video.php?viewkey=907126014

Smith, A. 2018. 'Participatory Porn Culture: Feminist Positions and Oppositions in the Internet Pornosphere.' In *Sex in the Digital Age*, edited by Isabel K. Dusterhoft and Paul G. Nixon. New York: Routledge.

Stella, R. 2016. 'The Amateur Roots of Gonzo Pornography.' *Porn Studies*. 3(4): 351-361.

Susanka, T. 2012. 'The Rhetorics of Authenticity: Photographic Representations of War.' In *Paradoxes of Authenticity: Studies on a Critical Concept*, edited by Julia Straub. 95-113. Piscataway, New Jersey: Transaction Publishers.

Tarrant, S. 2016. *The Pornography Industry: What Everybody Needs to Know*. New York: Oxford University Press.

Teen Titans. 2016. DC Comics.

Terranova, T. 2000. 'Post-Human Unbounded: Artificial Evolution and High-Tech Subcultures.' In *The Cybercultures Reader*, edited by David Bell and Barbara M. Kennedy. London: Routledge. 268-281.

Terranova, T. 2000. 'Free Labor: Producing Culture for the Digital Economy.' *Social Text* 63(18): 33-58.

TheFree3DPorn.com. Accessed 15 June 2018. <http://thefree3dporn.com/>

van Loon, J. 2007. *Media Technology: Critical Perspectives*. Berkshire: Open University Press.

Virilio, P. 1994. *Vision Machine*. Bloomington: BFI.

Virtual Sex with Jenna. 1999. Digital Playground FX.

Winkie, L. 2013. 'How Awful Are the Free Porn Games on the Internet?' Vice. Accessed 14 June 2018. https://www.vice.com/en_us/article/4wqzp9/how-awful-are-the-free-porn-games-on-the-internet

Williams, L. 1999. *Hard Core: Power, Pleasure, and the 'Frenzy of the Visible'*. Berkeley: University of California Press.

Wired staff. 2006. 'Animated Porn Makes Moves.' Wired.com. Accessed 5 March 2018. <https://www.wired.com/2006/12/animated-porn-makes-moves/>

Wysocki, M. 2015. 'It's Not Just the Coffee That's Hot: Modding Sexual Content in Video Games.' In *Rated M for Mature: Sex and Sexuality in Video Games*, edited by M. Wysocki and E. Lauteria. 194-209. New York: Bloomsbury.

Young, S. and Meikle, G. 2012. *Media Convergence: Networked Digital Media*. New York: Palgrave Macmillan.

Xenoblade Chronicles. 2010-2015. Nintendo.