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The Well-Played Glitch: practice and meaning in Glitching communities

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Introduction:

Videogames facilitate differing and often unexpected interactions, and behavior when eventually played (e.g., Juul, 2002; Hunicke, LeBlanc, & Zubeck, 2004; Steinkuehler, 2006; Bogost, 2011). These behaviours are the product of the different values, predilections, and interests that the player brings to the videogame space, located with the specific opportunities and affordances offered by the game, and are theorized within the significant body of work exploring player types and motivation (e.g., Bartle, 1996, 2003; Bateman, 2004; Fullerton et al., 2004; Yee 2005; and Kallio, Mäyrä, & Kaipainen, 2011). Where players recognize common play styles they may spontaneously form *communities of practice* that extend beyond the boundaries of the game onto the internet, where members share expertise, socialize, and support their divergent activities (e.g., Taylor, 2003; Consalvo, 2007; Pierce, 2009; Wirman, 2009). The practices developed and sustained by these groups sometimes differ from those intended by the designer, inculcated by the game rules and contractual frameworks that protect the commercial prerogatives of the videogame (such as EULA and copyright law). Actual player behavior is the product of a ‘mangle of play’ (Steinkuehler, 2006), it has the unpredictable capacity to alter the videogame on which it takes place. Therefore game operators and platform holders (henceforth *institutional stakeholders*) must differentiate between benign and malign modes of play and to regulate the latter to protect their games.

Spontaneous communities of practice align with aspects of Bernie DeKoven’s well-played game, on the basis that the merits of play ‘...can only be measured in terms of how well we have been able to play together. ...not measured by the score, it is not measured by the game, it is measured by those of us who are playing’ (DeKoven, 2002, p. 7). According to this communal perspective even play forms that are apparently hostile to the videogames that they utilize have the capacity to be considered well-played by some – this is from the perspective of the protagonist, not the institutional stakeholders or conventional player. While the notion of the well-played game is useful when theorizing the social significance of play, it is not necessarily compatible with the competing economic and legal pressures of a contemporary videogame. Play is subject, by institutional stakeholders and players alike, to a binary ‘normalizing gaze’ (Foucault, 1977, p. 25), which separates it into distinct models of *good play* and *bad play*, and as a corollary informs the identity of good and bad *players* (Myers, 2005). Bad play deviates from the expectations, rules, contracts, and laws that surround play, framed as noob play, destructive play, illegal play, exploitation of game rules and codes, pirating and hacking (Myers, 2005, p. 15). Where it encapsulates the rejection of the encoded structures that restrict play and define the player it can be understood as counterplay (Dyer-Witford & de Peuter, 2005).

Within game studies literature counterplay is often treated as a problem that emerges from flaws in game design, and something to be reduced and managed (e.g., Yan & Choi, 2002; Yan & Randell, 2005; Parker, 2007). Counterplay forms are thus given pejorative labels, such as grief-play, greed-play, trolling, hacking, cheating, boosting (collusion), offensive behavior and offensive content. In contrast game scholars have approached counterplay from a more sociological perspective, framing it as a natural feature of play as a social activity (e.g. T. L. Taylor, 2003, 2009; Flanagan, 2009; Consalvo, 2007; Kücklich, 2007, 2008; Dyer-Witford & de Peuter, 2005, 2009; Malaby, 2007).

While scholars from the sociological approach have attempted to detail the practices and values attributed to modes of counterplay there is still relatively little known, in part due to the reluctance of counterplayers to discuss their acts and the pragmatic issues associated with identifying and studying non-normative behavior. As a result, while we are relatively confident about the labels, form and detrimental impact of counterplay, relatively little is known of the pleasures, meanings and values that encourage its varied manifestations – i.e. what is considered the well-played game from these counter perspectives. Formalist approaches, through prioritizing the development process and authorial intent of the designer, naturally frame counterplay as destructive or detrimental – and as a result there is the tendency to assume that destruction and malignance motivates counterplay. This rhetoric supports a reductionist view of counterplay as an unnecessary and incompatible activity to be managed and denigrated instead of engaged with and explored, such as its framing as ‘...a retreat from the demands of the new, [signaling] ...a disposition that does not want to be performatively challenged’ (Malaby, 2007).

This article responds to this context by offering insight into what it means to conduct well-played counterplay, specifically within the context of *glitching*. This is the product of eighteen-months of ethnographic field-work located within glitching communities, notably mapMonkeys and chaoticPERFECTION, on the Xbox360 platform, and as part of a wider PhD study exploring counterplay more generally. Through participant-observation, interview, and textual analysis, this article will expand upon the processes adopted to identify glitches, their varying modes of documentation, and the ways in which they are deployed. In doing so this will offer a glimpse into what constitutes the well-played glitch, and highlight the ambiguous sophistication missing from the configuration of counterplay as bad play.

Glitching as a counterplay practice:

Glitching is a specific form of counterplay that focuses around the identification, documentation, distribution and utilization of exploitable flaws discovered within videogame software and systems. Glitching is practiced by *glitchers*, who seek out, document and distribute *glitches*, while it is simultaneously a pejorative label applied to those identified by conventional players or institutional stakeholders to have exploited glitches for benefit. Glitching is a practice that can be found across the gamut of videogame platforms and genres, and is the product of the unpredictability of software code and player interactions. Glitches may be the product of visible but unidentified software anomalies, or may only become apparent when instigated through unanticipated player input and system interaction. Irrespective of their origin, glitches highlight or initiate anomalous and inconsistent game simulation – the videogame suddenly looks, sounds, or behaves differently – and in some cases this is exploitable by the glitcher. Glitches allow a range of outcomes: *exploration*, where the glitcher is able to access unintended interactions and areas of the gamespace; *productivity*, where the potential uses of the game are transformed, such as enabling the creation of new grassroots game modes; *renegotiation*, where the glitcher is able to overcome game rules in order to better progress; and *domination*, where the glitcher obtains competitive advantage over conventional players, and is able to dominate, and harass. As a result of the negative potential of the glitch it is almost always configured as malign, destructive and antagonistic. This is reflected in the following tweet, released by David Vonderhaar, multiplayer gaming design director at Treyarch, the developers of the *Call of Duty: Black Ops* series:

We are disinterested in making mini-celebrities out of douche-bags. You better think twice before you glitch. You never know who in your game doesn't like glitchers who reports you ...and tells us about it.

(Watts, 2010)

This statement captures some of the way that glitching is perceived by the player base and institutional stakeholders. While Activision themselves refrain from the use of such juvenile and incendiary language, they class glitching as a form of 'game abuse', defined as 'player behavior that violates the spirit of the game', the penalty for which range from 48 hours and thirteen-and-a-half years of exclusion from their game servers (Activision, 2011). While those subject to these penalties can create new game profiles to play again, this results in a resetting of any accumulations and reputation – a starting from scratch. The message is clear – that glitching is a mode of play incompatible with videogame play, it is deemed hostile and abject, and if caught doing it the player will be castigated and ejected. These are some of the contexts that frame glitching – the ways in which the institutional stakeholders define and position the acts, and as a corollary infuse it with the thrill of the illicit.

Glitching in context:

Within glitching communities – i.e. those that seek out, document, and share glitches, there are additional influences and meanings. One of the core principles for glitching is that it is conducted on unmodified videogame hardware, and is therefore replicable on any equivalent system and release. On this basis glitching focuses upon exposing interesting or exploitable flaws within a videogame that have been missed by Quality Assurance teams (henceforth QA), and other glitchers. Glitching becomes a race to identify exploits or anomalies, and in doing so assert hierarchical dominance over the QA team and other glitchers who failed to discover the flaw. When a discovered glitch is deemed appropriate for distribution it is typically documented as a video with a voice-over tutorial that explains its replication, this is then uploaded onto video sharing websites for consumption. In addition to the implicit pleasures associated with the identification and use of a glitch, glitchers enjoy the vicarious pleasures of seeing the impact of their glitch as it is exploited by *the public* (a term of distinction used by many glitchers), and any recognition it elicits from institutional stakeholders, such as through the deployment of software security updates or press releases intended to placate irate players. While each glitch is protean, resulting in radically different outcomes, glitchers tend to discuss their significance across two continuum that inform the way that a glitch is likely to be understood by glitchers, players, and institutional stakeholders: *competitive advantage*, and *visibility*.

Glitches that are neither advantageous, nor visible, are *trivialities* – of interest to glitchers, but not the public. Glitchers still document these and share them, as the iterative nature of glitches means that apparently irrelevant anomalies have the capacity to lead to more significant glitches, but are rarely visible to conventional players or necessitate a response from institutional stakeholders.

Glitches that offer little advantage but are highly visible – e.g. are particularly easy to do or are spectacular in their deployment, are often regarded by players as *strategies* that are adopted as part of the repertoire of play. Examples of strategies include *Call of Duty* franchise *reload cancelling* where players interrupt the weapon reload animation by sprinting *after* the ammunition count has been reset, but *before* they would normally be able to attack.

This enables the glitcher to be able to attack sooner than an opponent playing conventionally, and constitutes a minor but beneficial strategic advantage. Strategies are not generally subject to widespread censure, but are reconfigured as hidden gameplay knowledge that betrays player expertise – somebody versed in *Call of Duty* techniques.

Glitches that confer advantage but are difficult to do, and are therefore restricted to the dexterous practiced minority, are utilized as a mark of distinction are configured as *glitches*. If observed by conventional players they are likely to be regarded as grief-play, while when observed by glitchers become markers of an alignment with glitching as a practice, provided that they are not abused through over-use. Glitches include those that allow the glitcher to exit the conventional gamespace for exploration and domination. Glitchers generally are opposed to the widespread use of glitches upon public matches, partly due to the reputational damage and frequent defensive initiatives by institutional stakeholders that they motivate. Glitch abuse raises the stakes of glitching across the board, and as a result many glitchers view the well-played glitch as the sensitive and restrained use – saved for private game modes and the consensual. This is not to imply that glitchers never utilize exploits for domination, but that this is understood as an inauthentic behavior that risks significant detrimental repercussions to the entire glitching community.

Where a glitch is both highly advantageous and visible it is viewed as a *game-breaker*. These are highly potent and result in almost immediate and escalatory intervention from institutional stakeholders. The *Call of Duty: Modern Warfare 2* Javelin glitch is a good example of a game-breaker, it is conducted in the competitive multiplayer FPS through the player priming an explosive charge and the immediate replacement with a powerful rocket launcher. When they are eventually killed the primed C4 explodes, detonating the Javelin missile payload at the same time. The cumulative blast kills all opponents within a large radius irrespective of cover. The Javelin glitch necessitated a mandatory security update that was released less than two-weeks after its discovery at a cost in excess of \$40,000 for the publisher (Stuart, 2012). Following the software update Activision began to strongly articulate their policy on glitching, and retrospectively banned many of those that had utilized the glitch.

While some glitchers express reticence regarding the distribution of game-breakers, it was generally agreed that they constituted the most desirable glitch discovery. This is not due to the implicit pleasures of their invocation, or the immediate subversive damage that they cause, but the secondary *symbolic dialogue* that they represented between institutional stakeholders and glitchers.

Zorro, one of the mapMonkeys glitchers who had contributed to the adoption of the Javelin glitch (his version of the of the glitch video had been viewed more than one million times) felt little culpability regarding the damages attributed to the game-breaker, instead viewing its public dissemination as a service to the game developers who he regarded as ‘core members of the glitching audience’. This perspective was shared by many glitchers that I spoke with, who argued that any response from the developers, such as patching a glitch, constituted a kind of interaction that was both recognition of glitching skill and tacit challenge that motivated further glitching. In addition to the pleasures attributed discovering a previously unknown glitch, and those associated with its utilization, the recognition that the glitch elicits from public and development communities was highly significant. The motivation was not simply the *mini-celebrity status* ridiculed by Vonderhaar, but the capital and opportunity that

the glitch generated – being perceived as a skilful glitcher was regarded as an alternate method of engaging with and potentially entering the game development industry.

This is substantiated by Infinity Ward’s utilization of mapMonkeys glitching team members during the development of *Call of Duty: Modern Warfare 3*. Robert Bowling, Infinity Ward’s then creative strategist saw mapMonkeys as ‘...a great addition to an already rigorous QA process that the internal team here at Infinity Ward / Sledgehammer’ (Ivan, 2011). While mapMonkeys’ work with Infinity Ward is an example of a mutually beneficial relationship between institutional stakeholders and glitchers, it is a rare occurrence, that has become part of the motivational folklore that colors glitching. Yet even this example is further contextualized by conflicting attitudes and animosity, fewer than three months later, Bowling was publicly denouncing both the practice of glitching and those who conduct it:

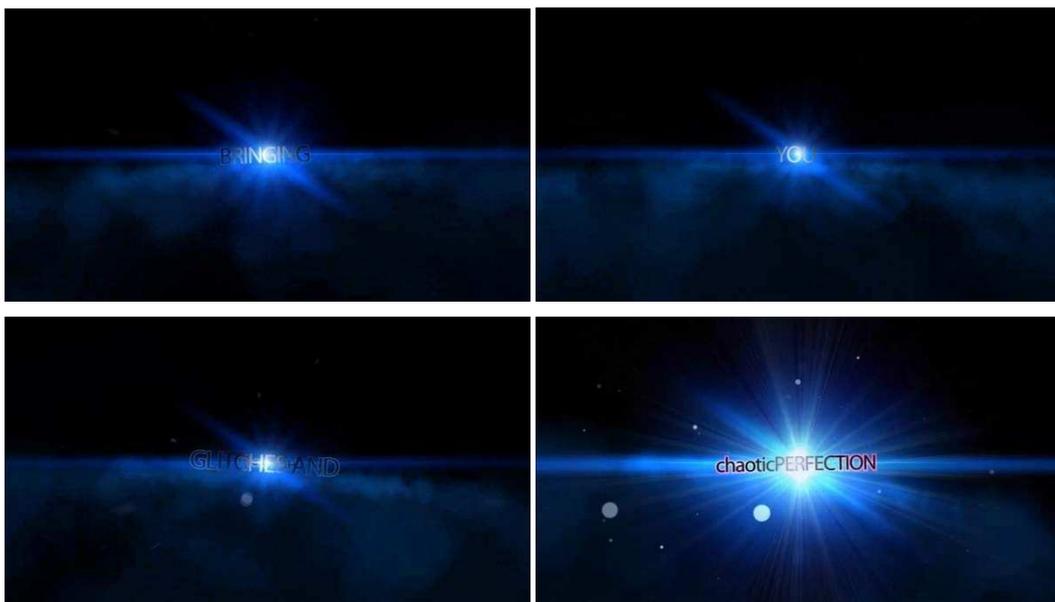
Any attempt to cheat, hack, or glitch in #MW3 will not be tolerated. 1600+ bans issued....Every ban unique to the level of douchiness of the offense. The greater the douche the greater the length. PermaDouche possible.

(Bowling, 2011a, 2011b)

This exposes some of the ambiguous and often contradictory contexts of glitching as a practice – as a practice opposed and seduced with videogames, as a valuable practice during development that may be economically damaging post-release, and an act to be sensitively deployed yet simultaneously given to the public with no opportunity to control subsequent utilization.

Documenting a glitch - chaoticPERFECTION:

The video’s animated sequence begins, ‘Bringing you glitches and tricks with voice and text tutorials... chaoticPERFECTION’, it acknowledges the glitcher who documented the glitch, XNickncsxcP, before fading to black.



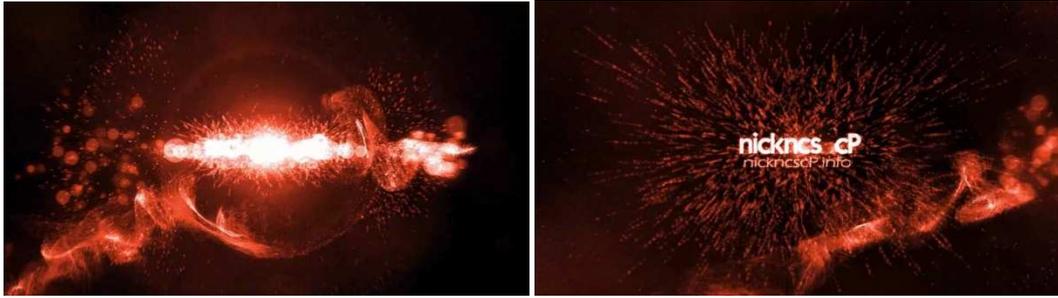


Figure 1 - The chaoticPERFECTION introduction sequence.

As music strikes up, the *Duke Nukem: Forever* loading screen is displayed and we watch as Duke drives his monster truck through a rocky tunnel (Figure 2).



Figure 2 - Glitching Duke Nukem: approaching the glitch.

The Monster Truck veers right and smashes headlong into the tunnel wall and instead of being repelled it truck flips upward and the rock wall becomes transparent (left, Figure 3), when the truck stabilizes it is outside the conventional playable game area and enters the strangely rendered space beyond (Figure 3).



Figure 3 - Glitching Duke Nukem: conducting the barrier breaker and getting OOM.

As the video continues the area outside the level is explored further, the player exits the vehicle and begins to shoot at level objects, drawing the viewer's attention to them – on closer inspection the scenery appears to have 'Fake Background' clearly written on it (Figure 4, left panel). The player continues, focusing on interesting and striking imagery. Eventually the music fades, the image dissolves to black, and the video finishes.



Figure 4 - Glitching Duke Nukem: the 'Fake Background' panel, and exploring scenery.

Documenting a glitch - mapMonkeys:

'Hey mapMonkeys, it's your boy Sewerwaste here... on Dome you're going to come to this part of the map... (Figure 5)



Figure 5 - Glitching *BLOPs*: Identifying location.

...you're going to do this kind of strafe-jump up there... then you've got to jump around the corner and crouch at the same time... (Figure 6)

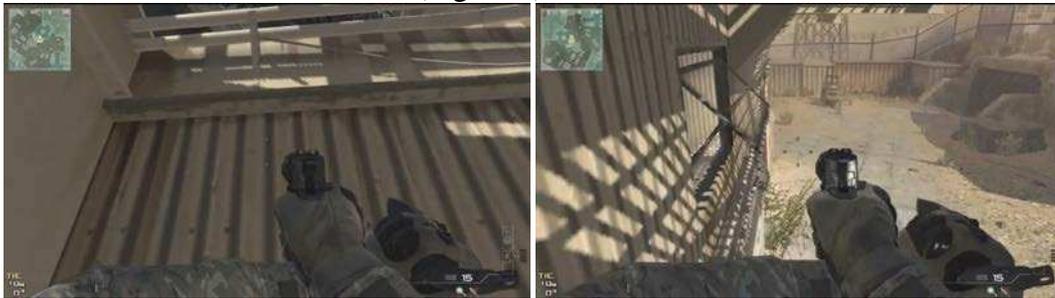


Figure 6 - Glitching *BLOPs*: Articulating Technique, Jump and crouch.

...I recommend being on default button layout because you've got to crouch immediately after... once you're up here you can just hang about, climb all over the dome... stand on those little red bars... it's a good spot for infection if you guys play that... (Figure 7) (mapMonkeys, 2011).



Figure 7 - Glitching *BLOPs*: Explaining outcomes and uses.

These two glitch videos offer insight into some of the range of contemporary glitcher outputs, the first, produced by chaoticPERFECTION is a sophisticated sequence that encapsulates the glitch with motion-graphics, fair-use copyright statements, soundtracks and branding, while the mapMonkeys release concisely explains what to do and where. Tens of thousands of glitch videos like these are available online, many are distributed directly from the glitchers' personal Youtube profile, while others do so through centralized glitching *team* and *community* channels, e.g. chaoticPERFECTION and mapMonkeys. At the point of writing, the chaoticPERFECTION channel, active since May 2010, hosts 200 videos, has 2,500 subscribers and has generated 900,000 views, while the mapMonkeys channel has just over 100 videos, over 46,000 subscribers and 7.5 million video views. The now defunct

mapMonkeys community site hosted more than 3,500 videos, had a registered community of more than 130,000 members, 1,600 of which paid 'premium' subscriptions. Glitches therefore represent a significant mode of engagement and example of player productivity (Wirman, 2009), but despite this it is one that relatively little is known about how it is conducted.

Identifying a glitch:

As glitches exploit weaknesses and contradictions in code they can occur at any point within the videogame: from the ways that the gamespace is presented and rendered (graphical glitches); the way that the player moves through the gamespace (navigational glitches); the boundaries that constitute the gamespace (barrier glitches); the consistency of the functions that the game occurs (process glitches); the causality and sense of continuity within the game (logic glitches); and the power and agency of player interactions (affordance glitches). When glitchers enter a gamespace they do so with an investigative and opportunistic mode – following up anomalies and potential exploits as they become apparent. Despite this need for flexibility glitching sessions are generally conducted in groups and with focused intent – primarily seeking out one type of glitch that has been agreed on prior to entering the game, while remaining receptive to other opportunities that become apparent. The following case study, taken from glitching sessions conducted on the *Call of Duty: Black Ops – Rezurrection* DLC, sought to primarily identify barrier glitches, in particular seeking to get *Out of Map* (OOM), beyond the playable gamespace. While the practices here are directly related to the discovery of this kind of glitch, the overarching processes and forms adopted remain consistent with glitching more generally.

I was invited to join chaoticPERFECTION members on a glitching session on the *Rezurrection*, building upon the *Call of Duty* franchise's popular 'Nazi Zombie' mode, it relocates to a cold-war moon-base, where, taking the role of Richard Nixon, Robert McNamara, John F Kennedy or Fidel Castro, players must cooperate to survive successive waves of Nazi zombies. I was told to download the DLC immediately upon its release in the UK and to wait online for other glitchers to join. My role was to primarily create a safe 'beachhead' to enable glitching, which was conducted through zombie herding. In a match of *Rezurrection*, players must dispatch successive waves of the undead, that become progressively numerous and dangerous. Once a specific number of zombies have spawned a stronger *boss zombie* enters the arena that explodes on death, and no more weaker zombies are spawned until the final weak zombie is killed. Each of the zombies are attracted to players, typically the closest accessible player in the zombie's line-of-sight becomes its target. If a player is careful they can use this mechanic to lead a zombie around a map. It became my responsibility to lure the final weak zombie away from the other glitchers in the match who were herding the boss zombie into a specific location where it was hypothesized that its detonation would enable players to access high areas of the map and overcome barriers. I had to remain close enough to the weak zombie to maintain its attention, leading it to locations that it would find difficult to navigate, such as staircases and then I would sprint back to observe and help with the glitching.

Each glitcher took turns in the various roles in the process, and when not herding the remaining glitchers interrogated the space independently, looking for other anomalies that could be explored later. This interrogation of game barriers and navigation took the form of systematically challenging the game simulation – leaping against barriers, rubbing the avatar against walls, constantly calling for others to observe and verify anomalies as we repeated the action. We looked for anything that immediately appeared anomalous: inconsistently shaped

scenery or objects, different kinds of walls, barriers, floors, handrails and other objects that might offer a foothold; and for places where the player felt something odd happen – such as their avatar sticking, catching, or popping up while moving.

Following an initial exploration it was decided that the boss zombie should be lured into a position adjacent to an apparently low staircase barrier. It was hoped that the resulting explosion would send the glitcher up and over the wall, and hopefully OOM. Through careful maneuvering the zombies were separated and the boss zombie lured into the relevant (Figure 3). The resulting explosion launched the others into the air, one slammed into the doorway in front of me, while the other brushed against the wall, too low to confirm whether a barrier existed above the wall or not. It had taken perhaps twenty minutes and five restarts of the map to reach this point.



Figure 8 - Glitching *CoD* Rezurrection: testing the glitch hypothesis.

Undeterred, the process was repeated, eventually the glitch was conducted as intended, the glitcher sailed high above the visible wall (Figure 4), *highlighting the existence of a barrier beyond*. That particular location was not susceptible to that glitch under those circumstances. Another location was selected and we began again.



Figure 9 - Glitching *CoD* Rezurrection: A successful glitch process, no latent exploit.

The reputation of the glitching team and the relatively imbricated community links meant that there other glitches were constantly available, often in different time-zones, to take the place as glitches left. In addition there were a number of similar glitching sessions occurring

simultaneously on other *Rezurrection* matches, and periodically we would receive reports of their progress or a point that appeared fruitful. Despite the competitiveness of glitching as a practice, at least within the context of chaoticPERFECTION and mapMonkeys, information and community knowledge was actively pooled and shared. After three hours of glitching I retired from the match. It transpired that our *Rezurrection* glitching session was unsuccessful, but one of the simultaneous sessions were successful using a similar hypothesis to ours but in a different location. One of the glitchers within diffuse glitching community, xFINALKILLAx discovered a ledge (an unintended foothold on an environmental object) and a spot (a useful location). The glitch was uploaded onto YouTube on the 26th August, less than three days after the *Rezurrection* had been released (xFINALKILLAx, 2011).



Figure 10 - Glitching *CoD* *Rezurrection*: xFINALKILLAx's boss zombie glitch.

This process can be seen in Figure 5, firstly a boss zombie is lured to the required location, the resulting explosion sends the players into the air, but instead of going OOM the glitcher manages to get caught on the edge of a wall strut. From here they are able to attack the zombies without fear of retaliation. Later within the same tutorial video a new technique is presented, instead of using the conventional boss-explosion process, it is discovered that performing a running jump, and 'laying prone' whilst in the air (a dolphin dive), he is able to reach the ledge directly instead of using the boss zombie. This illustrates the progressive and iterative nature of glitching – that even within a single video a strategy is developed and then improved upon, refining the ways of navigating and manipulating the gamespace.

Conclusion:

This glitching case study highlight a general process consistent with glitching as a community practice:

- The creation of a 'beachhead' in which the game is controlled in a way to best facilitate glitching. This may be done through initiating a local game with specific

match settings, or by utilizing an understanding of the game processes alter the experience of the environment e.g. zombie herding;

- The development of focused and coherent hypotheses that are systematically tested and finessed both within the located community and, as a result of player productivity and networked participatory culture, through the diffuse glitching community;
- Open communication and discussing between glitchers in-game and within extended spheres, developing a kind of community knowledge that maintained across glitching sessions with different practitioners and even different groups e.g. the simultaneous *Rezurrection* glitching sessions;
- A systematic process of documentation and distribution, with varying levels of sophistication and finesse, which in turn distribute glitching knowledge to a wider public community;
- The differentiation of glitches into diffuse subcategories – triviality, strategy, glitch and game-breaker, and the dominance of the game-breaker as desirable glitch;
- A ambivalent approach to the repercussions of glitch distribution, seeing it as a way of generating status, reputation and being of benefit to institutional stakeholders, and a neutrality regarding its subsequent utilization by other parties, such as the public. and;
- A seduction and fascination with the materiality and production mechanics of the videogames that are glitched, and prevalent desire to engage with symbolic dialogue with institutional stakeholders through glitching activity.

While this explicates some of the contexts of what it means to conduct a well-played glitch there is significant additional work that still needs to be done, such as an exploration and categorization of the form and nature of glitches, to better understand what constitute well-played glitches within the community. It is hoped that this article exposes some of the often contradictory significance of the practice of glitching and therefore challenges its reductive reading as simply oppositional, destructive counterplay. While this is certainly one valence of glitching there are many more sophisticated ways that a glitch is well played.

Bibliography

- Activision. (2011 йил 1-September). *MW3 Banning Policy* . Retrieved 2012 йил 12-November from http://support.activision.com/articles/en_US/FAQ/Banning-Policy
- Bartle, R. (2003). *Designing Virtual Worlds*. New Riders.
- Bartle, R. (1996). *Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDs*. Retrieved 2012 йил 8-Jan from www.mud.co.uk: <http://www.mud.co.uk/richard/hcds.htm>
- Bateman, C. (2004). *Designing for Different Play Styles: Demographic Game Design*. Retrieved 2011 йил 12-December from www.cms.livjm.ac.uk: [http://www.cms.livjm.ac.uk/library/Archive/GDTW2004-Publications/ChrisBateman-Designing for Different Play Styles.v1.3.pdf](http://www.cms.livjm.ac.uk/library/Archive/GDTW2004-Publications/ChrisBateman-Designing%20for%20Different%20Play%20Styles.v1.3.pdf)
- Bogost, I. (2011). *How to do things with videogames*. Minneapolis, MN: University of Minnesota press.
- Bowling, R. (2011, November 18). @fourtwozero. Retrieved November 20, 2011, from Twitter: <http://twitter.com/#!/fourzerotwo/status/137733006310903809>
- Bowling, R. (2011, November 18). @fourtwozero. Retrieved November 20, 2011, from Twitter: <http://twitter.com/#!/fourzerotwo/status/137733006310903809>
- Consalvo, M. (2007). *Cheating: Gaining Advantage in Videogames*. Cambridge, Massachusetts: MIT Press.
- DeKoven, B. (2002). *The Well-Played Game: A Playful Path to Wholeness*. New York: Writers Club Press.

- Dyer-Witheford, N., & de Peuter, G. (2005). *A Playful Multitude? Mobilising and Counter-Mobilising Immaterial Game Labour*. From Fibreculture Journal: http://journal.fibreculture.org/issue5/depeuter_dyerwitheford.html
- Dyer-Witheford, N., & de Peuter, G. (2009). *Games of Empire: Global Capitalism and Video Games*. Minnesota: University of Minnesota Press.
- Flanagan, M. (2009). *Critical Play*. Cambridge, Massachusetts: The MIT Press.
- Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.
- Fullerton, T., Swain, C., & Hoffman, S. (2004). *Game Design Workshop: Designing, Prototyping, & Playtesting Games*. San Francisco: CMP Books.
- Hallford, N., & Hallford, J. (2001). *Swords & Circuitry: A Designer's Guide to Computer Role Playing Games*. Roseville, California: Prima Publishing.
- Hunicke, R., LeBlanc, M., & Zubeck, R. (2004). *MDA: A Formal Approach to Game Design and Game Research*. Retrieved November 2, 2012, from <http://www.cs.northwestern.edu/~hunicke/MDA.pdf>
- Ivan, T. (2011 йил 13-July). *Infinity Ward talks up 'rigorous' Modern Warfare 3 QA process*. Retrieved 2012 йил 2-July from www.computerandvideogames.com/311399/infinity-ward-talks-up-rigorous-modern-warfare-3-qa-process/
- Juul, J. (2002). The Open and the Closed: Games of emergence and games of progression. *Computer Games and Digital Cultures Conference* (pp. 323-329). Tampere University Press.
- Kücklich, J. (2008). Forbidden Pleasures – Cheating in Computer Games. *The Pleasures of Computer gaming* , pp. 52-71.
- Kücklich, J. (2007b). Wallhacks and Aimbots How Cheating Changes the Perception of Gamespace. In F. v. Borries, S. Walz, & M. Bottger (Eds.), *Space Time Play: Computer Games, Architecture and Urbanism* (pp. 118-124). Berlin: Birkhauser Verlag AG.
- Kallio, K. P., Mäyrä, F., & Kaipainen, K. (2011). At least nine ways to play: approaching gamer mentalities . *Games & Culture* , 6 (4), 327–353.
- Malaby, T. M. (2007, February 6). *Ganking the Meaning out of Games*. Retrieved June 27, 2010, from TerraNova: http://terranova.blogs.com/terra_nova/2007/02/ganking_the_mea.html
- Myers, D. (2005). What's good about bad play? *IE 2005 Proceedings of the second Australasian conference on Interactive entertainment* .
- Parker, J. (2007). Cheating by Video Game Participants. *Proceedings of CGSA 2006 Symposium* . Canadian Games Study Association CGSA .
- Pierce, C. (2009). *Communities of Play: emergent cultures in multiplayer games and virtual worlds*. Cambridge, Massachusetts: The MIT press.
- Steinkuehler, C. (2006). The Mangle of Play . *Games and Culture* , 1 (3), 199-213.
- Stuart, K. (2012, February 11). *Interview: Schaffer's Millions*. Retrieved from Hookshot Inc.: <http://www.hookshotinc.com/interview-schafers-millions/>
- Taylor, T. (2009). *Play Between Worlds: Exploring Online Game Culture*. Cambridge, Massachusetts: The MIT Press.
- Taylor, T. (2003). Power Gamers Just Want to Have Fun?: Instrumental Play in a MMOG. *Proceedings of Other Players Conference* , 300-311.
- Watts, S. (2010 йил 10-November). *Treyarch Issues Stern Warning to Black Ops Cheaters*. Retrieved 2012 йил 5-November from [www.1up.com: http://www.1up.com/news/treyarch-stern-warning-black-op-cheaters](http://www.1up.com/news/treyarch-stern-warning-black-op-cheaters)
- Wirman, H. (2009). On productivity and game fandom. *Transformative Works and Cultures* , 3.

Yan, J. J., & Choi, H.-J. (2002). Security Issues in Online Games. *The Electronic Library* , 20.

Yan, J., & Randell, B. (2005). A Systematic Classification of Cheating in Online Games. *NetGames '05 4th ACM SIGCOMM workshop on Network and system support for games* (pp. 1-9). New York: ACM.

Yee, N. (2005 йил 14-March). *A Model of Player Motivations* . Retrieved 2010 йил 6-July from The Daedalus Project: <http://www.nickyee.com/daedalus/archives/001298.php?page=10>