

# DeFragging Regulation: From putative effects to ‘researched’ accounts of player experience

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## ABSTRACT

In line with the conference theme for 2013, this paper introduces a research project that is seeking to ‘defragment’ research dealing with player experiences. Located at an intersection between humanities, social sciences and computer sciences, our research aims to achieve greater receptiveness for accounts of games that emphasise “the relationship between the structure of a game and the way people engage with that system” (Waern, 2012, p.1) in the context of game regulation. Working specifically within the context of the New Zealand classification system, which possesses a legally enforceable age-restriction system, the project seeks to strengthen regulators capacity to utilize Section 3(4) of the current Classification Act and support the employment of concepts such as ‘dominant effect’, ‘merit’ and ‘purpose’ when classifying games (OFLC, 2012). Extending an established appreciation within game studies for the way games produce polysemic performances and readings, this paper draws on our mixed methods approach in an exploration of the nature of a players’ experience with *Max Payne 3* (Rockstar Vancouver). In doing so, we illustrate the different dynamics at play in its expression and use of violence - dynamics that fail to achieve expression when games are considered more generally within political and social realms.

## Keywords

Player experience, classification, aestheticisation of violence, spectacle, slow motion

## INTRODUCTION

In common with other systems of media regulation, in New Zealand digital games receive an age-restriction based on the role and depiction of harmful content and its possible impact on players. New Zealand possesses a legally enforceable classification system that

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functions to minimize the impact of the *putative effects* of violence within interactive games through controlling the degree of access and spread of harmful content. In doing so, classification processes serve as an exercise in caution. While classification decisions are validated periodically in assessments of their public acceptability in accordance with social mores (OFLC, 2009), the nature of subsequent interactions between player and game text, once they enter society, are left unexplored. It is the aim of our project to assess such interactions against the variables that determine age restriction. With the narration of violence and its techniques of depiction varying considerably across game texts, we find it surprising that such qualities are portrayed as homogenous both within policy-driven effects research and articulation of regulation practices. Taking the latter process and using the example of *Max Payne 3* (Rockstar Vancouver), the public are presented with a label denoting the outcome of classification, in this case R16. The rating is furnished further by a short rationale describing the game, in this instance as containing “violence, sexual references and offensive language”. However, what this and similar descriptors fail to communicate is the manner in which such attributes are shaped by the characteristics of the game system or the nature of demands placed on the player.

Turning attention to the paradigm of media effects research, it was a decade ago that Anderson *et al.* (2003) declared the debate on the effects of violent video gaming on adolescents as ‘essentially over,’ referring to the claim that violent videogames leads to an increase in aggressive thoughts, feelings and behaviours. Given the verity of this statement one would again expect greater clarity with regard to the meaning of ‘violence’ when apprising the public. Uncertainty remains as to the nature of player motivation and intent during player controlled acts of simulated violence, without understanding the role simulated violence assumes in the ontological foundation of particular game systems, or the extent to which violence is made freely available to the player as a mode of expression or performance. Irrespective of the stance researchers have subsequently taken either in support or denunciation of the view that violent imagery activates a psychic button in players, paradigms of gamic ‘violence’ continue to evolve and synergise with games in the ‘narratification’ (Sørensen & Pødenphant, 2013) of gameplay thus demanding continued attention and explanation.

While ‘gamification’ describes the way something that is not a game can adopt game like qualities, narratification is useful term in the sense that it can be used to describe the increasing sophistication with which game actions are now seamlessly combined with other forms of storytelling. In this paper, we seek to illustrate our approach and level of analysis with reference to *Max Payne 3*, one of the several games that have been examined in our work to-date. *Max Payne 3* provides an interesting example of the dualistic approach described above, as the game employs inter-textual associations with cinematic narrative devices through its use of slow motion or ‘bullet time’. That is, it subscribes to a formal choreography of violence that suggests visually dazzling expressions of graphic excess. Moments that Morales (2003) has characterised as “elegantly blurring the distinction between beauty and violence.” In this instance, a regulator examining *Max Payne 3* use of bullet time is faced with a depiction of violence that can be perceived as 1) evoking the spectatorship associated with cinematic violence and its aestheticisation, but 2) reflects a form of temporal malleability that is quite untypical from real world expression of violence and 3) an expression of violence that is player-activated. Should the application and *use* of bullet time by the player therefore be interpreted as an audacious performance of violence or strategic component of play employed to achieve greater success and accuracy with the most economic use of resources, or both? Such distinctions rarely penetrate or disrupt the agenda of policy-

oriented research or achieve expression from regulatory frameworks. Indeed, on its website the New Zealand *Office of Film and Literature Classification* (OFLC) stipulate that if a game receives an R18 rating, then “the violence in the game has been judged to be as strong as the violence in an R18 DVD or film.” A clear signal to the public that the aggregation of the subjective experience of both mediums is something to be encouraged in understanding classification processes.

In beginning to stipulate the need to set out the configurative qualities of the experience of game play we again confront an aspect of public discourse that more commonly assumes that interactivity deepens the impact, and compromises players further in acts of violence. Indeed, Anderson and Dill (2003) have stated that: “One major concern is the active nature of the learning environment of the video game” which for them makes games “potentially more dangerous than exposure to violent television and movies, which are known to have substantial effects on aggression and violence”. Yet, we argue that both explicit design characteristics driving and articulating action and the underlying rule systems enclosing action may indeed have a contextual role to play in easing apprehensions concerning the relationship between potentially injurious media content and its psychological impact on ‘audiences’ (see Schott *et al.*, 2012). That is, we seek to understand player’s experiences based upon observable and measureable variables of play. We argue that such measures can then explored and interpreted in relation to the semiotic resources made available by the game that both diametrically express the fictional world of the game, but also obliquely assimilates triggers for activity.

## **MULTI-METHOD CONTEXTUALISATION**

Conscious of the impasse that has endured between user-centred approaches (that draw on dynamic concepts of media literacy in defence of media) and positivist approaches that both construct and reinforce connections between games and a myriad of social problems, our project possesses an interest in the foundations of evidence-based or evidence-responsive policy with regard to the assumptions being made about the dynamic systems under consideration and the types of engagement they evoke. To achieve this we seek to counterbalance surveyed and experimental research-findings with textually and structurally analytic accounts of texts/systems that are supported by player’s conscious reflections on game-play, measures of physical responsiveness and quantitative summarisation of within-game behavioural activity. During the course of our project, several cohorts of players agreed to play a single game text over a period of five to six weeks. Participants were aged between 14 and 16 years old, requiring permission from the New Zealand Chief Censor and exemption under Section 44 of the *Films, Videos and Publications Act 1993* to allow player experiences to be studied with games classified R16. The rationale for dipping below the age-restriction was twofold: Firstly in recognition of the ‘reality’ of young people accessing games under age, and secondly, to explore comprehension and experience leading up to the age-restriction set by legislation.

During each period of study, we seek to extract and measure players’ experience as it relates to specific texts, in doing so, also chronicling the player’s role in the production of the text’s material structure. Player engagement is then variously achieved by 1) representing player’s game-play via a project-devised automated method of generating game metrical data based on games’ audio-visual feedback, 2) bio-metric information on players’ experience that is subsequently synchronized with game events, in addition to 3) observational capture of the player as they play and 4) player commentaries that articulate participants response to footage of their own game-play sessions. This final approach to player experience seeks to take heed of Garnham’s (2000) warning against confusing, or

equating ‘use’ with a simplified notion of an ‘active’ audience. The entry or focal points for our analysis is capable of being triggered in several ways, driven variously by classification decisions, key game features, our own play, the fluctuation patterns of players’ GSR measures, or behavioural patterns exposed by our metric system.

Game-play is measured, understood and explored as both a process of configuration and interpretation for the player, that permits the placement of player activity and experiences variously between that of the ‘implied’ player (Aarseth, 2007) and more transgressive player. To date the project has been able report findings on the extent to which play can be 1) characterised as ‘partially informed’ strategic play indicative of degrees of player comprehension (see Schott *et al.*, 2013), 2) the role that anticipation and suspense plays in player experience (see van Vught & Schott, 2012), 3) the manner in which players themselves prioritise and articulate their experience as a configurative activity when recounting play sessions (see van Vught *et al.* 2012), in addition to 4) evaluations of the project’s research design. For example, our approach for generating game metrics that processes the audio-visual output of the game as presented to the player (see Marczak *et al.* 2012). Finally, 5) textual analysis of the fictional worlds of the games examined within the project enable us to provide accounts of the imaginative planes that precede, set off and envelop play (Schott, *forthcoming*).

## THE REALITY OF PLAY

Games have been well described as ‘half-real,’ relating to the interaction with real rules set within the artifice of a fictional world (Juul, 2005). In doing so, the experience of violence is not likely to mimic or simulate experience or exposure to real violence found at a community level. As Wilson and Rosenthal’s (2003) research suggests, this factor alone is likely to mediate the potential impact of games. If we can presume that a game’s reality exists in its function as a configurative phenomenon, this is suggestive of a form of perceptual prioritisation that elevates the ‘playing of a game’ as the principal form of ‘realism’ for the player. In this sense, it is possible to interpret ‘aggression’ (etymologically understood as a readiness to attack or confront) in the context of games as an action that constitutes a motivational force that is adaptive to a system rather than maladaptive, is constructive rather than destructive. Given the underlying parameters set by the rule system of the game, player behaviour becomes harder to characterise as out of synch with context or cues provided (key characteristics of aggression). Furthermore, such activity thus assumes an instrumental quality, defined by its proactive (rather than reactive) nature, motivated by, and associated with positive emotions such as satisfaction and achievement (rather than stimulated and accompanied by fear or anger) (Connor *et al.*, 2004). By giving priority to the ‘game’ as a rule system in analysis, simulated violence can then be evaluated against the degree of secondary gains (Meloy, 1988) potentially achieved from mediated violence, that is, actions and drives that are detached from the conditions of play and more closely allied with maladaptive behaviour and predatory intent (Brown & Pennell, 2000).

In making this argument, it is important that our approach did not preclude the recognition, appeal or enjoyment of a game’s narrative. Indeed, participants in our study showed a keen awareness for the propelling qualities that steer and characterise Max Payne in the case of *Max Payne 3*. As a character he is generally understood to be a ‘hired gun’, adapting his skill set (as a former cop) in contexts that will tolerate his crisis of faith, moral doubts and substance abuse in the wake of his personal losses. While retribution and revenge constitute the past in this third instalment of the Max Payne series, they continue to shape the character’s design. Yet, given the age of our

participants, they had no prior experience of the franchise thus requiring the game to portray the character and his state of mind clearly at the onset of *Max Payne 3*. It was however questionable whether the placement of the character's state of mind at the forefront of the game actually had any subsequent impact on player choices or general approach to play once the game commenced. For example, drawing on the material derived from commentary sessions conducted with participants, the following viewpoints were indicative of understanding and evaluation of the character's disposition:

I'm just making this up here, maybe he feels like he failed protecting someone one time ... maybe he feels he should do better by ummm ... he should try and make up for it by trying his best and save these people

Or

I've seen flashbacks of his past but I don't really know anything about him

If anything, what the game's preface offers players is further indication (having assented to play a game) that the impending game experience is not seeking to present a normative framework of reality. In making this point, 'normative' is used to distinguish real-world from game-world. While the game engages the player in lawless violence, in doing so it subscribes to notions of 'legitimated violence' that Young (2009) identifies as a kind of normative paradox associated with cinematic violence. That is, "the violence of a wrongdoing can be met with violence" (p. 8). This is a sentiment that is reinforced in Max's stream of consciousness throughout the game that typifies his personal philosophy and propels his subsistence (e.g. "*I hope I haven't lost my edge along with everything else*"). As a guiding principle too, it avoids the player having to reevaluate or question whether or not every new NPC encountered should be killed or not. Thus, once the game commences, players give consideration to the role of on-screen directives provided by the game system, for example, "*continue shooting, press left mouse*" (in bullet cam mode), as a mechanism for the initiation of new actions and their subsequent adoption.

The extent to which players later employ directive-instituted actions is discussed in greater detail below with the specific example of 'bullet cam'. However, on-screen directives curiously offered an explanation for player behaviour when it ran counter to the linear thrust of the game. For example, when a player was questioned as to why he turned the character around and ran in the opposite direction from the action, his response stipulated that:

It told me to search for clues, I assumed it meant search more carefully everywhere

More generally during play, players were seen to give proxy agency to cues such as the virtual cross hair that served a number of behavioural functions. At the beginning of the game it stipulates and teaches the player that in aiming with the mouse "*the reticle turns red over your target*". In doing so, it denotes the certainty of action, that is, confirmation that a shot fired will hit an enemy whilst illustrating where on the body it will strike. This technique not only permits the player to act with increasing levels of accuracy, but can also determine restraint and economy in expending ammunition (an expression of players' game schemas relating to the way ammo can be a valuable and limited commodity). The cross hair further serves to distinguish enemies from bystanders, as it remains white in the case of the latter, determining that extras to the action become

‘deniable’ content (Leino, 2007). Beyond this, players recognised and identified that the cross hair presents itself as a white cross when an enemy has been killed suggesting restraint in the face of an accomplished action and indicating little need to shoot fallen enemies by way of certainty and extra care for character preservation. Comments such as “you know not to shoot anymore ... really cool,” were indicative of the wider relationship Klimmt et al. (2007) have already demonstrated between causal agency (effectance), control and enjoyment.

Finally the cross hair, as an on-screen cue, also works effectively to bridge non-interactive and interactive moments, placing players in the midst of action hero sequences indicative of heroism. Very early in the game, *Max Payne 3* is given the appearance and feel of a movie, as the player is folded into a moment of daring and ‘astonishment’ that holds “little respect for either seriousness or rationality” (Rutsky and Wyatt, 1990, p.14), typical of displays witnessed in ‘cinema of attraction’ (Gunning, 1993). Finding himself a floor above kidnappers seeking to escape with the client under his protection, Max (not the player) dramatically opts to break up the stand off below by jumping off the balcony, sliding down a roof and landing in the pool below. In doing so, the appearance of the cross hair in the middle of this action sequence signals the need for input from the player, requiring the player to complete the semiotic chain in this excessively stylised scene. We read this moment as narratification, as the player is required to perform an action whilst in motion. There is a requirement to aim at the kidnapper holding his hostage in front of him, whilst also accounting for the duration of bullet time and the dimension of the surface the character is using to slide down. Furthermore, as ‘undeniable’ content (Leino, 2007), the player’s input is required to avoid failure, that will merely prompt repetition of the scene until either success is achieved or the player gives up. In such moments it is simpler to give attention to the salience of the image, its stylisation and the manner in which it connects up with other images (e.g. the cinematic action hero), rather than account for the role and position of the playing self, played subject and how the particular action scripts of *Max Payne 3* come together in a blend of cinematic and game action. In the remainder of this paper we will develop our account of some of the other key elements of player experience with *Max Payne 3*, attempting to contextualise them in the terms described above whilst also drawing on our various data sources.

### **Reading through Violent Style**

*Max Payne 3* is renowned for its use of bullet time. In this mode of play, players are given the capacity to slow time in the surrounding game world, leaving their input unaffected (shooting in real time). Bullet time has achieved crossover appeal and cinematic expression in films like *The Matrix*, becoming a registered trademark for *Warner Bros*. Within *Max Payne 3*, bullet time also forms a part of the ‘shootdodge’ manoeuvre, Max Payne’s signature manoeuvre that creates a temporal distortion as the character dives through the air. Activation of bullet time or shootdodge sees the same world momentarily and temporally carved up, as enemy actions are witnessed via a perceptual alteration of time, allowing the player to evade bullets, aim accurately and return fire in real time. In the third iteration of the game Max is also able to aim 360° and dispatch remaining enemies from the ground, before getting up.

Peebles (2004) has argued that the pervasiveness of slow motion as standard cinematic practice, since its cultural impact with Arthur Penn’s 1967 film *Bonnie and Clyde*, has meant it “has lost much of its power to shock or disturb” (p. 45). Yet, in direct contrast to this argument, the Australian *Guidelines for the Classification of Computer Games* (2012) still demonstrates its need to stipulate that the impact of games ‘may be higher’

when a game-play sequence contains ‘slow motion.’ There is a distinction that needs to be drawn out here separating distortion of perceived time from the aestheticisation of violence that holds relevance for *Max Payne 3*. Beginning with temporal distortion, we find a pre-existing association between slow motion and violence that extends beyond cinematic application. The phenomenon of ‘tachypsychia’ (Ayoob, 1983) is evident in perpetrators, victims and witness accounts of intense violent, or life or death moments describing perceptions of a temporal subjectivity during such experiences - A slowing down, speeding up or heightened awareness of time. In tachypsychia, Haanstad (2009) argues: “The fractal traumatic moment penetrates the daily collective construction of time [or ‘social time,’ (Munn, 1992)] through an usurpation of ordinary temporal reckoning.” (p. 74). It describes how rational consciousness can therefore be ruptured, stretched out in moments that offer a challenge to the ‘vivid present’ (Schutz, 1962) whilst also stressing the significance of mortality. This phenomenon fits with the *performance* of simulated violence in *Max Payne 3*’s bullet time and shootdodge modes, in which the player actively manipulates time and space to exert their advantage over Max’s adversaries. Such situations as when Max being outnumbered is accentuated and/or the player reasonably foresees the ambush awaiting him in the concealed spaces ahead of them. As players confirm:

It gives me a lot more reaction time

I like to use it when you know you are going to get shot or you need time to carefully pick them off and not wasting your own clip and having to reload at a crucial moment

It was also possible to confirm the frequency and importance of both modes of play in player’s strategic approach to playing *Max Payne 3*, as bullet time and shootdodge modes are directly triggered by the player, by pressing ‘left shift’ and ‘space bar’ respectively. It was therefore possible for the project to note and examine each time a participant opted to trigger these modes during the course of their play via the automatic detection of key-strokes and generation of storyboards (x10 images per key stroke detection). Figure 1 illustrates typical examples of bullet time activation connected to strategy. For the majority of players, bullet time constituted a core tactical and strategic tool, the need for which was seen as built into the game, for example, “its probably not worth aiming for the head if you don’t have bullet time, because you’ll probably get shot up pretty bad,” but occasionally also provided a source of frustration for players too who pressed space bar seeking to jump in real time, but unable to, having to do so always in a protracted fashion.



**Figure 1: Automatic-generated Story Boards (4 out of 10 Extracted) Illustrating, Left Shift Use to a) Exit Cover b) Enter New Room c) When Max Receives Wound**

The comments provided by players therefore appear quite distinct from the relationship that has been formed between slow motion and the aestheticisation of violence - a relationship was cemented during the most unlikely of events. Described as the “most influential filmmaker of the last half of the 20<sup>th</sup> century” (Mullin, 1995, p. 12), Abraham Zapruder was responsible for the infamous footage of JFK’s assassination. Mullin describes the captured footage as having “established a new code of reality for the representation of violent death”, a code that included the “exploding, spurting wound” (ibid.) in slow motion. By the time the public eventually got to see the footage in 1975 it had been manipulated by film technician Robert Groden, who had “slow[ed] the speed, isolated the head of JFK on frames depicting head shots, enlarged some parts of frames ... and produced a film version with devastating visual impact” (Wrone, 2003, p. 65). Even prior to its release, in discussing *Bonnie and Clyde*’s climax in which the lead characters played by Warren Beatty and Faye Dunaway “rolled and jerked in gory slow motion as a multitude of bullets sprayed their bodies” (Peebles, 2004, p. 45), director Penn claims that “even a piece of Warren’s head comes off, like that famous photograph of Kennedy” (Labarthe & Comolli, 1972, p. 169). Protracted killing has since become essential to the thrill of violence in the action film. In doing so, it represents an aestheticisation of violence, in which exhilaration turns into examination, a visceral enjoyment with an indefinable allure. As Bruder (1998) acknowledges “violent images encourage us to take pleasure in the spectacular representation of other people’s pain, [but makes] our fascination with them is difficult to justify.”

By contrast, the stylistic exploitation of slow motion in *Max Payne 3* does not suggest a similar account of the pleasures of the spectacle. Indeed, Brooker (2009) even goes so far as to claim that “videogame aesthetics are associated with empty spectacle” (p. 124). The role of bullet time or shootdodge is to permit the player to manipulate what Grodal (2000) has termed ‘game-world-generated time’ providing the option of manipulating time in order to manage challenging odds, or afford the player a means to survey the scene as they enter unexplored and obstructed spaces. In doing so, the game provides the player with an effective resource. Bullet time and shootdodge requires the player to remain alert



and function effectively in a moment of game-world deceleration that provides an advantage for only a limited interval of time. The sentiment that “living is time, dying a moment” (Pescador, 1973, p. 146) in the context of the subjectification of time, is particularly stressed too in the ‘last man standing’ mode of *Max Payne 3*’s game play. Triggered by a significant loss in health, and on the brink of screen-death, Max is placed in a duel-like bullet time face off scenario elevating the encounter for the player.

While the employment of bullet time or shootdodge does not necessarily heighten the *product* (or outcome) of simulated violence, it may be possible to argue that it serves to aestheticise the *act* of simulated violence, by allowing the player to choreograph their actions and perform them with style. As one participant stated: “I like it when I jump, I feel like such a badass ... it’s like *The Matrix*, so cool.” Player exposition serves to liken the mode of play to cinematic representation. Yet, in contrast when examined against its sibling medium (from a classification perspective), for example, the opening sequence of Oliver Stone’s *Natural Born Killers* gives us slow motion embedded in six minutes of violence containing ‘rapid-fire shifts’ in a montage of editing, shots and film formats that disorientate and position the viewer variously as killer, victim and instrument of death (Young, 2009). By contrast *Max Payne 3* confines itself to the use of one cinematically derived motif in slow motion, in doing so, diluting its aspiration to offer the mediated truth of an action movie hero, through the consequences and demands placed on player performance.

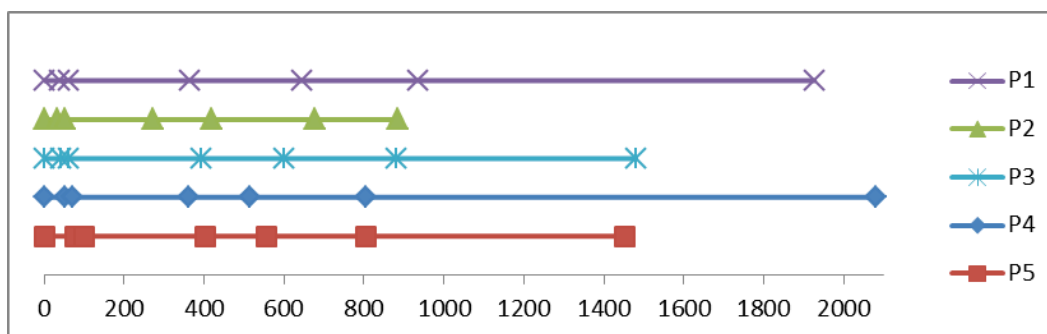
### **Bullet Cam**

What has been described as the “brutality of the camera eye” (Witcombe, 1975, p. 11) when it comes to representation of the pain and demise of the ‘other,’ can however be more readily related to *Max Payne 3*’s bullet cam feature. Segmenting the game experience for the player, bullet cam is suggestive of a celebratory moment or climax point at the end of a section of play when Max shoots the last enemy within a specified area. Unlike bullet time, the effect of bullet cam is an elaboration, exaggeration and aestheticisation of an action that is performed many times before within active play in order to create a conscious spectacle. Not only is the trajectory of the bullet shown in Zaprudian detail, but the player can also slow the bullet down and trigger the flight of further bullets without recourse to aim or accuracy in order to extend the scene and add to the physical annihilation of one adversary above all others. While pleasure may arise from the player’s achieved and controlled spectacle of this play, it comes at the cost of the tactical disadvantage of wasted resources. Rutsky and Wyatt (1990) might provide insight into how such a feature should be approached as they outline how ‘non-serious pleasure’ or ‘fun,’ “cannot be figured in terms of depth ... never ‘anchoring’ itself in the depths of meaning, character identification or imagistic fascination” (p. 11). Bruder (1998) further describes such moments as a call towards style or effect and away from ‘truth.’ Indeed, the further the player indulges in the extension of the bullet cam moment, the more it draws attention to the boundaries of gaming mechanics to represent further deviations from human-like motion. The increase in the ‘obviousness’ of what is happening even diminishes the suggestion that it is perfectly rendered imitation or shares inter-textual familiarity with the stylized violence employed by directors such as Woo.

Bullet cam thus offers an interesting proposition for the regulator, as the camera remains focused on the instrument of screen death not its issuer, following its trajectory and creating a position for spectatorship that does not reflect the point of view of the player’s character. A disconnect therefore occurs from the protagonist while maintaining the players input and manipulation of the scene. The analytics of mediation (Chouliaraki,

2006) at play in *Max Payne 3* determine that the agency of the action is twice removed from the player even while the movement visualised on screen is a direct effect of weapon fire. As referenced at the beginning of this paper, on first encountering ‘bullet cam’, the player receives an on-screen prompt to ‘*continue shooting.*’ For most the prompt to indulge in bullet cam remained unproblematic, while only one or two did express doubts about the scene. For example, “it made me feel a bit uncomfortable at first.” Boltanski’s (1999) double movement of ‘aesthetic pleasure’ is brought to mind by participants’ distinctions between reaction and response to bullet cam. Firstly, the reactions expressed by some, suggests Boltanski’s initial movement that of ‘horror’ of the amplification of ordinary actions and more involved perspective. Yet, its extension by some, by virtue of affording it greater time, attention and repeated shots shifts bullet cam quickly towards impartiality and shift into the second movement of pleasure. The enemy’s body contorts, folds and bounces in a manner suggestive of a rag doll. What is initially suggestive of brutality, quickly tips over into an object of play that can be manipulated and pushed around using the only means made available by the game – a bullet. As one participant, commented, “you see how the body moves ... it’s just funny”. It would seem that when fully realized during play, bullet cam ultimately forsakes the codes of presentational truth established by the game in its normal viewing modes. By placing the representational properties of the game under scrutiny in this way “the spectacle obliterates the humanitarian quality of suffering” (Chouliaraki, 2006, p. 263).

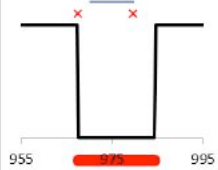
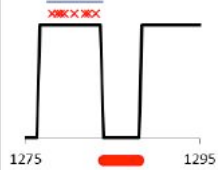

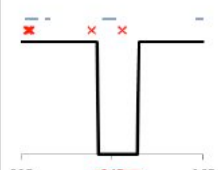
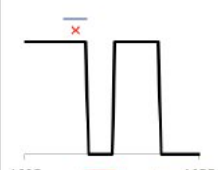
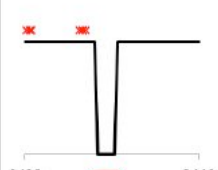
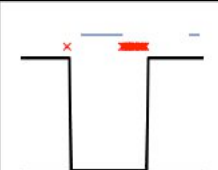
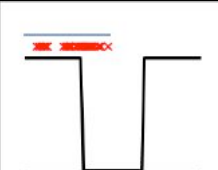
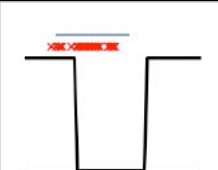
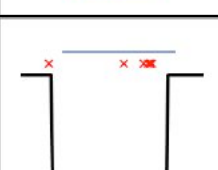
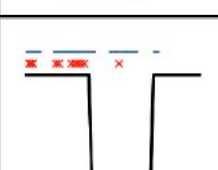
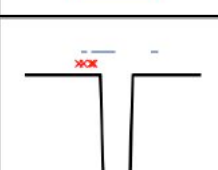
In contrast, to bullet time and shootdodge, bullet cam and last man standing modes of play are triggered by the game system, indicative of the state of play or outcome of play (low health and successful completion of a section respectively). In order to be able explore the nature of player behaviour in the context of bullet cam moments for example, it was necessary for us to find a means of automatically detecting each occurrence in which bullet cam is activated during each session for each participant. This enabled assessment of the degree to which players opted to indulge in the mode of play and ‘continue shooting’ beyond the required final shot over a series of bullet cam moments. That is, it was of interest to the project to determine whether participants who indulged in bullet cam, would continue to do so or if their engagement was short lived. In order to achieve this, the automatic detection of the slow motion sequences triggered by the game system posed a more challenging task, in the light of the fact that the project does not have access to the game’s source code (most commonly manipulated to generate game metrics). Our solution was to exploit the audio and visual feedback provided to the player during the course of play in order to produce metrics on player behaviour. The rationale for developing an approach to metrics based on audio and video feedback (see Marczak *et al.* 2012) is connected to project’s use of commercial game titles, released during the course of the project. Audio and video streams contain information that can be exploited in order to segment hours of game play footage denoting moments such as cut-scenes, instance of slow motion and other revealing game play elements (e.g. menu activation). In this instance, with *Max Payne 3*, we implemented a method of on-screen logo detection more typically applied to analysis of television broadcasting (Santos & Kim, 2006) where the presence or absence of channel logos represent an efficient way of segmenting programming schedules (e.g. logos are often removed during commercial breaks). Similarly, because bullet cam and last man standing limits interactivity (e.g. in last man standing mode the player can only aim), the HUD is removed from the screen in these moments. We therefore devised a means of detecting the presence or absence of the HUD on screen.



**Figure 2 – Game Segmentation Based on Cut Scene Detection for Chapter 2 of *Max Payne 3***

The absence of the HUD provided an effective first filter (see Figure 2) with which to identify a number of game moments in *Max Payne 3*, for example, modes of play such as last man standing, bullet cam or screen death in addition to cut scenes or player use of option menus. In order to determine which moment is being identified by the absence of the HUD, the process automatically produces storyboards comprised of ten screen shots for each section. Combining this process with keystrokes it is possible then to match moments such as bullet cam, with player activity (left and right mouse clicks) that highlight the extent to which players slowed the bullet down (right click) or continued shooting (left click), or simply let the scene play out or watched (no click).

Table 1 (below) illustrates three moments of bullet cam mode for four participants. The black line represents the presence (1) or absence (0) of HUD on screen, the red line below flags instances where as bullet cam has been detected. The red crosses represent the participant's left clicks (shots) and represent participation in the bullet cam scene, with the blue line also representing whether participants opt to right click hold, thus slowing the camera/bullet down. What we see above in the case of P1 and P2 (above) are examples of two players who followed the tutorial to the letter, following the on-screen prompt and shooting a second time only after bullet cam was activated. Yet, in subsequent bullet cam moments, both ignored the option to 'continue shooting.' Indeed, it was P1 in this illustration that expressed doubts about the bullet cam mode stating "it made me feel a bit uncomfortable at first." For him, the nature of the first movement (in Boltanski's double movement of 'aesthetic pleasure'), led to a course of action that meant avoiding elongating the bullet cam scenes in subsequent play. Thus, avoiding the feeling that "it enhances the cinematic quality I suppose, but it is also a bit graphic, it's a bit strong." In contrast, the shift into pleasure as described above ("you see how the body moves ... it's just funny") is representative of P3, who can be seen engaging heavily in these moments of opportunity. Between these two poles we also see P4, who followed the tutorial prompts, but whose engagement in these moments dwindled as play progressed.

	Tutorial		Last enemy of Chapt 1		Last enemy of Chapt 2	
<b>P1</b>						
<b>P2</b>						
<b>P3</b>						
<b>P4</b>						

**Table 1:** Bullet Cam Activation & Player Participation

## CONCLUSION

Our intent for this paper was to begin to introduce our approach to researching player experiences with games that assimilate violent content, in doing so, reflecting on the factors that mediate violence in terms of both spectatorship and involvement of the player. The aim was to outline and acknowledge not only the complexity and variation in the concept of violence employed within games, compared to its homogenous treatment as an object of legislatively determined warnings, but also begin to investigate more fully its different forms of expression in relation to its function and role in terms of the demands of the game. The role of the gaming apparatus as a mediating factor in understanding game simulated violence is currently underplayed, undeclared or avoided in order to avoid cluttering discourses of concern and protection. While focusing here on a single text in order to avoid aggregating our findings and in order to illustrate our focus and level of analytical interests, the wider aim of the study is to show more comprehensively how games penetrate elements of reality only to re-appropriate them and reproduce them in fragmentary modes assembled under new codes and laws. In doing so, seeking ways in which game studies understanding of these new codes and laws, both theoretically and methodologically can assume a greater role and attain greater

consideration in regulatory processes as a mode of public discourse dictating wider understanding of games.

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