**Level Design and Cinematics Pipeline in Gears of War (2006)**

 I would like to suggest that cinematics (cinematic cut-scenes) in video games are not simply a vehicle for progressing narrative, but also play an important function for level design, whereby they allow the player to appreciate and understand elements of mechanics, aesthetics and environments in the game. Cinematics tie a level together while also connecting levels. It is standard in video games to use cinematic cut-scenes as segues between levels and they can help the player to properly situate themselves in a new environment or with new characters and equipment. As such, this report will be concerned with a full breakdown of the Act One cinematic cut-scenes (Levels 1-5) from Epic Games’s Gears of War, released in 2006 on Xbox 360 (later with a PC release). This report hopes to splay out the structure of the cinematic cut-scenes in Gears of War and understand how they operate and interact with elements of gameplay, especially as it concerns level design. Finally, at the end of the analysis, I will use select documents generated by Epic Games and other agencies from within the video game industry to cross-reference my findings and draw some broad strokes conclusions about the game developer’s intentions with cinematics for the game, the development within that pipeline and how my findings either confirm or refute those statements and facts.

 The opening cut-scene for Gears of War operates as a trailer for the game’s narrative. Extreme long shots and mobile framing capture historical events that help to situate the player in the world of the game. Human characters from a planet named Sera, have been waging war for millennia never to find real peace. When the destruction reaches critical mass an underground army is unleashed that recalls the Morlocks of H.G. Wells’s 1895 novel, The Time Machine. The army are called the Locust Horde and led by a clandestine matriarch named, Myrrah. Myrrah provides voice-over narration for the opening cut-scene. She judges the humans of Sera to have reaped what they have sown. The COG army is a united front for humanity against the Locusts and having no options left assumed the responsibility of leveling major cities with satellite laser strikes. Few survivors now roam the wreckage hoping to discover an oasis where they might rebuild their civilization. The remaining COG soldiers must band together to put an end to the Locust threat. This opening cut-scene is not consistent with other cut-scenes in the Act One of the game and serves mainly as a way of establishing the stakes of the drama that will play out.

 Upon starting the game, the first cut-scene is shot from first-person perspective. The fade-in leads to realization that the gamer is in a prison cell. Dominic Santiago is Marcus Fenix’s squadmate from previous battles. He has shown up to spring Marcus loose. General Hoffman has overruled the orders of the interim military government in order to get all experienced soldiers on the frontline for a final offensive – Marcus Fenix has received a pardon from the general. It is a shaky camera (handheld style) that constitutes the frame leading the player to feel interpellated (hailed) into the scene. As the door is cut open by an engineering droid, J.A.C.K., Dom enters the cell. The player could be led to believe that the game was a first-person shooter at this point. The perspective of Marcus appears to be that of the player, however, Marcus moves into the frame. The shaky camera effect and character blocking seeks to have the player feel as if they are part of the squad – a transcendental squadmate. There is some confusion when Marcus becomes a surrogate for that effect and the gameplay actually begins as a third-person shooter.

 The scene now opens up with the each room in the level’s environment becoming increasing larger until Marcus and Dom have reached the outside courtyard. The opening cut-scene helps frame the goals of this first level – to escape the confines of the prison. Each leg of the journey away from the environmental context of the first cut-scene marks a transition – there is more space and more light. Once outside the prison, Marcus and Dom find the most room to work with. The cut-scene helps direct the player allowing them to feel less swaddled with each new technique that the game teaches them and with each new item that they add to their inventory. This first level operates well as a tutorial and the cut-scene plays an integral role in marking out the process of development for the player. Generally, Gears of War has its levels split into Acts and Chapters. To speak of a chapter is to indicate a discrete level and multiple levels constitute an Act. The end of this first level and the beginning of the next uses a cinematic cut-scene as transition

The beginning of the second cut-scene is much like the trailer shifting constantly between extreme long shots framing the monstrous Corpser emerging from the ground in the prison courtyard to extreme closeups of Marcus and Dom’s feet running toward the King Raven combat helicopter that is landing to retrieve them. This intercutting creates great dynamism and confirms the achievement of escaping the prison and thus the end of the first level. A fade-in has Marcus and Dom riding in the King Raven. They are now joined by Lt. Minh and Private Anthony Carmine. The four have become the new Delta Squad. The camera frames the scene much in the same way it did the opening of the first level’s cut-scene – mobile framing seeks to interpellate the player into the story and the action. The shaky camera emulates the movements of a person’s neck and head tilting and bobbing to gain vantage over visual information. Ephyra City is in ruins and the cut-scene seeks to establish the geographical labyrinth of refuse and scraps that await Delta Squad on the ground. A low angle shot frames General Hoffman’s feet as the King Raven comes in for a landing. This framing technique in the cut-scene allows for the general to be established as a superior figure in the game. Despite Marcus’s professed animosity toward the general, the cut-scene would indicate that Hoffman is beyond reproach and will not be challenged during the game.

Hoffman declares that Delta Squad must find Alpha Squad who had gathered intelligence on the Locust catacombs. A light-mass bomb is being developed to traverse the underground network and finally wipe out the Locust hive. The cut-scene shows Delta getting ambushed by more Locust grubs (foot soldiers). The grubs are working their way down a long staircase. The soldiers call to each other urging to find cover. The camera continues to assume the transcendental squadmate position. The shaky camera also assumes a ducked position behind sandbags. The critical mechanic in Gears of War is to take cover and shoot from cover. Enemies in the game are devastatingly powerful, even on the easiest level of difficulty, and Epic Games exploited the cover mechanic greatly. The cut-scene teaches the player that this second level will be full of up and down staircases as well as requiring the player to take cover when ambushed. The themes of the level are translated through the cinematic cut-scene. In this second level, taking staircases up can provide a huge advantage over certain enemies on levels below. When Delta first locates Alpha Squad, they are on a lower level. Delta must work their way down a series of stairs to reach the corpses of fallen soldiers and progress the narrative.

The following cut-scene ends the second level and is punctuated when Carmine throws a piece of Alpha Squad’s equipment down into an emergence hole. The ascending/descending theme finds its closure but marks a meta-narrative element of Gears of War. The cut-scene continues with a similar directing (framing) and editing style as previous cut-scenes, however the narrative makes it clear through dialogue that Marcus feels there are multiple courses of action to take and that he is unclear which will be best. This narrative element in the cut-scene is a prelude for one of the features of Gears of War that has its first impact in this third level – to choose paths and break up Delta. Choosing the left path is for aiding those that take the right path and vice-versa through the strategy of flanking. This is a common dynamic in Gears of War games. These moments add an element of difficulty and create tougher levels within levels of the game. Flanking becomes the major theme of the third level when a Troika turret requires the player to flank to kill the gunner who is cutting the rest of the squad to shreds. So far, it is clear that the cut-scenes not only have the traditional function to progress narrative and create segues for changing environments in the gameplay but are also extremely functional for revealing themes of the level design.

Once again, the following cut-scene marks the end of the level and acts to transition into the next level. The shaky camera and mobile framing still seek to emulate the phantom transcendental squadmate that represents the player. Carmine is reloading his jammed gun when a distant sniper hits and kills him. It is unclear what the theme of the level is at first. Perhaps. the sniper represents an ambush and therefore the player should take up an entrenched position. Perhaps, it is a warning that the squad is going to be flanked. It turns out that both are true, however, the true function of the cinematics is to mark the level as one where new NPC squadmates will join Delta. Private Augustus Cole is fighting off Locust grubs on his own in a courtyard. Delta enters the building and bails him out. He joins Delta. There is a cut-scene to introduce Cole to the Squad. Cole is a much more impressive soldier than Carmine which would seem to indicate that the levels will become progressively more challenging. His presence on Delta and the cut-scenes for the level do not indicate a particular design for the level except for a suggestion that upcoming levels will be more advanced. That is to say, the cut-scene marks general difficulty progression for the levels in the game.

 The hints to level design from the cut-scenes are fruitful once more. Almost, immediately after Cole joins Delta, a new enemy class is introduced. Delta is swarmed by wretches. A new power weapon, the Hammer of Dawn, is also introduced at this point and then used on two new enemy classes almost right away. Then the exteriors become interiors, spaces tighten and there is a sense of returning to the claustrophobic conditions of the opening sequence in the prison. The level design creates a labyrinth of narrow passages. New weapons must be honed against multiple enemy classes. The end of the narrow passages leads a long staircase with Troika turrets at the top on the roof of the building. The final battle involves enemies in the air as well as on the ground. This end of level battle is a culmination of all the combat elements leading up to this point. Then there is a very lengthy and dramatic cut-scene. The members of Alpha and Delta squad convene but are ambushed by a swarm of Locusts led by General Raam. Raam murders Lt. Minh in front of his squadmates. Myrrah provides a voice-over narration and is now identified as the leader of the enemy Locusts. Epic Games chose not to end the first round of levels with a boss fight against Raam but instead used him as a teaser. It is a clever strategy for building drama.

 The end of the cut-scene starts a new level – the boss level. Although, Raam was not part of a boss fight, the cut-scene that starts the level introduces the boss, The Berserker. The Berserker is tough to beat and she kills with one hit. Killing the Berserker is strategy-based like most traditional video game boss fights and there is a time limit added to create more intensity and reward the skilled players. The cut-scene to end the first act is not as dramatic as the teaser for Raam, however, it produces closure. The Sun is setting and the newest Delta Squad member, Lt. Baird, makes mention that it is getting dark and that they should find a safehouse quickly. The color scheme for the second act levels changes marking a dusk transition for narrative progression. The next cut-scene introduces a new heavy enemy, The Boomer. The cut-scene shows how the Boomers are closing in on Delta and that Delta is getting pressed into a tighter and tighter space. In effect, the cut-scene reveals the game environment to the player for the level, however it operates more to showcase the spectacle of the Boomers. In fact, very little is revealed of the theme or structure of the level design through this Act Two cut-scene. As the levels progress in the second act, day turns to night and enemies are progressively more difficult to target. The cut-scenes move the narrative forward but highlight the city becoming darker. This transition is relevant as the challenge in the final levels of the second act will be to avoid being killed by the bat-like Kryll which only attack when the player is standing in dark places. All of the levels in Act 2 are designed around the strategy of moving quickly from lit up area to the next. The challenge comes from being pinned down in tight spots. However, cut-scenes have become more generic and predictable. They operate less in foretelling elements of level design as they do in summing up narrative development. Something critical was lost moving from the functional cinematics of Act One to the traditional cinematics of Act Two.

Act Two ends without a boss fight – instead there is a kind of survival round. The cut-scenes in Act Two begin to have a looser association with the level design and provide little indication about how the level is constructed and what the goals are. By Act Three, the levels are still at nighttime and Delta Squad must make it into a factory to find the resonator that will have the mapping data. Act Three levels lead Delta into underground catacombs that the Locusts use to reach the surface. Cut-scenes become shorter and less creative. The cut-scenes still function to sum up key elements of the levels that preceded them and focus on narrative progression. They cease to intelligently foretell elements of the level design for upcoming levels. Something has been lost. The cleverness required to beat The Berserker is replaced by Act Three’s Corpser which requires the simplest of methods to be defeated. Cut-scenes operate as a means of showcasing action and monsters – a cinema of attractions mode of representation. What happened to the cinematics in Gears of War? How could such intuitive and creative directing that married narrative with level design and gameplay be reduced to pedestrian displays of spectacle and bookmarks for narrative progression?

 The cinematics director for Gears of War was Greg Mitchell and he created a document to trace some of the development and goals of cinematics in the first three Gears of War games. Mitchell arrived at Epic Games with more than fifteen years of experience in television production. He has almost a decade of experience in video game cinematics and has been with Epic Games for most of that time working on a wide range of their game titles. Mitchell commented that one of the initial challenges was that when he arrived Epic Games was a much smaller company and their Art Director had been handling the cinematics up to that point. In fact, there was no cinematic team per se. In addition, 90% of cinematic animation was outsourced. Mitchell pushed hard for a focus on real-time next-gen cinematics. He endeavored to use filmmaking techniques in the game cinematics. Gears of War was slated to have thirty minutes of cinematics in twenty-two narrative scenes. In addition, the team planned several smaller sequences, however, there was a relatively short time to finish when Mitchell arrived (three months only!)

 Mitchell adopted an “organic” production style where there were no storyboards or pre-visualization, the script was a mere blueprint and the director could make major alterations during the production process. One goal for the cut-scenes was to have no “talking heads” moments. The characters were to be moving and interactions were to be dynamic. The handheld (shaky camera) feel was incorporated into the cinematics to match what had already been planned for gameplay. There was a sense that the cinematics would accentuate a documentary “gonzo” style. Many cut-scenes were re-cut to be more traditional and Mitchell comments that the shaky cam style didn’t always work as intended. The larger cut-scenes were intended to have a more traditional cinema style in direction and editing.

 The performance of a character in each cut-scene was a combination of the work of the voice-actor, motion capture actor and the animator. Multiple takes were done in order to finesse the character blocking. Camera motion was intended to feel organic. The most interesting piece of information in Mitchell’s document is that there was no pipeline and he felt that one was needed. He required a manager for Cinematic Production but one was not assigned for Gears of War. This made it difficult to track the status of scenes and there were no defined naming conventions for the team to follow. There was also no targeting for milestones. The team was flying by the seat of their pants, as Mitchell admits, and this also led to syncing issues for cut-scenes. The handheld shaky cam style only compounded the timing issues and this is why eventually the team moved to more traditional filmmaking styles for directing and editing. Mitchell was relieved when the sequel game, Gears of War 2 was assigned a greater budget, larger team and longer timeline (most areas were doubled). For the sequel, Mitchell corrected numerous oversights – they produced a pipeline, included previsualizations, and outsourced some areas to avoid bottlenecks. Tanya Jessen was added to the team as a production manager.

 In Arthur Gies’s article at polygon.com (“Beauty Deconstructed: The State of Gears of War”), Gies explains that Gears of War was a project that barely came together in time for a holiday release in 2006. The game’s cinematics may have been the component that was most rushed where many cut-scenes were assembled last minute and often using a technique Mitchell dubbed, “Frankencine”. The technique describes the process of cut-scenes reusing motion capture from previous scenes. Audio gaps were stitched together with ambient combat noise and character shout-outs from the voice actors. The short timeline to complete cinematics and the lack of a pipeline is very revealing for my own conclusions about the cinematics in Gears of War and how they affected level design – in the end they didn’t.

 It is difficult to conclude whether Greg Mitchell intended to make the cut-scenes rich and functional for gameplay and level design. It is obvious that they operated as such for the first levels of Act One, but after that everything slipped into slapdash traditional production. Mitchell admits this but does not comment on what the original intentions were. It seems that from his emphasis on “organic” filmmaking that one might conjecture that the effects in Act One were not a fluke but were intended… yet without a pipeline to follow and without previsualizations, it would have been very difficult for the team to trace their development in order to maintain some of the function that the cut-scenes originally had as they moved on in the game. There is also some nuanced readings that would lead one to believe that Mitchell intended the rich functionality of cut-scenes as teaching tools for level design, however, his superiors had a timeline to keep and lacked interest in new approaches. Mitchell remarks several times that there was a push from the higher ups to move back to more traditional modes of representation and filmmaking. It is clear that a pipeline for cinematics (like that employed for Gears of War 2 – see attached) may have allowed Mitchell’s team to continue incorporating functional cut-scenes into the level design. It is all too easy for game theorists to continue with their trend of separating narrative from ludic elements of games when the two are in fact parsed and kept separate. Mitchell’s ingenuity for making cinematics functional to level design and gameplay hints at a wealth of untapped potential in video games. Regardless, of whether Mitchell intended such rich functionality, he did create it successfully for the first act of Gears of War. The important lesson here is that a pipeline is necessary for successes to be tracked, failures to be identified, trends to be reinvested in and schedules to be kept tight. A pipeline also has the potential to allow different departments to integrate their development creating a more holistic approach to game development. Gears of War has proven to be one of the most successful game franchises of all time and perhaps one can hope to see some of the high points re-emerge in new sequel titles.

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\*cinematics pipeline chart for Gears of War 2 comes from the Mitchell document.