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Maximum Convergence

“The technological line between video games and action movies has become so tenuous that even the nimble Lara Croft may have a hard time detecting it” – so reads a recent USA Today article (“Games, Movies Share”). Indeed, given the latest flurry of new action motion pictures based on computer and video games, it would appear as though we are headed for an ultimate convergence between the two media into a cataclysmic Big Bang giving birth to a new interactive medium. Coming from the other direction, as computer technology and graphics advance at an astonishingly rapid pace, we see computer and video games borrowing more from movies, incorporating such elements as flashy cinematography and wild camera angles, while game designers supplement atmosphere with original soundtracks and stronger narrative plots that bring more to games than just mindlessly blasting the opposition into a digital oblivion.

Max Payne, designed by Remedy Entertainment, is one such game featuring all of the above elements and appearing at the forefront of this seemingly unavoidable collision. Serving as a springboard for the future of entertainment media, *Max Payne* might appear to symbolize the upcoming conglomeration of two massive multi-billion dollar industries, signifying a revolution in the entertainment industry, as well as new radical changes in how society interacts with its cultural media. The consequences of such a revolution are staggering. However, we are not heading toward an age where there will be no distinction between video games and movies, but rather, both media will continue to thrive together, existing in a symbiotic relationship where both forms ultimately remain unique and distinct yet intertwined and interdependent upon each other. Ironically enough, *Max Payne*, then, does not represent the apparent convergence of

media, but rather, proof that new media does not replace others, it simply remediates them and its boundaries actually become more specialized and defined as it evolves, despite the fact that its content may often spread across those boundaries and cross-pollinate other forms.

In order to ascertain whether we are really on this crash course, we must take a step back and view the trajectory from which we are coming, first for movies, and then for video games. Our journey, according to Steven Poole, takes us back to the 1982 release of Disney's *Tron*, a science fiction thriller about a video game programmer and avid player who is digitally absorbed into a computer mainframe governed by an evil Master Control Program (72). Seen as one of the first motion pictures to actively borrow elements from video games, *Tron* featured fast action scenes and glowing "light cycle" races reminiscent of computer graphics at the time, which consisted of a few colors whose glowing luminescence emanated from a cathode-ray tube monitor. The mid-1990's brought another attempt by Hollywood to bring the look and feel of a video game into mainstream motion pictures with the hopes of cashing in on the ever growing revenues of the gaming industry with the release of *Super Mario Brothers* and *Double Dragon* in 1993, and *Streetfighter: The Movie* in 1994. One year later saw the release of *Mortal Kombat* to slightly better reviews and thus box office revenues, enough so to spawn a sequel, but the attempts by filmmakers were less than successful (Dean).

More recent and more successful attempts by Hollywood to bring silicon to the big screen include *Tomb Raider* and *Final Fantasy: The Spirits Within*. Contrary to their predecessors, these films contain storylines that depend more on solving puzzles to advance the plot, as opposed to collecting coins and shooting the enemy ("Games, Movies Share"). *Final Fantasy*, produced by Japanese design studio Square, in fact, is not based on any particular episode from the popular video game series, but rather gains inspiration from narrative elements and themes

common to them, including heavy mythological references and the typical battle of good versus evil, reason and logic over force and violence. As another example, at the time of this writing, Hollywood is about to release yet another movie based on the best-selling video game *Resident Evil*. Whether it will be successful like its recent contemporaries or suffer the same fate as earlier attempts remains to be seen.

Motion pictures also borrow from video games more subtly than just blatantly converting their plot lines to the big screen and sprinkling them with big name actors and actresses and flashy special effects. For instance, fight sequences in such movies as *Crouching Tiger, Hidden Dragon* and *The Matrix* include gravity defying feats such as leaping across rooftops and the seeming suspension of reality commonly found in video games. Furthermore, the concept of multiple lives and the “Press Start to Continue” phenomenon evince themselves in movies such as *Run Lola Run* and *Groundhog Day*. In these films, the lead characters get multiple chances to succeed at their task after repeated failures (“Games, Movies Share”). *Being John Malkovich* is another film that borrows concepts from video games, as it parallels the role-playing theme closely with characters finding a “backdoor” into John Malkovich’s mind and getting a chance to experience the world from his perspective (Jenkins).

Yet another interesting twist on the idea of convergence lies in the area of moviemaking itself, as opposed to the borrowing of plot lines and gaming elements. Traditional methods of moviemaking involve real actors and actresses, elaborate sets and shooting locales, and an incredible crew and support staff behind the scenes operating cameras and sound and lighting equipment. Recent films do away with tradition and instead are created completely in a virtual world of digital bits inside graphics supercomputers. Scale and scope of settings are limited only by the artist’s imagination. Camera and boom operators are replaced by graphic artists and 3D

modelers. The only aspect of these movies that are not synthetic are the voices of real human actors and actresses, but it is only a matter of time before synthesized speech will replace the last element of humanity in these movies. *Final Fantasy: The Spirits Within* is perhaps the most demonstrative of this technical achievement, for its revolutionary techniques in cloth modeling, human movement, and skin imperfections create some of the most realistic characters and some of the most fantastic landscapes ever realized by computer hardware. Indeed, the tagline for the movie is “Fantasy becomes reality.” Of course, the first full-length completely rendered CG animated film was Disney’s *Toy Story*, created by Pixar Studios and released in 1995. Since *Toy Story*, we have seen films such as *Antz*, *A Bug’s Life*, *Toy Story 2*, *Shrek*, *Monsters Inc*, and of course, *Final Fantasy* brought to life on the silver screen. All of these films in fact never existed on film, but rather occupied and shared the cyberspace all too familiar to video games.

In fact, a new form of moviemaking is emerging that uses a 3D game engine as the basis for creating its characters and sets. Known as “Machinima,” this nascent technique is giving low-budget individuals the chance to create feature-length films (Kahney). One example of this new art form is *Sidrial*, being created by Fountainhead Entertainment, a film made completely inside the Quake III game engine and rendered in real time (*Sidrial* website).

Just as Hollywood borrows from video games, video games also borrow from Hollywood. In fact, the development of the gaming industry closely parallels that of the movie industry. As Grant Dean notes, “In the pioneering days of the silent film industry all they needed was a few dollars, a camera, a girl, and they had a movie” (“Gaming Goes”). None back then could have foreseen the impact motion pictures would have on the economy, a multi-billion dollar industry with equally impressive licensing spin offs of related paraphernalia ranging from toys to breakfast cereals. In the 1970s and early 1980s, game development usually consisted of

one designer and some basic hardware and lasted a few months. But as the industry grew, so did the size of the development teams and production costs. Today, video games feature complex storylines, virtual actors, brilliant orchestral and popular soundtracks, and marketing budgets that could easily be confused with the next big blockbuster movie. Game design studios employ character designers, writers, 3D artists, composers, costume designers, and even directors and producers, terms commonly associated with Hollywood. Game designers often layout concepts and character development in the form of storyboarding and other techniques borrowed from filmmakers. In fact, a typical video game today requires about two years of development time and a budget that can climb into the tens of millions of dollars, rivaling its big screen counterparts (Poole 73). For instance, *The Fallen*, a recently released game based off the Star Trek franchise, took nearly two years to complete, longer than the production time of some of the original theatrical Star Trek releases (Marriott).

Besides development time and production costs, marketing and advertising of video games are also beginning to resemble movies to the point where it is hard to distinguish between them. For example, game previews are now frequently released in the form of a movie trailer, highlighting the game's special effects and action-packed game play while presenting its storyline as an attempt to sell the game before it is even released, a phenomenon all too familiar to the average movie-goer. Revenues of the gaming industry also rival that of Hollywood. In 1999, game revenue in the United States topped \$7.4 billion, compared with \$7.5 billion in box office sales (Marriott). It is no wonder then why these two entertainment media often look to each other for inspiration. Much like two large corporations both dominant in market share of two closely related market segments, what better way for total control than to merge into a single even larger multi-billion dollar conglomerate (AOL and Time Warner comes to mind as one

example)? According to Chris Mike, vice president for marketing at Konami of America, “Parallels between the movie market and the game market are so amazing that they have almost become one and the same” (qtd. in Marriott).

To understand these similarities between video games and movies, we need to look at the historical usage of video in games and the importance of technology on its advancement. Since the development of the CD-ROM allowed for orders of magnitude more storage capacity, game designers have incorporated full motion video (FMV) into their games as a tool that when used appropriately “can create mood, set up game play, introduce characters, and forward narrative,” but when used poorly, “can rip you out of the game faster than a direct rocket-launcher hit during a deathmatch” (Waggoner). The first successful “interactive movie” to employ the use of FMV was Trilobyte’s *The 7th Guest*. As Waggoner and York state, its success was probably due more to the novelty of seeing for the first time live-action video on a computer, rather than its game play. *The 7th Guest* did, however, establish the basic formula for future games of the genre to follow, namely interspersing video elements between puzzles as a sort of reward to the player, whether or not the puzzles, or the videos themselves served to further the plot. This basic fallacy was put to rest with the advent of *Myst*, arguably one of the most successful games of this genre and perhaps of the industry as a whole. *Myst* used video appropriately, in small, short segments that provided the players with clues and insights that contributed to the overall atmosphere the environment while helping to advance the storyline. This model has been closely followed by subsequent games, such as *Wing Commander III*, *Spy Craft: The Great Game*, and *Grim Fandango*.

Grim Fandango, however, is an interesting case and marks a turning point in the use of video in games. Its FMV cut scenes so closely resemble the game’s engine, that most players

cannot tell one from the other (Waggoner). As technology and graphics processing power have increased, more and more games employing the use of cut scenes do so not with pre-rendered or pre-filmed video, but instead with the game's own 3D engine to create a seamless progression between game action and storytelling. Inconsistencies between cut sequences and action sequences disintegrate, thus giving the game a more coherent feel. The game then truly becomes a fully interactive experience. With the release of Valve's *Half-Life*, game designers are able to project the player into a character and have him or her interact with the environment, while at a moments notice, also revoke that privilege and draw the player into the game instead as a passive observer.

Thus, we see the advancement of technology as the main driving force for realism in video games as well as in movies, as the line between computer graphics and live action video begin to blur much like the line between video games and movies. "In no other media are these two aspects so tightly coupled: technological performance makes new experiences possible in terms of realism, interaction, aesthetics, and gameplay" (Cavazza). This push for realism and a focus on content is most evident in a 1998 annual report message from Hiroshi Yamauchi, President of Nintendo:

In fact, in the not too distant future, developers will be able to generate any image they want, as real as life, or as fanciful as they imagine. But once we reach that point, technology will become unimportant. We will be like the movie industry, or TV, where every director works with 35mm film or the same type of studio cameras. When all technology is equal, it ceases to be a point of differentiation. It is the content and the story that the recipient experiences that gives the "producer" success and longevity. (qtd. in Horwitz)

Similarly, press releases for the Sony PlayStation 2 boast:

Imagine walking into the screen and experiencing a movie in real-time... this is the world we are about to enter... The quality of the resulting screen image is comparable to movie-quality 3D graphics in real time... This will help accelerate

the convergence of movies, music, and computer technology into a new form of digital entertainment. (qtd. in Horwitz)

It would appear then, that this convergence is inevitable and occurs as a direct result of technology. Indeed with the recent release of *Max Payne*, it would seem that digital convergence is already upon us.

Developed by Finnish company Remedy Entertainment with the help of 3D Realms, published by the Gathering of Developers, and headed by project leader Petri Jarvilehto, *Max Payne* was released on July 25, 2001. Remedy, a relatively unknown game developer, was founded in 1995. Focusing primarily on action games, the company developed its own 3D game engine called MAX-FX exclusively for *Max Payne* and future projects. The MAX-FX technology has been utilized by popular 3D benchmark programs, most notably in 3DMark from MadOnion.com, a spin-off of the company (*Remedy Entertainment*).

Because of its stunning new 3D game engine, *Max Payne* sports some of the most realistic graphics found in recent games. Texture maps from digitized photos along with extremely high polygon counts and a believable physics engine create an unparalleled sense of realism in all of the game's richly detailed environments. In addition, following from *Half-Life*, the cinematic cut scenes are not pre-rendered, but rather presented in real-time in the game engine itself. The result is a seamless integration of game play and story progression, propelled forward by quality voice-over narration and detailed storyboards.

The developers use sound equally well. Much like a movie, ambient sounds heighten sensory perception and often put the viewer inside the gaming environment. This effect is of course readily augmented by multi-channel surround sound, first used by movie theaters to propel their patrons into the on-screen action. Moreover, often, just as in movies, the soundtrack in *Max Payne* will shift readily, in some instances transforming into a suspenseful, pounding,

driving beat that signifies a large battle is about to ensue. The music not only gives the player a much needed cue to succeed in the game play, but also creates the sense of atmosphere and awareness that draws the player into the game, much like its effect in movies (imagine *Jaws* without John Williams' suspenseful score).

The game itself begins at the end, allowing the diachronic narrative to actually become the synchronic storyline, and much like a movie, utilizes flashback to a period three days prior where the player finds himself not as Max Payne, but in a third-person perspective controlling Max's movements. The story revolves around a potent new drug, Valkyr, which has infested the streets of New York City and has led to the murder of Max's family by a gang of crazed junkies. The brutal incident causes Max, an NYPD detective, to go undercover, unearthing the secrets behind the synthetic drug. Following the death of his only contact within the department, Max is framed for his murder and becomes entangled in a conspiracy of organized crime (*GameSpot PC Preview*).

As a complement to the game's realism and sophisticated modeling, the designers added another element called "bullet time," which turns Max Payne's world into an ultra-slow motion *Matrix*-style scene, giving the player an advantage in situations that otherwise would be impossible to overcome while enhancing the dramatic cinema-like effects in the game. From a playability perspective, Max Payne employs a sophisticated AI engine that adjusts the difficulty according to the player's developing skill and current situation (*GameSpot PC Review*; *3D Realms Site*). The result is a video game equally entertaining to play as to watch. Max Payne's suspenseful storyline, coupled with breath-taking graphics effects and action sequences as well as good game play, demonstrate the future of interaction and interdependence between the movie and video game industries.

As an example of convergence, *Max Payne* then clearly draws upon the 1999 blockbuster film *The Matrix* with such game play additions as “bullet time.” Other moves such as “shoot dodge” and cinematic effects upon killing an enemy draw from John Woo style films.



Figure 1: Similarities between *Max Payne* and *The Matrix*

According to Remedy Business and Finance Director Matias Myllyrinne, the game also extracts influences from American pop culture in general, along with many Noir films for themes and mood, reminiscent of *Grim Fandango*. Camera angles, or rather, *virtual* camera angles derive their movements from Hong Kong action flicks. Furthermore, the game’s use of a third-person perspective, a “graphic novel” (resembling a comic book), and cinematic cut scenes all serve to heighten ideas of interactive story telling. Indeed, the third-person perspective, employed in such games as *Tomb Raider* and *The Fallen*, allows for a “stronger character association. [It] allows you to show the character. It is not a vacuum to be filled with your own feelings” (Myllyrinne). Thus, the use of third-person perspective effectively separates us from the main character in the interactive movie. We watch and see Max Payne. We control and associate with him, yet we do not confuse ourselves *for* him. Player/viewer remain distinct and separate from on-screen character.

Thus, it appears as if *Max Payne* represents the future of digital entertainment media. However, in fact, the game implies exactly the opposite. Instead of a replacement or convergent theory, the gaming and movie industries will remain separate and unique, yet forever borrowing from each other in a symbiotic theory, often governed by the advancement of technology in both fields. For instance, although *Max Payne* derives elements from *The Matrix*, we can view *The Matrix* itself as being influenced by computer games, with ideas of virtual realities and manipulation of digital bits, as well as the fight sequences described earlier. In previous examples, games such as *Resident Evil* in fact draw on influences from horror films such as George Romero's *Night of the Living Dead* and *The Exorcist*, "using odd 'camera' angles, music and shock sequences to work the player up into a frenzy of disquiet" (Dean). Thus we see video games utilizing elements from movies, these same video games that eventually form the basis for new movies, which in turn spawn more video games. A sort of circular feedback loop takes shape, a symbiosis between games and movies exemplified by *Max Payne*, which itself has feature film potential stemming from a deal with Miramax/Dimension Films movie studios (*Remedy Entertainment*).

Indeed video games are fundamentally separate from movies. When asked about the future trend of video games evolving into interactive films, Myllyrinne responds:

Max is more of a film-like game and has many things in common but it must also conform to the medium in which it is presented. *Metal Gear Solid 2* has long cinematics ([making it] more film like in this respect?). Yet in my opinion, they take control away from the player for too long periods of time. Also, linear stories allow us to tell one story really well as opposed to telling several badly. Games have their own strengths and so do movies. Convergence will not happen – it is a myth.

He posits that markets segment and specialize, becoming more complex and "focused" (Ries) in the process, and notes that "brands may cross over, but line extensions have rules of their own...

Don't confuse a brand being leveraged in several media to be convergence... Taking influences from one area and using them elsewhere does not mean that the whole medium has changed.”

Bolter and Grusin share a similar viewpoint as well, in that the only object that has been transformed in these crossovers is the content, but the medium itself remains untouched (44).

Moreover, the inherent difficulties in writing nonlinear storylines that grow exponentially and inconsistently often detract from game play design. According to Peter Molyneux, “Computer games are an independent form of entertainment; they don’t fit snugly into films” (“An Audience”).

Furthermore, as revealed in a recent *New York Times* article, new games featuring longer visual elements and short movies sprinkled throughout the game interrupt and slow down game play. In fact, players often just press the Escape key to bypass the cinematography so they can play the game itself (Marriott). As another side effect, the production time spent creating these movies detracts from the time spent actually developing the game, as in the case of *Metal Gear Solid*. “Unlike Hollywood, game companies can’t ever expect players to be happy with a product that can be consumed in whole in two or three hours – or even two or three days, sometimes two or three weeks” (Horwitz).

What, then, will become of video games? What defines the medium? According to Jer Horwitz, “compelling content, superior cinematography, enhanced appeal with perpetual lasting power, enlightened distribution, and effective advertising” are necessary for success. On a similar vein, Harvey Smith notes, “... computer games should provide the player with an interesting environment over which he has some measure of control, and that environment should react to him. This, rather than traditional story telling, is the unique power of the computer game as an art form” (“Player Character Concepts”).

Therefore, we may breathe a sigh of relief and rest assured that movies and video games are not on a crash course, that those wanting to passively experience a well-written linear story on the big screen and those wanting to enjoy an addicting puzzle or shooter game need not fear a digital convergence. What is actually occurring with video games and movies today is a form of remediation, whereby new media borrow from older media. In fact, the current relationship between media is more than just remediation, it is symbiotic, with both industries relying on each other for licensing revenues, tie-ins for lunchboxes and action figures and the like. Bolter and Grusin believe that in this form, we can consider convergence then as “mutual remediation” (224), and in this sense, the convergence that appears to be occurring actually means “greater diversity for digital technologies” rather than a “single solution” (225). Much as how literary media is often transformed into a screenplay in Hollywood, and then into a video game, what appears to be convergence is nothing but cross-pollination between differing and unique entertainment media that exist today. “The contemporary entertainment industry calls such borrowing ‘repurposing’: to take a ‘property’ from one medium and reuse it in another” (Bolter and Grusin 45). The moving picture did not replace the still picture, and the still picture did not replace the written word, and the written word most importantly did not replace the single most common medium of all, that of human expression. All coexist equally, with brands frequently transforming into other forms while at the same time reaffirming their own boundaries.

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