



New Media Cultures

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stand alone avatars created by the game are available in the most popular of the online games – *Euroquest*. According to one survey, 90,000 players are logged on to the role-playing game at any one time (Armstrong, 2003). The total number of players is estimated at 2 million who roam through a virtual space of 323 square miles (Massmog, 2003). Not all games are organized for massive numbers. A trend in online games resembles chatrooms. Games between two or a group of friends are often the norm with online games. With these smaller numbers, games also betray their origins, where players once created local area networks by connecting their computers into a local network in order to play against each other. Emerging in online game spaces are similar micro-communities loosely linked to other communities. Tournaments have grown more sophisticated and professional as a more formal site for play.

Games in this online environment have become places where friendships are built and maintained through interests in particular games. Afficionados of specific games develop their own argot and acronyms that rival the best text messengers. With online games, the critique that games are socially isolating makes little sense as players build their social networks through their online game connections.

Conclusion

Through their long history, electronic games have been the most influential of new media forms in transforming the cultural landscape. Their status as diversissement perhaps allowed their influence to go unrecognized except in the most vituperous articles critiquing their debilitating effects on children. What has made electronic games particularly significant is the way that they have shifted our relationship to media and entertainment. As detailed here, electronic games were instrumental in the new blending of work and play in contemporary life. The delineations are less clear than in the past as work invades domestic space and play pervades the creativity space of the information economy. Via electronic games, the entertainment industry has also redirected itself and moved the idea of play into the structure and meaning of other forms, from film and television to popular music and radio. This shift is very much related to incorporating the essential component of electronic games and play more widely: interactivity. The kinds of engagement embodied by electronic games have become the benchmark for popular culture and presaged the prolific cultural investment and interactivity that have made the internet and the web such a fascinating and dynamic environment for information and cultural exchange since the 1990s. Games have provided for massive participation, but qualitatively different than the participation offered by television or radio. Electronic game participation implied the individual's personalization of the medium through playing the game and bringing the structure to life. I have called this a form of cultural production, albeit contained within the framework of a cybernetically interactive game. Electronic games have democratized contemporary cultural production in a patterned way: they have allowed the player to move into the action of the screen. This profound shift is a celebration of the activity of the populace to make their culture. The electronic game has been a broad channel for that will-to-produce even as it has been

Rejuvenation: film in the digital world

Michele Pierson makes the convincing argument that digital effects maintain a discourse of wonder for the production and reception of film (Pierson, 2002). This sense of wonder is wedded to the very illusion of cinema as an apparatus and a practice. The techniques of digital effects that we might see in the *Terminator* or the *Matrix* film series are very much a part of the tradition of film as it connects science and technology to affective moments of awe and bewilderment within film narrative. The digital from Pierson's perspective is a form of rejuvenation of the cultural form in its capacity to replay the 'shock of the new' origins of the cinema at the beginning of the twentieth century.

This chapter and the next explore the way that the now traditional media of film and television have transformed in the era of new media and digitalization. Both television and film have been very successful in the production of audiences over the last century. In the case of film, our object of study for this chapter, audiences have been drawn to its narratives and its structure of generally accessible content that can span many cultural differences through its various genres. What has been detailed in previous chapters is that the nature and status of the audience is in flux with the development of new media. Beyond the active audience, we have identified that there is a 'productively' quality in the user of new media whether that use is via the internet or in electronic games. Similarly, the digitalization of film has presented possibilities and potentials for film to address some of these emergent democratized aspirations around cultural production. The film industry, in reaction and response to new media cultures, is developing interesting hybrid forms and patterns of production that are becoming significant components of that same culture of new media.

Film and the digital

Chapter four dealt with the constraining design structures of electronic games. In that discussion, it was possible to identify the controlling aspects that are part of game design and through that provide one counter-argument to the sense of engagement that playing games embodies. As we investigate the digital implications for film and the cultural activities that it engenders, it is useful to investigate critically film from a similar vantage point of

First of all, the film medium is highly structured partly because of its complex and collaborative production exigencies. As it has been industrialized, that structure has particular ends around attracting large audiences. The highly designed form of film production is related to the building of very clear narratives and, at least in its Hollywood incarnations, decisive forms of closure. These can be rethought of as aspects of the 'software' design of the film. Utilizing the metaphor of software helps us think of how film is designed to work in practice. The producers of Hollywood films are very sophisticated designers of software, who through various feedback systems, have worked out patterns that derive a certain success at providing pleasure for audiences. Hollywood, more than any other film 'system', has been able to make that software comprehensible and engaging for an array of audiences from a variety of national, racial and ethnic backgrounds. The system, as Miller *et al.* have explained, dominates the exhibition and production of film globally with the possible exception of the equally designed Indian film industry (Miller *et al.*, 2001).

In industry terms, films that are highly designed are high concept: they are driven and thereby conceptualized by a single idea that becomes the story and guiding structure for both its development and exhibition (Wyatt, 1994). What differentiates film from other kinds of computer-developed software is that its actual end use is not through the interface of the computer screen, but rather in the play of imagination and identification in the viewer. The interactivity that is so much part of the user's relationship to the web or to the playing of an electronic game through the click of the mouse or the manipulation of the joystick, is designed in film as a form of immersion in the mind itself. The screen becomes – in Christian Metz's terms – the fourth wall that opens outwards into the narrative but is designed to exert a psychological identity effect on the viewer (Metz, 1982). The viewer 'identifies' with characters as points of view, partly there to situate the action of the narrative but more importantly to 'stature' the viewer into the meaning structure of the film. The sensory quality of the darkened cinema house with the brightened fourth wall, with its characters literally larger than life, provides an 'apparatus' for the play of the imaginary that psychoanalytical film theory has likened to the dream state that underlines its psychic power in audiences. In these terms, cinema's effect is one of transference – out of the reality of the film viewer and into the reality-effect of the imaginary scenario that is presented.

Into this system of production and reception, where Hollywood has been very successful at presenting the imaginary reality-effect for the audience's pleasure for nearly a century, come the possibilities and potentials of the digital. There are four major implications that need to be developed as we think through how film as a system deals with its digital reincarnation and I will address each of these in turn.

1. The digital presents the potential to better reconstruct the reality-effect that cinema has cultivated. Digitalization of the image permits its manipulation for even greater kinds of illusion.

In many ways, the digital is an extension of the various illusory techniques that are part of cinema's repertoire. The digital, then, can be thought of as one of cinema's techniques of special effects which dates back to its pre-origins. Cinema's history is wedded to a number of

the *trompe l'oeil*. The actual effect of film's moving image itself is one of these tricks of the eye: in reality a strip of film is a series of still images that, when projected rapidly enough in succession, produces the illusory effect, a perception of motion, because of the persistence of vision that carries the image in the brain from one still image to the next. If enough frames per second are projected the brain imagines the series as continuous motion. Cinema's standard is 24 frames per second.

The digital manipulation of the film's image makes the screen much more malleable for editors. Early digital effects were often connected to science fiction and fantasy, and were designed to make elements that could produce believability in the viewer about a certain creature or environment. For example, *The Abyss* constructed an alien figure that adopted its recognizable form through becoming more or less a tubular liquid – a pseudopod that transformed into a face. The digital effect of presenting the alien was an elaborate computer development of the image that simulated the way light would be refracted through a form that had the thick mobility of mercury but the transparency of water (Darley, 2000: 107–8). Spielberg's *Jurassic Park* fabricated dinosaurs so that their movements could be more fluid as well as provide appropriate reflection of a given environment. In a famous CGI scene, we are shown a slowly moving raptor's head with the projected computer screen image displayed over its mottled skin and yellow eyes as its searches for its next victim. These moments of finely crafted CGI were used sparingly because of the expense; nonetheless they were inserted at critical moments to heighten the believability that human actions were in the same environment as these creatures. CGI helped blend the real image with the computer-animated components.

Other films played with the capacity to manipulate existing archival film footage through inserting actors into the scenes. The film *In the Line of Fire* (1995) placed a young Clint Eastwood film image into documentary footage of the 1963 Kennedy Dallas motorcade. For both plot and character development, this fabricated past became a believable flashback to establish Eastwood's character. Frank Herrigan's strong motivation to prevent a presidential assassination. Similar efforts were generated in the fantasy-historical drama *Forrest Gump*. Via digitally compositing, the image of Tom Hanks as Gump is placed into historical scenes. Also, the development of 'digital crowds' was employed in *Forrest Gump* that in effect reduced the number of extras needed for a re-enactment of a Washington Vietnam War protest.

Although clearly different uses have been made of computer imaging by the film industry, they have generally fallen into specific categories. The most common digital effect is to produce a composite image. In the past mattes, painting and modelling were the principal techniques used to layer an image with a different foreground or background. Much of this kind of film-making is now accomplished almost entirely through digital rendering. Thus a contemporary street can be remade digitally with vintage cars and lighting into a 1940s street scene. Likewise, transformations of skies and the composition of a city skyline can be

produced more seamlessly through digital compositing. A second category is special digital effects that may be either too difficult or dangerous for real actors or stunt actors to complete or that are beyond the possibility of display. In the *Matrix* (1999), the slow-motion dodging

manipulation of the image and motion and the reconstruction of an array of still cameras grabbing images around the scene. Elements of compositing are overlaid with live action and the third category of digital imaging – *digital animation*.

Digital animation currently represents the most dramatic transformation of film. In order to render simulation of real bodies in motion via computer programs and designs, digital animation demands elaborate efforts to record in three dimensions body movements for their reconstruction and simulation by computers. The first uses of digital animation appeared regularly in commercials, inserts into feature films and short films. Pixar, the most dominant producer of digital animation, produced its first complete digital animation feature, *Toy Story*, in 1995. Its box-office success ensured that other productions followed. In fact, there have been very few traditional animated features that have been successful since *Toy Story's* release; moreover most of the 'traditional' animated films are assisted massively by computer imaging. What has emerged is a shifted aesthetic with an odd relationship to live-action features. For the audience the reality-effect of digital animation is partially determined by how close to the real the image represents or how close the film is to the cinematic-real.

Thus, films such as *Toy Story* or *Shrek* (2001) produce what can only be described as an uncanny representation. They remain animation, but the organization of light and depth on objects allows for a much more three-dimensional construction of the characters in screen space. The intricate work on facial expressions and movements in *Shrek* or in *Finding Nemo* (2003) make the audience believe and disbelieve simultaneously. This sense of uncanniness, which can be thought of as the audience's uneasy relationship to the image and its perpetual state of being unsure how to categorize its qualities generically, reached its recent zenith in the film version of the video game *Final Fantasy* (2001). Here the digital animators worked at rendering what we could describe as syntheses – animated human-like figures as opposed to the stylized toys and other characters that populated most other forms of digital animation. Watching a certain character, again with the subtle facial movements as they spoke and 'emoted', blended with the actor's voice so much more completely that what is uncanny is not seeing James Wood or Donald Sutherland on-screen, but rather a model synthespian that bears no close physical relationship to these real-life actors. Perhaps this proximity with the reality-effect made it difficult to watch the film: *Final Fantasy*, for all its technical achievement, was not successful at the box office. Of course, the more obvious reason for its relative failure was the sheer woodenness of both the 'performances' and the actual story, which may have developed because of the overwhelming focus on the technical achievement of verisimilitude in the actors and setting. What was believed to be a natural and ready audience of game players of *Final Fantasy* did not translate into an engaged film audience.

Emerging in contemporary film via digital effects is a new form of voyeurism that needs to be explored further. Much of digital cinema is producing images that are 'real', but actually impossible to capture via conventional camera work. In this way, digital cinema is presenting a new hyperreality. The traditional horror film's play with showing the goriest parts in a series of climaxes best represents this expanded voyeurism. Digital effects promise us this extra vision into the action, from angles and situations that expand the effect and

instance, in *Titanic* (1997), director James Cameron's use of digital effects was to make the *Titanic* 'live' again. We see Leonardo DiCaprio's character Jack's triumphal mounting of the bow of the ship in a panoramic 270-degree tracking shot along the ship's line; the artifice of the moving ship was developed digitally as were the actual ship's deck and the people.

Similarly, the scene of 'people' falling down the deck of the ship as it began to break into two and sink was produced entirely digitally. Heightened moments of hyperreal images were no doubt part of the rationale for George Lucas to digitally re-edit his *Star Wars* trilogy in the late 1990s, two decades after their original release (a more cynical view would claim, quite correctly, that it was more about guaranteed box office for a re-release). The added scenes were built as moments of this new digitally real, where the capacity of computer animation could transform the 'vision' of Lucas's *Star Wars* world more completely and accurately.

2. New media with their forms of interactivity represent a challenge to the conventions of film 'software'. Coursing through the film industry blood lines is that its entertainment must attempt to produce the simulation of interactivity to compete with newer media forms.

There is little question that film represents a different form of engagement than many new forms of media. There isn't the obvious connection by a perpetual human-machine interactivity. But as we have seen in cinema's digital developments, there are ways to attract the viewer and maintain an investment in the form.

In order to counteract this perceived deficiency, film has invested heavily in commentary on the cultural conditions of new media. In other words, film stories are often an engagement and debate with the effects of new media forms. In a very elaborate dialectic, the narrative around new media is both one of ostentatious display and cultural critique. The dialectic is entirely schizophrenic as film after film is a discussion of some form of technological dystopia, while there is a celebration of the employment of the technical capacities of digital production and simulation.

To get a sense of this bizarre but clearly developed dialectic, it is worth tracing its filmography. Its lineage is clearly connected to the dystopias that H.G. Wells and George Orwell penned, and film versions of this same dystopian future in Fritz Lang's *Metropolis* (1927). But in its more modern incarnations it is connected to the development of the blockbuster and its utilization of new technology for overwhelming the film viewer – what we can term an immersive aesthetic. *Westworld* (1973) and *Futureworld* (1976), two films from the 1970s, represent the beginnings of this duality as they more directly articulated the same dialectic that was embedded in Stanley Kubrick's *2001: A Space Odyssey* (1968). In these films, Yul Brynner plays a cyborg at an elaborate theme park where, as the

advertisements for the film intoned, 'nothing could go wrong'. Visitors were immersed in the western via computer-controlled scenarios; unfortunately for the guests, the highly structured and cybernetic virtual environments moved from playing with life and death struggles to real hunted and hunter relationships between the robot cowboys and the theme park's guests. Interspersed with the action were images of computers and programmers working in backrooms. *Westworld* was one of the first efforts in film to present computer-generated

The rendering resembled heat-sensitive/infrared camera images combined with an array of geometric lines and intersections, all computer generated.

Westworld represented a clear dialectic between a narrative critique of the monstrous possibilities of new media and a celebration of its capacity to transform the image into something remarkable. Disney's *Tron* (1982) followed this lineage. The storyline of *Tron* focused on providing a parallel between the evil corporate machinations of the director of a computer game company and the control of the game itself. Through some kind of transnogrification (and abduction), an actual programmer/hacker, Flynn, enters into the computer game world as a gladiator. The game is controlled by the Master Control Program; Flynn's objective is to unseat this dictator and replace it with Tron, a security program that allows users and programmers their rightful place and freedom. In dismantling the Master Control Program, Flynn is also able to unseat the corporate director in real life by revealing his past thefts of his programs. The *mise-en-scène* of the story, like *Westworld*, is designed to celebrate the magic of the computer-simulated game world. CGI helped produce various sequences and the overall look of the film, even as its contents were an expression of the threat of ultimate control that computers represented within our society.

The filmic discourse of critique and celebration of new media continued throughout the 1980s and 1990s. Films such as *Brainstorm* (1985) and *Lawnmower Man* (1992) employed various levels of computer-generated effects to reveal both the pleasures and possibilities of immersive entertainment technology; but both films diegetically exposed the dangers of losing one's identity in simulated states. In many ways, these films and the fin-de-millennium film *Strange Days* (1998) provided an odd moralistic presaging and parallel commentary on the 1990s journalistic obsession with cybersex and other internet 'addictions'. Entertainment in these new media forms went dangerously beyond fun and into something destructive in its controlling and addictive hedonism and its possibilities for different exploration. Other films, less drawn to the use of CGI but nevertheless part of the same elaborated film discourse provided further critiques of new technology. For instance, *Virtuosity* (1995) and *The Net* (1995) played with the fears around identity and security that the internet had spawned. *Hackers* (1995) romanticized the power of the sole individual to undermine the control of large corporations.

It could be argued that the *Terminator* series of films spawned the norm for blockbuster films and their schizophrenic relationship to technology. With the release of *Terminator 2: Judgment Day* (1991), it was clear that the storyline, with its future threat of machines taking over the Earth, which could only be prevented through the saving of an individual from time-travelling cyborgs was in contradistinction to the promotional campaign that celebrated the new generation of computer-generated images that the film showcased. The liquid metal morphing of the T-1000 evil cyborg became the narrative for the film's publicity campaign. The wonder of its illusion and the various explanations of how the images were produced migrated through the various talk-show appearances by the film's stars as well as being the centrepiece of the 'making of *Terminator 2*' documentary film. It is remarkable to see how the *Matrix* series of films echoes the *Terminator* series. Once again, the underlying narrative of the films is a dystopia of an entirely simulated world where humans are used merely as an

however, is partly the way it depicts the simulated world through the illusions constructed via CGI. Like *Terminator 2*, the *Matrix*'s promotion revolved around the presentation of these remarkable special effects and a discourse around how they were achieved.

The films listed here do not represent all of the films that the Hollywood film industry has produced and the massive number of films that have employed CGI for much more routine purposes over the last quarter-century. What they do represent is how film has produced a critical commentary on new media. The way that these films have provided this commentary is to make films that fabricate the level of interactivity that is imagined for new media forms. The reality is that these new media, such as virtual-reality games or other forms of immersive entertainment, currently can not fabricate this level of interactivity. Film provides the cultural imaginary of possibility and thereby simulates for the audience the sensation of further dimensions of interactivity. The film industry's response, then, is to represent versions of the near future. Spielberg's *Minority Report* (2002) provides further examples of this capacity of a film to depict more complete levels of interactivity as it extends existing technologies. As touched on in previous chapters, we see Detective John Anderton manipulating images and information on large interconnected projected hologram screens both with his hands and via voice recognition. Later in the movie we see an imaginary future level of interactivity where via retinal recognition billboard display advertisements speak directly to Anderton inviting him to buy an array of products as he passes the images in public spaces. These possibilities are part of the current technology but clear extensions that work effortlessly in the fictional film world when freed from the more pedestrian limitations of current technology. Blockbuster films' affinity to new media is to provide a 'demo-aesthetic' of possibility and potential: fiction film can actualize the desires of current new media for the audience where the technology actually works and works powerfully.

Contained within many blockbusters is a different kind of narrative driving the action. The narrative, as Andrew Darley has explained, often has the kinetic energy of an electronic game or a theme park ride (Darley, 2000: 52–3). It is an aesthetic that does not pause except to produce moments of awe around a particular effect as it moves towards clear objectives and ends. The action film represents the fullcrum of the blockbuster in all its incarnations and stories. Film, in its effort to produce the continuous adrenaline rush for the player of a first-person shooter game, replicates the sensation via films such as *Speed* and *Speed 2* (1994 and 1997), *Twister* (1996), *True Lies* (1994), *Mission: Impossible* and *Mission: Impossible 2* (1996 and 2000) and a host of other films. The action and the causal chain leads to reaction serially until the inevitable closure. This aesthetic has developed in film in the era of new media. Coordinated with this development of action narrative, the film industry has invested in creating its own kind of immersion through IMAX film exhibition. The final part of the *Matrix* series *Matrix: Revolutions*, was simultaneously released in this large-format print (three times the size of the normal large-format 70 mm print) for massive screen presentation not only to make the film larger than life, but also to overwhelm the viewer with its imaginary representations. One can liken the current experimentalized in cinema through the blockbuster in terms of narrative, technological effects and screen size as techniques that emulate the change in cinema in the 1950s with the introduction of television. In that era,

make film-going a more dramatic spectacle and to make television less appealing. The contemporary film industry this time around is fabricating a sensation of greater engagement and investment to match and replicate the interactive aesthetic of new media.

The continuing development and refinement of the blockbuster imperative and the expansion of digital effects represent how the mainstream film industry has responded and adjusted to the era of new media cultures. Both of these strategies are dependent on extensive capital resources and work to ensure the success of the largest of film corporations. For example, a 40-second digital sequence for the film *Titanic* cost the producers \$1.1 million. Blockbusters now routinely cost in excess of \$200 million. Their promotional budgets are equally massive. The strategy behind promotion is to produce complete saturation in all media forms so that the opening weekend is massive. To ensure this different form of immersion, studios now plan for simultaneous release on thousands of screens so that the maximum impact of the advertising is achieved with bums on seats within two weeks of its initial release. *The Matrix: Revolutions* (2003) expanded this strategy so that it opened simultaneously in over 50 countries, on 10,013 screens and in 43 languages, a feat never before achieved in the film industry (Holson, 2003: B1). The blockbuster is designed to create an entire media event: even local multiplexes will devote as many as seven screens showing a blockbuster round the clock in its first week of exhibition. The interactive environment of the blockbuster can be thought of as attached to a promotional aesthetic that is equal in significance with the narrative and action of the actual film; the public cannot escape knowing something about a blockbuster film because of the incredible amount of publicity and advertising that surrounds its release.

3. The digital has reduced the costs of production and editing. Digital 'film-making' can democratize the production process and thereby open the system of film-making to new players.

As much as this strategy represents the digital heartland of the film industry, new digital technologies allow for cheaper forms of production. One of the other principal tendencies in film production over the last 10 years has been the development of independent film both in the United States and internationally. In some instances, digital forms of production make it difficult to identify whether a given production is in fact a film. Nonetheless, what has emerged is a generation of 'films' that are nowhere near the average cost of production in Hollywood. In the United States, this has led to a new bifurcation in production of large and small budgets that makes them incomparable. Smaller films are produced for exhibition in repertory cinemas and on cable channels devoted to independent films such as the IFC and the Sundance Channel. Digital editing has provided cheaper possibilities for the completion of a project primarily because the technology of editing can be contained on a desktop computer.

There are many examples of cheaper films that have been made in the last decade to wide acclaim. Perhaps the best example of a film that embraced the ethos of new media culture was the *The Blair Witch Project* (1999). Although highly stylized, it privileged handheld camera techniques, the regular use of digital video for authenticity and the clever utilization of both

appear as if the material was an incomplete video documentary that was stumbled upon and that detailed what went wrong in a college production crew's quest to uncover the mystery of Blair Witch. Drawing on what was revealed as much as what was not revealed, the film succeeded in navigating the lines of a horror film and the aesthetic of an uncured documentary.

Adding to its success, the producers worked on what could retrospectively be called viral marketing. The producers built a website for the film without revealing that the film and project were fictional. The website, filled with fragments that purportedly belonged to the missing production crew, attracted a following and connected fan websites as it moved to its first exhibition at the Sundance Film Festival, which helped maintain the ambiguity about the origins of the film in order to maintain its authenticity as a documentary. After its success at Sundance, the film was picked up for major distribution; however, the viral marketing where people found out about the film via word of mouth, was sustained, albeit with greater resources and ultimately massive distribution into the mainstream cineplexes.

It is usually distribution that connects smaller production companies to the larger film studios, and the success of independent films is crucially linked to these distribution deals. Over the last decade most of the major studios have not only trawled the independent film market at countless film festivals internationally for the next big 'independent' breakout hit, but they have also either purchased an existing independent production company or set up their own subsidiary to make their own small films. What has attracted the majors to this apparently smaller market is that the profit margins are so much better than even for the most popular blockbuster film. For instance, *The Blair Witch Project*, which cost only \$45,000 to make, actually had a box office of \$145 million. The major studio's commitment to the project was a \$2.5 million advertising campaign and guaranteed distribution. Even counting that figure in the production costs, the profit return is 7000 per cent. If we compare this to *Titanic* with production and distribution costs of \$250 million and a return of \$1.3 billion, the profit return is wonderful but only five times its cost, not seventy times. Industrially, the blockbuster does return very large profits, but also represents large capital risk. If a major film studio distributes a film that has proven itself within smaller festival markets and backs it for wider release the risk capital is much smaller. As a result we have seen the emergence of a series of internationally distributed 'success' stories that have been promoted heavily by the major studios and exhibitors, and have worked aggressively at a form of viral and cult marketing. From the UK, we have had *The Full Monty* (1997) and *Billy Elliot* (2000), from the United States and Canada we have seen the emergence of *My Big Fat Greek Wedding* (2002), from Australia films such as *Priscilla: Queen of the Desert* (1994) and *Strictly Ballroom* (1992), from Taiwan and the United States *Crouching Tiger, Hidden Dragon* (2002) and from Mexico *Y tu mamá también* (2001).

Most of the independent films listed here do not necessarily depend on the cheaper production techniques that digital technology has provided; what makes these films part of this general trend is that they represent new conceptualizations of the audience and the sources of activity and production that these new formations have generated to rejuvenate the rather staid industrial forms of production and reception of the major film corporations. The film industry now resembles the music industry from the 1950s as it tries to capture

outwards to larger national and international markets. The digital 'effect' is once again similar to the transformations in production in music this time in the 1980s, where there was a proliferation in digital studios from people's basements to locations in exotic and not so exotic locales. The technology and expertise in producing a film has democratized somewhat and has become more accessible. It is important to realize that film remains an expensive and collaborative resource and because of these labour and capital needs is not as flexible a form of production as, say, producing a website. What we are witnessing in the film industry through its bifurcation is a strategy that recognizes this shifting power of the audience and the new ethos of cultural production that can be more locally developed without the loss of 'quality'.

4. The convergence of media through digitalization presents different avenues for exhibition.

Distribution and exhibition of film are in a state of transformation driven by the new economies of digitalization. On one level, the film industry is faced with the same threat over the control of its intellectual property that has completely unsettled the music industry. In comparison to the music industry, the film industry's difference has been its more centralized administration of distribution and, ultimately, exhibition. Films have had a very constructed pattern of release through what are called windows. For instance, for most of the last 25 years a particular film has a theatrical release window in cinema houses for one to two months, followed by its international distribution and exhibition window, followed by its release on video window, then its release on premium cable networks window and finally on national free-to-air networks window in each market. Each release window provides a different revenue stream and, cumulatively, these streams ensure the success of larger studios with connections and distribution deals with the cable and television industry nationally and internationally.

From an industry standpoint the biggest threat to structured release has been the possibility of piracy at many different points of distribution and exhibition of a particular film. Pirate copies soon circulate internationally once a film is exhibited, as digital video camera recordings or digitally copied prints of films are made quickly. Because the digital copy does not degrade in the making of copies – if the copy is well made – it is a threat to sales of the film. Copies may quickly move through some parts of the international market; but it is the internet distribution of pirate digital copies of films that threatens to transform the value of the film in some of its principal points of distribution. With the internet, the structure of controlled and centralized release of prints is shattered through its capacity to distribute/exhibit to many points simultaneously as music sites have done so successfully since the mid-1990s.

The film industry itself has tentatively embraced the digital beyond its forms of production, partly as a way to thwart this challenge to its control of distribution and exhibition. Although the technology of digital projection is now four times the price of 35-millimetre projections (Wasko, 2002: 203), the industry is moving towards a much cheaper distribution of its film masters. Ultimately, films may be sent digitally to cinema houses for projection, which would reduce the number of prints actually circulating with a film's release

as we have seen with *The Matrix: Revolutions* (2003), is aimed at a similar technique of industry regulation (Holson, 2003). Likewise massive blockbuster releases where a film is exhibited on thousands of screens simultaneously and completes its principal run within two or three weeks is another way to eliminate the success of pirate copies and to simplify the exhibition cycle through equally massive-saturation promotional campaigns. The industry has also worked on digital encryption to ensure that films cannot be copied from legitimate digital versions such as DVDs where a content scramble system (CSS) is engaged when a recording is attempted.

Beyond using legal means to curtail the theft of intellectual property, the film industry has been working actively to improve its own product by using the capacity of digitalization to create what could be described as an elaborate new intertextual commodity (Marshall, 2002). The digital versatile disc or DVD is at the centre of this strategy to provide the audience with greater and greater possibilities and connections to individual film products. The DVD, in its enormous capacity for storage, now represents one of the dominant and lucrative 'release' windows for the industry. For instance, *Spider-Man* (2001) when it was released on DVD generated sales in excess of \$200 million (Audiodivolution, 2002).

Contained on its two DVDs were different screen formats of the film, discussions of special effects, English, French and Spanish versions of the film, music videos associated with the film, filmographies of the principal stars, interviews with the director and the composer, an out-take reel, screen tests and two documentaries, including the HBO *Making of Spider-Man* along with a profile of the creator and other artists of Spider-Man the Marvel comic-book hero. The *Shrek* DVD in its appeal to a children's market contained a series of simple question-and-answer games about the film as well as a remarkable program that allows the user to dub in their own rendition of the dialogue over film sequences. Films surround themselves with other objects of play and promotion, which have the capacity to immerse the audience into their architecture of engagement. Many of these products and forms of entertainment are repackaged with the DVD to make a more complete film experience. Once again, the film industry is responding to the new aesthetic of engagement in formats and styles that reconstruct interactivity and audience investment through new home versions of films and a more elaborate collector-friendly version of the particular film. Whereas rental was the largest market for the movie video cassette, ownership is the objective in the construction of the DVD.

The internet and the World Wide Web have presented a further challenge to the organization of the film industry. What has transpired via the web is an interesting and often cross-purposed array of websites that cater to film. Each major film has its official website. The film industry has generally tended to use the web as an extended promotional vehicle for its primary film products. Because of the web's structure of interactivity, however, these film sites possess much more than simple promotion. *Lara Croft's Tomb Raider* provided excerpts from its musical soundtrack. Other films provide background information that resembles the material that appears later in DVD format.

Fansites intersect with these official websites in unpredictable paths that are worthy of a great deal more study in their specific attributes than can be provided here. Film fansites

attracted the greatest amount of interest that has developed on the web. Thousands of fans have developed websites that are devoted to some aspect of the films. The official *Star Wars* site actually provides a resource centre that allows for such a community to connect to others with a similar passion for the films. It lists the 100 most successful and popular fan websites as well as providing a great number of other sources of information about past and future films. In fact, *Star Wars* George Lucas sponsors a short film fan tribute festival and chooses the winning entrants each year for exhibition on the web (Atom Films, 2004). The web thus serves as an incredibly rich information source for the film industry; but it must be understood that the web is uncontaminable in terms of what actually appears and often the kind of information may not suit the objectives of the film industry. Just as many websites of fans are supported by film studios, many others are forced to shut down for copyright infringement primarily in their use of images. The web can be thought of, then, as containing a clear tension for the film industry: it is evidently a channel to connect to and service fans; but it also represents the cultural location for what is perceived as the greatest threat to the film industry and the integrity of its product.

It is not surprising therefore that there are many sites that confront the power of Hollywood. The web provides an avenue for quite alternative forms of exhibition and distribution of film. Since the mid-1990s, there have been sites that have allowed patrons to download Hollywood films. Far more interesting are the resource sites that gather and gatekeep the production of short films. Because of the length of time required for downloading, the short film has become one of the principal web cultural forms and has been instrumental in a kind of renaissance of the genre. At Atomfilms.com, registered users can peruse categories that include action, animation and comedy. Like Atomfilms.com, ifilm also serves as a site for new independent film releases that circumvent the usual patterns of distribution and exhibition. Although these two sites represent the greatest concentration of film exhibition on the web, digitalized film/video, along with animated shorts, are ubiquitous on the internet (see Harris, 2002). The web provides something that is limited through the major film industry – a regular venue to exhibit productions that do not conform to feature-film length or theme. We can see that via the internet in this instance, film has been democratized in its distribution and because of that has stimulated a growth in production.

Conclusion

Film is now an exhibition technology that is over a century old. Its very mechanical origins with sprockets, reels, teeth and motors hark back to the inventions of the eighteenth and nineteenth centuries. Despite the rise of many other pretenders to the organization of popular culture, film as an industry and as cultural practice continues to sit atop the hierarchies of entertainment culture. What film has become in its grander theatrical exhibition is a herald. It heralds possible futures through its dialectic celebration of technology through appropriation and negation of its possibilities through Delphic dystopian narratives. Through its appropriation of digital technology, it is equipped to tell the stories of the future in a way that produces a sense of wonder. Where technology cannot quite fulfil its promise, film can pull the

also a herald for the organization of the media economy. Through its saturation promotional campaigns, the blockbuster film enters thunderously into the collective cultural imaginary. Like a remarkable demonstration of the power of the aesthetic, film then becomes the leading edge of the intertextual commodity. Sean Cubitt writes how film's movement into the digital facilitates the transition of images into other digital forms such as electronic games: its digital animation as background helps the construction of the game itself (Cubitt, 2002: 26). *Harry Potter* or *Lord of the Rings* are well positioned for a plethora of other commodities attached to the images presented in the original films and in their digital constructions easily convertible to new games, new toys and new elements of a 'film cycle' that appear in websites and fan reconstructions of the film (Cubitt, 2002).

This rejuvenation of film is not limited to the grand-scale strategies of a lugubriously large industry. The digital has created new cultural economies. There is clearly a place for the short film via the internet. Through different websites, the digital version of film breaks down the limitations of exhibition that have controlled what it is possible for audiences to see. Digital cameras have made it possible to have filmic qualities in the smallest of productions. Although this expansive development of film is still quite circumscribed, it demonstrates how 'film' has been more accessible and is connected to the wider new media and cultural phenomenon of the will-to-produce.