Digital Film Art and the Persistence of the Classical Hollywood Style

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For Andrea Renée,
Wife, co-parent, best friend, and the funniest person I've ever met

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TABLE OF CONTENTS

TABLE OF CONTENTS

Chapter 1: An Overview of Digital Technologies in Mainstream Cinema

I. Digital Film Art?

> "There is great excitement about the future possibilities of immersive or interactive entertainment, but also fear that digital technologies are leading film into a descending spiral of spectacular superficiality." (Lister, Dovey, Giddings, Grant, and Kelly 137)

> "[T]he drive behind much of the technical development in cinema since 1950 has been towards both a greater or heightened sense of 'realism' and a bigger, more breathtaking realization of spectacle...the intention of all technical systems developed since the beginning of the 1950s has been towards reducing the spectators' sense of their 'real' world, and replacing it with a fully believable artificial one." (Allen 127)

Digitization is the process of translating input data into a series of binary digits for storage and re-translation into another form. In the instances to be discussed in this dissertation, that form is most likely that of an image on a display, perhaps being viewed in the office of a visual effects supervisor or in the home of a teenage science fiction fan watching on a personal computer or mobile phone, or possibly by an opening weekend crowd in a public theatrical setting on a much larger screen. All fall under the heading of "cinema" in some way. Cinema as an art form has experienced a transformation in the technologies used to produce, distribute, and exhibit it since the mid 1970s, which mark the beginnings of the widespread use of digitization of media.

Some of the earliest applications of digitization of images were undertaken in the interests of transmitting visual media material more easily and accurately, such as with the conversion of analogue video to digital information in order to broadcast the Apollo 11 lunar landing back to Earth (McKernan 16-17). Nowadays, though, digitization is

1

primarily used as a method of efficient storage that allows for greater artistic

manipulation and flexibility. Once digitization could be undertaken in a cost-effective

manner, its use in the film industry began to spread in the early 70s (Rickitt 90). Created

digitally, or filmed traditionally and then digitized, one black cat can easily, and at little to

no additional cost, be multiplied into a crowd of 100,000 black cats, or fluidly

transformed into a white dog while we watch. These transformations would be

impossible in real life and awkward at best with the use of traditional effects

technologies; with digitization, the potential magic of movies has increased a hundred

fold. Hollywood has enthusiastically embraced these technologies, with an eye on

improving the quality of its products while simultaneously lowering expenses. While

some aspects of Hollywood filmmaking practices have been changed by digitization, the

core product of the dream factory has not. As David Bordwell, Janet Staiger, and Kristin

Thompson note of Hollywood cinema to 1960, and as I will be arguing in what follows,

"telling a story is the basic formal concern" (3). Through advances in the digitization of

filmic art, storytelling's place in the digital era remains the same.

     In the 1990s, the power of digital computers expanded exponentially while their

costs simultaneously plummeted. Michelle Pierson has called the early to mid 90s the

"wonder years" of digital special effects: "a formative if short-lived period in the

production, circulation, and cultural reception of computer-generated special effects in

Hollywood [science fiction] cinema...a period in which CGI effects became the focus of

intense speculation not only for cinema audiences but also for the special effects

industry itself" (Pierson 137). Pundits and public alike began to get caught up in frenzied

anticipation and anxiety over the potential changes wrought on the forms of cinema by these technological developments.

Anticipation focused on two divergent potentialities. On one hand, some imagined that cinema was nearing its fulfillment as what André Bazin identified as total cinema: an exact and all-encompassing representation of the physical world. While Bazin wrote in 1946 that "cinema has not yet been invented," the technological changes that had begun in the 70s and had been made manifest in the 90s held out the possibility that the time had arrived when cinema was finally about to be invented. It would be a cinema that could both recreate the real world and create new worlds which had heretofore existed only in film artists' imaginations. The 90s offered profound developments in virtual reality environments, as demonstrated by the CAVE technologies at the Electronic Visualization Lab at the University of Illinois at Chicago and Hollywood's concomitant burgeoning obsession with VR technologies as demonstrated in films such as *Lawnmower Man* (1992). The impetus towards "a total and complete representation of reality...a perfect illusion of the outside world in sound, color, and relief" (20) that Bazin saw as the goal of Eadweard Muybridge and Auguste and Louis Lumière was now capable of being realized due to digital computers. While total VR—which aims for a completely immersive sensory experience that aims to present "the reality that is supposed to lie behind and beyond representation" (Bolter and Grusin 162-3)—was not yet possible, steps towards more immersive illusions in cinema were being taken at an increasing rate as the 20th Century breathed its last.

On the other hand, some wondered whether the new digital era was

impoverishing cinematic form rather than enhancing it. This era, with its advancements, provoked the aforementioned anxiety by seemingly overturning the classical storytelling traditions Hollywood form was founded on in the early decades of the 20th Century in favor of a new cinematic form that focused on spectacle rather than storytelling. The period heard claims of a new "post-classical" era in Hollywood brought about by a multitude of villains: the influence of European Art Cinema; the drive to produce dumbed-down, record-setting box-office blockbusters; or the degrading of film aesthetics via influential formats such as advertising and music video. Film and media scholars such as Thomas Schatz, Justin Wyatt, and Richard Schickel lamented the passing of an era during these wonder years, with some of them asserting that "Hollywood seems to have lost or abandoned the art of narrative" (Schickel, quoted in Smith, 13). Not coincidentally, one omnipresent enemy at the gates was digital technology. Whether computer-generated visual effects were distracting from narrative structure or film form and style were being geared towards ancillary market compatibility with video games, digital technologies were blamed by some for the downfall of cinema just as much as they were being lauded by others for its long-awaited self-actualization.

The intervening two decades between the wonder years and 2013 have both fulfilled Bazin's dream and confounded the digital scolds. The illusions generated with cameras and projectors might never be a complete representation or replacement of reality that some believe they can be. However, this should not be seen as an inherent shortcoming of the medium, but as a fundamental strength. Cinema, through the art of special effects, can both reproduce the world we live in and fashion its own worlds that

are just as absorbing as everyday experience. Through it all, the art of narrative has survived. As some scholars have argued, "reports of the death of narrative in Hollywood filmmaking are surely much exaggerated [and]...narrative is omnipresent" (Smith 13). The rise of digital visual effects may even signal an invigorated life for narrative film.

Cinema itself has always been, to many observers, the very art of special effects. Any film that deviates from a direct, unmediated presentation of reality, if it employs the smallest edit or uses the most unobtrusive filter, can be said to employ special effects. Even the acts of directing a camera at an object or scene or the selecting and recording of objects and events for later presentation in a different time, place, and context, can be see as a special effect. As Rudolf Arnheim writes, the way even the simplest film is created "had to be selected definitely out of a hundred visual possibilities...[b]ut this very 'limitation' yields the artistic opportunity of making the particular pictured event convey an idea" (Arnheim 38).

Cinema's dominant cultural form—narrative—works to engage viewers in a series of events set in a fictional world populated by imaginary people; the idea conveyed is that of a story. Sometimes, fantastical settings and beings that do not exist in reality or have long since vanished into history need to be conjured up onto screens to absorb viewers in a convincing story world. Just as often, settings and beings that do exist in reality are conjured onto the same screen or "real" images are altered slightly, perhaps in the interest of cost-cutting or convenience during production, or to enhance the visual impact of the images. These additions and alterations need not be seen as the antithesis of narrative, however, but rather as its auxiliary. Digital technologies augment

the traditional tools filmmakers have used for over one hundred years, but the end result is neither the ultimate realism of virtual reality nor spectacular imagery divorced from a plausible story set in a believable world.

This augmentation upholds the century-old tradition wherein Hollywood cinema "purports to be realistic" (Bordwell, Staiger, and Thompson 3). Stephen Prince has suggested, based on James Cameron's explanation that his work on *Avatar* was to foster the seduction of reality, that "this seduction is not predicated upon an impulse to betray or abandon reality but rather to beguile it so as to draw it close, study and emulate it, and even transcend it" (9). Digital filmmaking technologies do just this, by "taking viewers to new thresholds of optical experience" (10). Prince suggests that because film is, and always has been, a medium of composited images—of the fragmenting of reality and the recombination of images and sounds into meaningful stories—digital effects are not a betrayal of realism in film art, but a truer realization of it (51).

While he confronts Bazin's remarks about the nature of reality in cinema, Prince barely mentions Arnheim. However, his own observations on the power of digital effects seem to echo Arnheim's writings on formalism: "Digital images take viewers through the looking glass into new landscapes of vision unavailable to ordinary sense, enable them to peer into domains of the imagination" (55). As Arnheim writes about the art of cinema, "[t]he spectator is thus brought to see something familiar as something new" (44). With the advent of digital technologies, this artistic defamiliarization has reached new heights. It is important to remember that, as filmmaking technologies advance and bring

dinosaurs to life or merely saturate the sky with a richer hue, the purpose of film never was—and never should be—to simply replicate the real, but to create realistic illusions which support an engaging narrative. Those illusions should seem familiar to us, but also be different enough to engage us in the process of defamiliarization. As Kristin Thompson writes, artworks "are ordered and purposeful in a way that differs from reality" (*Breaking* 11). "The renewed or expanded perceptions we gain from artworks," she notes, "can carry over to our perception of everyday objects and events and ideas" (9). Writing in 1933, during the infancy of widespread sound and color film, Arnheim condemned unimaginative film viewers who "want to keep on getting nearer to nature and do not realize that they thereby make it increasingly difficult for film to be art" (75). Perhaps his comments are even more applicable to those who say digital technologies should recreate the everyday world.

As Bordwell, Staiger, and Thompson point out, Hollywood films have always tended to value story logic over the rules of the everyday world (19); narrative is king. The entire history of cinematic art can even be seen as attempt to tell stories more effectively with the aid of technology, as it has always trafficked heavily in the art of special effects. From the early trick films of Georges Méliès, to the use of techniques such as rear projection, to the stop-motion animation of Ray Harryhausen, to the more mundane techniques associated with continuity editing carried out on a Steenbeck or Moviola, cinema has utilized more and more sophisticated technologies to assist in its creation of a complete world to set its stories in, or the finessing of that world. Despite the pioneering work of effects wizards like Harryhausen and Willis O'Brien, the art of

special effects really only became capable of bringing "realistic" illusions to the screen beginning in the late 1970s, with the advent of digitally-generated effects. However, despite the fears voiced by many film scholars that Hollywood's love affair with digital effects has destroyed the storytelling structure that provides a context for these effects, mainstream cinema continues to rely on the classical Hollywood style of narrative. This style is characterized by a unified plotline composed of a chain of cause-and-effect events undertaken by a goal-oriented protagonist.

While many digital technologies have come and gone—the pioneering rudimentary line drawings in *Star Wars: Episode IV* (1977) seem quaint now— they have all worked in support of maintaining this narrative foundation. Certain genres, such as superhero films, may have increased in prominence and we may have seen digital novelties like digital 3D attempt to do battle with competing entertainment formats, but the end result of the digital scientific and artistic advances is that the storytelling aspect of cinema has become more imaginative and powerful. The use of computers to create fictional worlds and people in a convincing manner simply advanced the narrative artistry of mainstream cinema beyond the level of achievement it had attained until that point, but does not take it a new direction. This dissertation argues that, as dramatic as these changes have been, they have had little effect on the basic conventions of classical Hollywood storytelling. Before I present this argument, it will be helpful to place this issue within an historical framework which traces the evolution of cinema as new digital tools have been introduced into the realms of pre-production, filming (or production), post-production, and exhibition.

II. A Brief History of Digital Filmmaking Technologies

       The beginning of the digital era in cinema was not a dramatic overnight change, but rather a series of small steps. The most conspicuous advances occurred in the realm of visual effects. The era began with techniques of filming incorporating computerized images gradually, and took decades to become widespread. Although *Star Wars: Episode IV* is often cited as the breakthrough film in terms of the use of computers in special effects production, two films contained digital images prior to its release: *Westworld* (1973) and *Future World* (1976), although they were basic, fleeting, and hardly noteworthy. The digital technology used in *Star Wars* was mostly deployed in the film to assist in controlling the movement of cameras as they filmed traditional models of spaceships, although there were a few brief digital images displayed on diegetic computer screens during the scene of the Rebels' planning and attack on the Death Star.[1] George Lucas' reputation as a pioneer in what general audiences think of as digital effects rests largely on his work in the later *Star Wars* 'prequel' films that began being released in 2001. It was actually with *Star Trek II: The Wrath of Khan* and *Tron*, both from 1982, that the era of digital special effects could truly said to have been born. *Khan*—with its famous "Genesis sequence" which depicted the rebuilding of a dead planet surface to a lush landscape—contained the "first stand-alone, all-digital sequence to appear in a feature film" and is cited as "the era's great industry eye opener" to the potential of digital effects (Prince 21-3). As dramatic as this may sound, the sequence was only an eighty second segment of a nearly two hour long feature film;

there was clearly room for expansion.

Later in the same year, *Tron*, which expanded on *Khan*'s total effects content, contained numerous digital sets and several minutes of entirely computer-generated footage. Unfortunately for digital effects advocates, the film described as "the first movie to make extensive and widely publicized use of digital graphics...[and] a test for the viability of computer-generated imagery in feature films" ended up being "proof to many that the future of CGI was limited" due to its colossal failure at the box office (Rickitt 162). By today's standards, *Tron*'s animation is rudimentary, and therefore appropriately described as animation in that there is no pretense that what we are looking at is supposed to be real. This is largely due to the narrative function of the graphics' style: the world inside the computer is supposed to look like simple computer graphics from the real-world era of the early 80s. The movement of Kevin Flynn (Jeff Bridges) from the physical realm into the computer realm of the mainframe (foreshadowing William Gibson's description of cyberspace) illustrates this divide between the digital and everyday worlds as illusionary and realistic. Ultimately, however, the failure of *Tron* at the box office did not discourage artists and technicians from continuing to develop digital effects. Despite the limited deployment of digital effects in the *Star Wars* films of this decade—with no digital work at all in 1980's *The Empire Strikes Back* and very little in 1983's *The Return of the Jedi*—the financial success of the later films in the franchise, with their more credible imagery (and tight narrative form) "proved to the big studios that innovative special effects would bring audiences into the theaters" (Pinteau 66), and these innovations would from now on be mostly digital.

Further experiments followed in such films as *The Last Starfighter* (1984) and

Young Sherlock Holmes (1985). In the latter, the effects firm Industrial Light and Magic,

which had grown out of the production of *Star Wars,* created the first digitally-generated

character: a stained-glass knight that was composited into a live-action setting. A

standard Hollywood mystery/period piece working with presold properties in Sir Arthur

Conan Doyle's characters, the film adheres closely to classical narrative rules. Largely

incongruous within the film itself, the digital effects scene lasts under one minute and

plays a minor role in inaugurating the whodunnit and never reappears. However, the

knight, created by John Lasseter (later of Lucasfilm spinoff Pixar), attracted attention

from both the moviegoing public and industry professionals, and helped the film garner

an Academy Award nomination for Best Visual Effects. Primitive when compared to the

sophisticated animated characters that audiences grew accustomed to in films such as

Toy Story (1995) and *The Lord of the Rings* series (2001-2003), the knight was

revolutionary for its time. ILM, founded and headed by John Dykstra, continued to

pioneer special effects throughout the 1980s on the *Star Wars* and *Indiana Jones*

franchises, but many of these landmark sequences were still being created using

analog techniques such as stop-motion rooted in the same practices developed at the

dawn of cinema and perfected by artists such as O'Brien and Harryhausen. The digital

techniques used to create the knight were soon surpassed by ILM and others, who

integrated these new tools more firmly into narrative contexts.

In 1989, digital visual effects took a quantum leap forward. Audiences watching

The Abyss were treated to a startling sequence depicting a shape-shifting alien as a

stressed-out research crew comes face to face with the mysterious entity they have

been investigating. The realistic detail of the otherwordly pseudopod raised the bar for

the computer-based realization of fantastical images. Two years later, in *Terminator 2:*

Judgment Day, this achievement was overshadowed by the development of the

morphing process used to depict a shape-shifting character played by Robert Patrick—

the T-1000 sent from the future to assassinate John Connor (Edward Furlong), the

leader of the human resistance movement. This character was not only much more

visually complex than the alien in *The Abyss*, but occupied a far greater amount of

screen time, becoming one of the film's main characters.

      Increasingly realistic and spectacular CGI entered a new era with a film that is

still considered extraordinary by contemporary effects standards. In 1993, Steven

Spielberg's *Jurassic Park* was released to an anticipatory public hungry for the much-

publicized arrival of a new level of sophistication in digital visual effects. It did not

disappoint, and moviegoers were apparently more than willing to spread the word, as

the effects *tour-de-force* became the highest grossing film up to that date. Spielberg was

undoubtedly taken by surprise at the film's digital effects success, as he had originally

planned to use traditional animatronics and stop-motion techniques to bring the

dinosaurs to the screen and had to be talked into the use of digital methods by those at

ILM (Rickitt 210). A combination of digital techniques and traditional animation methods

(including hand rotoscoping and stop-motion) was used to composite the dinosaurs with

live-action sequences.

      ILM's success in using these new and/or advanced techniques grew as they

worked on the film, and scenes featuring the dinosaurs were greatly expanded in order to showcase the developments that were being made on the fly as the artisans put the film together (210). A number of innovations and advances were unveiled. Among them were kinematics—crafting realistic relationships between objects in motion—raised to a new level of interaction between parent and child objects. The relationship between a torso and a hand, for instance, previously only worked in one direction in terms of movement. Inverse kinematics allowed that relationship to work both ways, adding to the realism of the movements. Texture mapping—supplying surface detail to a 3D object —brought a verisimilitude to the skin of creatures that hadn't existed in 65 million years and then allowed that skin to be wrapped around the fictional dinosaur's body and moved in relation to light, shadows, and water realistically.

The two decades following the watershed *Jurassic Park* have offered an endless parade of increasingly powerful digital visual image-making technologies. In 1994 came *Forrest Gump*, a film that most people wouldn't associate with digital visual effects, and for good reason. A heartwarming drama about the life and loves of a simplistically noble developmentally disabled man, the film is also cited as the pinnacle of the use of CGI to create not unbelievable images, but almost mundanely believable ones, strengthening the illusion of reality in order to tell the tale of an everyman caught up in major historical events. Zemeckis employed digital effects to generate scenes of the desegregation of the University of Alabama and at the White House through the 60s and 70s as Forrest (Tom Hanks) meets a succession of U.S. Presidents from John F. Kennedy to Richard Nixon. Digital technologies allowed *Forrest Gump* to improve on previous falsified

historical reenactments such as those in Woody Allen's *Zelig* (1983), which used bluescreen technologies for the same effect. This type of realistic effect is located on the spectrum of effects styles as "invisible," a type which achieves "perfect verisimilitude that does not draw attention away from the narrative; rather, the effects serve to engage the viewer in the events of the story without ever revealing the artifice used" (McClean 77). Also in evidence are "documentary" or "artifactual" effects (74) in the photoshopped *Fortune* Bubba Gump cover that acts as visual evidence of the events in the story we are being asked to believe. Both types add to the verisimilitude of the diegetic world. While the wonder years were coming to a close, progress in digital technologies was not.

In 1999 came a landmark film: *Star Wars Episode I: The Phantom Menace*. Equaled in innovation and influence by only a handful of prior films, *The Phantom Menace* has been cited as "the most sophisticated digital effects film in the history of the cinema" (Rickitt 365). *Episode I* was remarkable for advances in shooting on digital video, using digital characters and performance (e.g. Jar Jar Binks), digital backlots, digital compositing that combined live-action and digital elements in various scenes, and the unparallelled number of digitally processed shots (1,900 out of 2,000 total in the film).[2]

The history of digital effects in the first decade of the 21st Century is primarily a chronology of improvements on previously developed techniques. The phenomena that had been traditionally difficult to realize in CGI—smoke, water, fire, hair, skin, muscular movement—had already been conjured onto screens. What remained to achieve was

an increasingly convincing illusion of alternate realities, places, beings, and objects either long gone from our world, or that exist only in our imaginations—what Stephen Prince has called "perceptual realism." The former goal of resurrecting a long-gone world was actualized in Ridley Scott's *Gladiator* (2000) which featured, in addition to the grandiose architecture of the Roman Empire, massive realistic armies and crowd scenes on a scale never before accomplished in order to magnify the achievements of its titular hero. The latter dream of an elaborately-realized imaginary universe came true in Peter Jackson's *Lord of the Rings* trilogy, an epic *tour-de-force* of visual artistry that transported millions of moviegoers to Middle Earth—a place that existed only in the mind of J.R.R. Tolkien, the author of the novels that the films were based on. The level of detail generated in the creation of imaginary creatures such as elves and orcs, the landscapes they inhabited, the vegetation covering those landscapes, their dwellings, their clothing, and the weapons and tools they used brought a new level of realism to fantastical ideas that were previously thought to be too difficult to render convincingly, enabling viewers to more fully share in the adventures of Frodo, the film's protagonist. The wild box-office success in showcasing these digital fabrications helped demonstrate to Hollywood studio executives how a significant investment in digital visual effects could be turned into runaway global profits from the film and its ancillary products (Thompson *The Frodo Franchise* 8-9).

The technological advancements of this era had an impact on the subject matter of movies as well as on the techniques used to make them. The digital depiction of the fantastical has served to greatly expand genres that rely on these images, but have

heretofore been hamstrung by the primitive nature of the illusions presented to audiences. Adaptions prior to Jackson's of *The Lord of the Rings* largely proved to be failures. Certainly fantasy, horror, and science fiction have benefited in terms of popularity, but the greatest change can be seen in the rising popularity of a formerly marginalized genre—that of the comic-book superhero film (Bordwell and Thompson 331). The place where the colossal profits generated by superhero comic books since the late 1930s and Hollywood's penchant for exploiting presold properties meet would seem to have been the perfect breeding ground for a box office-busting genre whose investment (and subsequent profits) were in keeping with the grand scale of its narrative content. However, until the 2000s, superheros were largely relegated to Saturday serials (*Captain America* from 1944), campy television series (the 1960s *Batman*) or the type of beyond B-movie throwaways like the 1960s films *The Wild World of Batwoman* (1966) and *Rat Fink a Boo Boo* (1966) that ended up as fodder for Mystery Science Theater 3000. A handful of successful exceptions exist, of course, with the series of *Superman* (1978-83) and *Batman* films (beginning in 1989) being good examples, but most often, prior to 2000, superhero films utilizing still-developing digital effects, such as Roger Corman's version of *The Fantastic Four* (1994), were considered so bad that they never saw the light of day.

Improvements in digital effects processes during the early 21st Century brought the superhero genre to the point where it could launch a serious assault on more traditionally popular genres. The success of the *Spider Man* (2002-07) and *X-Men* (2000-11) franchises, along with that of individual films such as *Watchmen* (2009), were

made possible by the increasingly sophisticated effects processes that allowed the depiction of physical phenomenon that could have previously only been realized in comic books. Hollywood's second attempt at producing a film version of *The Fantastic Four* in 2005 is a textbook example. The four characters in the super-group, one of Marvel Comics' most popular titles, each possessed a distinctive superpower (invisibility, unbreakable rocks for skin, combustibility and the ability to make one's body elastic) that made their depiction with anything less than top-flight effects artistry laughable. As the second decade of the century begins, the superhero genre is poised to become Hollywood's most successful moneymaker in decades, thanks solely to digital wizardry. At the time of writing, *The Avengers* (2012), based on Marvel's long-running Silver Age superhero group, holds the place of third highest box office gross in history. The success of these presold properties helps demonstrate how the significance of narrative form persists despite its digital augmentation and even opens up previously unearthed story worlds for hungry moviegoers.

Digital tools enabled advances not only in the domain of visual effects, but also in the realms of camera techniques, editing, and sound. New lightweight digital cameras in the late 1990s could come closer to the action than ever before and enhance the realism of the fictional spaces depicted in films. In Denmark, under the auspices of the Dogme 95 vow of chastity, Thomas Vinterberg, Lars Von Trier, and others inaugurated a new movement in cinema which sought to resist the alleged spectacularity invoked by computer-based filmmaking tools. Ironically, it often achieved its ends through the use of digital tools. In 1998, both Vinterberg and Von Trier released films which used these

new cameras to achieve a fresh feeling of intimacy with their characters and the story worlds they inhabit. Vinterberg's cinematographer Anthony Dod Mantle shot *The Celebration* on a Sony miniDV camera; at the time, one of the smallest and lightest consumer video cameras available. *The Idiots* was shot by Von Trier with a similar Digital Betacam camera. With *The Celebration* and *The Idiots*, these two directors used the new digital cameras to close in on and follow the action in ways that had never been seen before. This use of digital technologies was highly influential around the world, as demonstrated by the box-office success of the American film *Cloverfield* (2008), which employed similar stylistics shot with digital cameras.

The following decade witnessed new experiments which drew on the powers of digital cameras. Both *Timecode* (2000) and *The Russian Ark* (2002) exploited the capacity of digital video cameras to bypass the need for reloading every eleven minutes which had always hampered traditional 35mm cameras, and were actually shot in continuous takes. *Timecode* consists of four continuous takes of the same performance shot simultaneously and edited together via compositing into four quadrants on the screen. The multiple takes converge and branch off at various points in the film, which consists of four different viewpoints on one story world inhabited by the same characters and events. *Russian Ark*, by contrast, consists of one continuous take of one line of action and does not share *Timecode*'s split-screen effect. It does, however, differ in that it is not a narrative film in the traditional sense; rather, it is a series of vignettes from Russian history, narrated by a man whose first person optical point-of-view is the same as that of the digital video camera used to shoot the 96 minute long film. Its non-

narrative form is not due to digital technologies, however, but to the way the filmmakers chose to portray events and actions within the film, regardless of what medium it was shot on.

Editing and sound, too, were affected by digitization. The first digital editing system appeared in 1983, with Laser Edit, a means of transferring images from film onto a laserdisc for viewing and editing (Allen 121). George Lucas was again a pioneer in using these technologies, with his development of the EditDroid system in 1984 (McKernan 24). 1991 saw the release of the user-friendly editing application Premiere by Adobe. Premiere soon became widely embraced by editors, "making editing the first domain to go digital and be accepted by the industry as a professional standard" (Prince 20).

In the realm of sound, *Star Wars* is again important in the history of digital cinema as Lucas pioneered the use of digital sound in the inaugural installment of his science fiction franchise. The use of digital sound (particularly the surround capabilities of multichannel recording and playback) in the movie has been cited as the "benchmark against which all subsequent films were compared" (McKernan 111). Even before visuals, it is with sound that Hollywood first began to transition to the use of digital technologies and sound "is often credited with having revived the film industry in the 1980s" (Elsaesser 226). Although there were experiments with analog multichannel sound (e.g. Sensurround in 1974) it is the digital processes pioneered by Dolby Laboratories that have caused the dawn of this new era in filmmaking technology to be described as fundamentally altering the relationship between sound and image in terms

of the overall moviegoing experience. As Richard Maltby writes, "the movie theater...has become...a three-dimensional extension of the screen's two-dimensional image in which the audience is surrounded by sound" (259). The ever-evolving audio capabilities advanced by Dolby, from the release of *Star Wars* and up to and including the development of High Definition sound concurrent with visual HD technologies, demonstrates that the aural aspect of cinema continues to be just as important to the industry as the visual.

In 1999, *Star Wars: Episode I* extended the reach of computer technologies from the realm of production into that of exhibition. It was not the first film to be digitally projected—that distinction possibly belongs to a 1998 horror film entitled *The Last Broadcast,* which was also entirely shot and edited digitally—but *The Phantom Menace* generated a serious buzz surrounding digital exhibition. Although initially exhibited only in limited release, it holds the distinction of being "the first commercial exhibition of a digital feature film using digital projection" (Willis 16), certainly at least in terms of mainstream Hollywood cinema made by an industry favorite. The Texas Instruments DLP (Digital Light Processing) system used to project the film was just one of many competing systems at the time, but still dominates the market at the time of this writing. Potential conflicts surrounding different standards for digital exhibition have been at least partially mediated through the establishment of the Digital Cinema Initiatives—a consortium of major Hollywood studios dedicated to establishing industry-wide standards that ensure quality as cinema makes the transition to digital projection.

As the new century got underway, digital technologies also revived Hollywood's

interest in 3D. Film scholars noted that "the 2009-10 film seasons will be remembered as the years of the 'return of 3-D' and James Cameron's *Avatar* as its culmination" (Elsaesser 218). Much as the development of analogue 3D processes in the 1950s was an attempt by Hollywood to corner the market on entertainment options for the newly expanded leisure class after WWII, especially as competition for the rise of television in American homes, the drive to revive these previously failed technologies can be seen as an attempt to compete with the Internet and video games for the wallets of the growing number of young people raised during the dot com boom. Sold to a public too young to remember the first go-around, 3D, as embodied most spectacularly in 2009's *Avatar*, offers no different visual or story thrills than 1953's *House of Wax* did. Born in 1952 with *Bwana Devil* and resurrected in 1986 with 3-D IMAX (Allen 112-5), three-dimensional film images were significantly advanced by 2005 with the Disney digital short *Chicken Little*. Disney's film was produced via the RealD process, just one of a number of eventual competitors in the "new" market; among others, Master Image, XpanD and InTru3D have all become entrants into the market. The year after saw a proliferation of 3D feature films, including *Beowulf*, *Monster House*, and *Meet the Robinsons*. By 2009, 3D had been accepted as part of the mainstream of Hollywood filmmaking, as *Avatar* won the Academy Award for Best Cinematography. Elsaesser observes that "from an aesthetic perspective, D3D aspires to become, in the films themselves, an invisible rather than visible special effect" (221), reaffirming the thesis at hand that the digitization of Hollywood is less radical than often presumed. He goes on to state:

> "For the past thirty years or so, Hollywood picture making has revolutionized itself in many ways, most clearly through digital production methods and a corresponding shift to outsourced post-production; yet very few of its industrial and business innovations have actually been noted by the average viewer because so much in our movie-going experience has remained the same: the two-hour feature film, the narrative format, the genres-and-stars formula, the racked seating, the projector position, the social habit of going to the movies, and the popcorn and the soft drinks." (226)

Hollywood now faces the same set of circumstances as it did in the 1950s concerning 3D's present and future potential for saving cinema from its competitors in the home. A number of problems have become apparent in digital 3D's early years: prohibitive costs for exhibitors to convert their projection equipment, customer dissatisfaction with the image quality, little differentiation from 2D films, unwillingness on the part of moviegoers to pay the ticket premium, physiological difficulties experienced by some audience members, a limited supply of films which 3D is an appropriate format for, and higher production costs for either filming in 3D or converting a film in post. Kristin Thompson calls 3D a "minority product" and predicts a similar fate for the process now as in the 50s ("Has 3-D Already Failed?). Like many other critics, Thompson sees any stylistic changes brought by 3D to be intrusive into her attempt to go to the cinema and enjoy a film with an engaging narrative. Far from an innovation, 3D merely represents the return of the "complex interaction between industrial needs, product differentiation, economics, and audience expectation...to increase production efficiency and reduce costs, and to create a more attractive viewing environment" (Allen 109) which will very possibly fail just as it did sixty years ago. Others concur, as Elsaesser writes: "as far as Hollywood goes, D3D is not treated as a special effect but

as a means towards integration and a resetting of default values" (245).

In addition, Hollywood's move to extend the profit cycle of films has pushed digital exhibition beyond theaters and into homes, particularly with the advent of the DVD. Where the compact disc format slightly altered the aesthetics and marketing of film audio, the DVD or Digital Versatile Disc (often erroneously referred to as Digital Video Disc), had a profound impact on the way in which films were produced, distributed and exhibited. In hindsight, it seems that, as the DVD began to hit global shelves in 1996, the potential impact on the home video industry was not initially appreciated. While originally a way of achieving higher resolution than that of films distributed for the home viewing market on VHS (and reflecting the current drive for home theater systems with progressive scan machines playing even higher resolution Blue-Ray discs) DVD's capabilities rapidly expanded in a way that changed the film industry's approach to creating and disseminating films. The initial excitement over random access to the time line of the film and multiple subtitle options soon gave way to more sophisticated fare. "Extra" features such as deleted scenes, alternate endings, "making of" documentary segments, and voice-over director's commentaries quickly became required components of the DVD packaging. The home viewing experience expanded the confines of a film's look, story, and meaning beyond the theatrical setting. While some of these features were available on analog formats such as VHS, the random access element allowed viewers to view/listen to multiple versions of the film and its ancillaries in a seamless manner. If one wasn't paying close attention when choosing setup options, a particular playback experience could end up as a very

different work of art than the director originally intended audiences to see. This de-emphasis on the artist in favor of the power of the beholder came about not only because of DVD, however, but also as a result of another digital technology that changed film in significant ways: the Internet and the proliferation of various digital file formats distributed via networked computers.

With the birth of the World Wide Web in 1993, file sharing practices that had previously hidden their primitive accomplishments in the digital shadows of Usenet and FTP protocols had their capabilities expanded almost infinitely. Following the example of digital music pirates on first Napster and then Soul Seek and Lime Wire, fans began to trade digital copies of movies over the Internet. The rise of the BitTorrent protocol in 2001, coupled with massive increases in commercially available bandwidth, allowed for an explosion of movie file-sharing. Beyond just watching these films for free though, fans once again imitated trends in the music industry and began to remix films into megacuts, misleading trailers, mash-ups, and fan edits. Where audio recording had a long history of original versions of songs being altered in the studio by professionals for commercial purposes, video remixing became an activity by and for the fans. There are a number of reasons for this. First, video-editing applications such as Adobe Premiere that were previously beyond the reach of amateurs due to the exorbitant costs were also now being shared via BitTorrent trackers. Simple versions of these applications had already been available to the public (Microsoft had bundled its rudimentary Movie Maker with Windows Me in 2000), but the availability of much more powerful tools inspired amateurs to begin re-editing feature films in their own living rooms.

The appearance of *The Phantom Edit* (a remix of *The Phantom Menace*) around 2001 illustrates this burgeoning power of the audience in reworking original material generated by movie studios. While not approving this release (as it actually used the studio's product), LucasFilm has endorsed *Star Wars Uncut* and the 1997 *COPS/Star Wars* parody film *Troops*, which was created with prosumer (filmmaking equipment that occupies the space between professional and consumer-level tools) effects technologies and distributed online. The increasing sophistication of production and distribution tools will undoubtedly continue to have an effect on notions of film authorship, especially as the studios themselves seem to inspire such work with their own offerings of alternate versions on DVDs. In the closely-related case of machinima (animated films created using video gaming engines), content owners such as Microsoft have been more willing in recent years (with their 2007 Game Content Usage Rules) to allow end users to build with previously highly restricted copyrighted assets, recognizing that these new creators can help to market the original product and, at any rate, to do otherwise would alienate audiences (Hayes 578-9). If this trend continues, Hollywood may soon be in a position where it is actively encouraging the use of its intellectual property by those who do not hold the copyright on such properties, further eroding the aura of the originating author.

The late 70s saw, concurrent with the rise of the blockbuster film and the increasing importance of ancillary markets such as toys related to films like *Star Wars*, the rise of another element of the cinematic realm enabled by digitization. This digital phenomenon began to expand the moviegoing experience into the home long before

commercial home video copies of films were widely marketed: the film soundtrack.

Saturday Night Fever (John Badham, 1977) was not the first film to shine a light on its

musical score (Richard Lester's 60s films featuring the Beatles come to mind as

important precursors), but it did serve to push the movie soundtrack to the forefront of

the movie going public's minds. As digital compact discs in the early 1980s, and later

digital downloads in the 1990s, replaced vinyl records, sales of all music—including

original motion picture soundtracks—increased. This apparent gain, however, had

unintended consequences. As music was folded into the all-encompassing digital

bitstream in attempt to increase sales figures, it also became infinitely more susceptible

to a problem that was given short shrift prior to 1999: piracy. With the exponential

expansion of peer-to-peer sharing of digital files, music piracy dealt a blow to the music

industry that would soon be reflected in the film industry and cause Hollywood to sit up

and take notice once access to bandwidths sufficient to transmit a digitized pirated film

became commonplace in American homes. Nonetheless, the potential pitfalls of digital

technologies were not felt to outweigh the benefits. The arrival of the first all-digital film

soundtrack in 1990 with *Dick Tracy* (with music by 80s chart-topper Madonna) helped

signal a new beginning in cinema, if only in marketing.

This brief history serves as a backdrop for the discussion that follows, one in

which the claims that digital technologies have radically altered the form of Hollywood

narrative will be rebutted through a comparison of how the American film industry has

faced various challenges in its quest to tell entertaining stories (and profit from that

telling) in both the digital era and before. The issues that are highlighted in the following

chapters—spectacle, realism, open-endedness, and the creative process—have always concerned Hollywood filmmakers in some way, whether those filmmakers were Edwin S. Porter or George Lucas. The machines have changed, but the structures under-girding the stories have remained the same.

Chapter 2: The Story is Over: The End of Cause and Effect Narrative in the Digital Era

I. Hollywood Cinema Makes a Spectacle of Itself

One of the primary ways in which Hollywood film is said to have changed in the digital era is that it relies less and less on linear, cause-and-effect narrative, one of the key components of classical cinema. Although different scholars have different conceptions of the aesthetic specificity of non-linear cinema, most seem to agree that the dominance of cause-and-effect narrative has been undermined in the digital age by an emphasis on the pictorial qualities of the image. These qualities are often termed "attractions" or "spectacle."[1] Another term that is used to refer to tendencies that exist at the level of both form and style is "excess," which also suggests that spectacular elements can be emphasized over narrative progression in any particular reading of a film. The term "post-classical," as well, often relies in part on the distinction between spectacle and cause-and-effect/linear narrative for its stylistic specificity. Finally, "high concept," sharing some of the same concerns of the post-classical, is more specific in its identification of the changes in stylistics since the advent of digital cinema, relating these changes directly to issues of narrative continuity. Due to the frequent conflation of these five terms and the considerable overlap between them, I will refer to them collectively as "spectacle cinema," except in the few cases where the differences seem significant.

Champions of this spectacle cinema theory often point out that its elements directly

challenge the linear story lines and narrative intelligibility that Bordwell, Staiger, and

Thompson find as central to Hollywood film form. Spectacle or attraction films are said

to present images that arrest narrative progression or displace it altogether, therefore

overturning the classical model drawn by Bordwell, Staiger, and Thompson. Attractions,

spectacle, excess, and the qualities of the post-classical and high concept are all said to

be embodied in, or even a direct result of, the use of digital technologies in cinema.

Production capabilities in the digital era, especially the ability to generate heretofore

unseen imagery, are said to be responsible for deflecting the viewer's attention away

from linear narrative forms and onto the impressive qualities of the individual image.

Filmmakers are blamed for their supposed desire to flaunt these technologies in such a

way that the spectacular facets of a film overtake the narrative in importance in the mind

of viewers. Films such as *The Matrix* (1999), *Jurassic Park*, and *Terminator 2*, as well as

the *Star Wars* franchise, are offered as evidence that audiences are no longer paying to

see a well-told story, but instead are seeking out dynamic visuals.

The direct parallel between spectacle cinema and digital effects has been drawn

by many scholars. As Wanda Strauven notes, "the definition of contemporary special

effect cinema...*The Matrix* (Andy and Larry Wachowski, 1999), for instance, can be

conceived of as a reloaded form of cinema of attractions in that it is 'dedicated to

presenting discontinuous visual attractions, moments of spectacle rather than narrative'"

(Strauven 11). It is claimed that in the age of digital effects, the expanded ability to

composite real-life images with the unreal, such as in *Terminator 2*, or generate entire

non-existent worlds as in *Toy Story*, has led modern filmmakers to largely abandon the traditional storytelling techniques that were the *sine qua non* of Hollywood filmmaking. We now purportedly find ourselves watching movies that are filled with elements that usually serve only as eye candy. The year 1977, with the release of *Star Wars*, whether coincidentally or not, marks both the waxing of digital technologies in filmmaking and the putative waning of classical narrative as the dominant formal paradigm.

II. Theorizing Non-Linear Cinema: Historical Antecedents

One problem with laying the accusation of non-linearity at the feet of digital technologies is that the concept of spectacle cinema itself, and the films often used to provide evidence for its existence, predate the widespread use of digital technologies in filmmaking. Claims challenging the preeminence of cause-and-effect narrative have a long tradition in commentary on Hollywood film and encompass the entire history of cinema in the United States. Theorists of spectacle cinema hold that, as a story proceeds, an image presented in a narrative may be so striking (a series of explosions or a dance number featuring attention-getting costumes) that it can outweigh the less flamboyant, but narratively significant, elements that surround it and draw the viewer's attention away from the development of the plot. The spectacular nature of the image is said to overwhelm narrative progression, replacing it with an *avant garde* inflected structure, a reliance on loose connections governed by mood or tone or by no discernible connection at all. This tendency can be summarized by describing spectacle

cinema as "a refutation of classicism's reliance on causality and its appeal to a viewer's problem-solving capabilities" and by characterizing its stylistic and formal tendencies as "synonymous with disruption and incoherence" (Keil 193, 195).

Donald Crafton was one of the earliest critics to detail how spectacle challenges narrative. Close attention to the issue, with detailed stylistic analysis, dates back to his 1985 paper on slapstick comedy. However, Crafton wasn't concerned with the digital effects on the rise at the time of his writing, but instead highlighted these formal operations in films of the silent era. He used the analogy of pie and chase to represent a tension between spectacle and narrative, where, in comedy films, "slapstick is the bad element, and excessive tendency that it is the task of the narrative to contain" (Crafton 355). Ultimately, he concludes that "the seeming hegemony of narrative in the classical cinema is vulnerable to assault by the 'underground' forces of spectacle" (363). While this line of inquiry demonstrates that claims of spectacle's triumph over narrative cogency did not originate with the rise of digital cinema in the last thirty years, Crafton's work on spectacle laid the foundation for further significant theoretical work on the subject.

Perhaps the most fully developed conceptualization of non-classical cinema is Tom Gunning's "Cinema of Attractions." Gunning denies the influential model of film's history "under the hegemony of narrative films" (Gunning 56) and instead suggests an alternative chronology that uncovers the dominance of cinematic forms that show film as "less of a way of telling stories than as a way of presenting a series of views to an audience, fascinating because of their illusory power" (57), "supplying pleasure through

an exciting spectacle—a unique event...that is of interest in itself" (58). This cinema,

most obviously evidenced in the actuality and trick films that were commonplace in

cinema's earliest days, drew heavily on its predecessors in popular melodrama, theater,

stage magic and vaudeville, presenting audiences with a cinema in which "theatrical

display dominates over narrative absorption...the cinema of attractions expends little

energy creating characters with psychological motivations or individual personality" (59).

For Gunning, this cinema is "a truly oppositional program, one irreconcilable with the

growth of narrative cinema" (61), and it persists in contemporary Hollywood. The direct

parallel between attractions and the increasing use of digital technologies is most

apparent in Gunning's claim that the cinema of attractions is currently embodied in the

"Spielberg-Lucas-Coppola cinema of effects" (61). However, Charles Musser and others

have argued that contemporary special effects are in fact "tamed attractions" that (along

with various other forms of spectacle) "tend to be fully integrated within the story"

(Musser 411). Attractions, Musser suggests, are "allowed only if they [are] required by

the narrative" (412).[2]

Stylistic exceptions to cause-and-effect narrative cinema could also be described

as instantiations of the concept of cinematic excess, as described by Kristin Thompson

in *Eisenstein's Ivan the Terrible*. This concept suggests that narrative is only one way in

which to view a film, that pictorial or aural components of any given film—*Ivan the

Terrible*'s striking compositions, elaborately decorative props and sets, colorful

costumes and non-natural sounds—can be read as more significant than the linear

narrative (Thompson *Ivan* 136-40). Excess allows viewers to choose to step outside of

the "traditional, conventionalized views of what film structure and narrative should be" and view any given film in ways more in keeping with the Formalist notion of defamiliarization (140). While Thompson understands that every "film dictates the way it wants to be viewed by drawing upon certain conventions and ignoring or flouting others," she also asserts that "if the viewer recognizes these conventions and refuses to be bound by them, he/she may strive to avoid having limitations imposed upon his/her viewing" (141). Bordwell elsewhere explains how, even before viewers are involved in reading a film, the artist crafts the film along guidelines that presume schemata or "traditional formal patterns for rendering subject matter," and, following the work of E.H. Gombrich, creates "a horizon of expectations" that governs how viewers are inclined to approach a film—in the case of films made on the classical model, as a narrative (*Classical Hollywood* 8). As with Crafton's gags, Gunning's concept of attractions, and Laura Mulvey's conceptualization of spectacle cinema described below, those components in *Ivan the Terrible*—and other films—which could be described as excessive are always contained within an overarching narrative framework.

Mulvey's 1975 essay "Visual Pleasure and Narrative Cinema" offered yet another conceptualization of spectacle. In her analysis of non-narrative tendencies within the classical Hollywood cinema, Mulvey pointed out that "the presence of woman is an indispensable element of spectacle in normal narrative film, yet her visual presence tends to work against the development of a story line, to freeze the flow of action in moments of erotic contemplation. This alien presence then has to be integrated into cohesion with the narrative" (750). The hallmark of the classical cinema, its (in Formalist

terms) dominant —linear, cause-and-effect narrative form—had seemingly come under assault. Scott Bukatman has pointed out how the logical extension of Mulvey's analysis applies to digital spectacle, as he notes that "Mulvey's model recalls the more pervasive suspicion of excess which has suffused the critique of spectacle throughout its history... [t]his line of critique continues through to the present dismissal of Hollywood blockbusters as empty spectacles (or attractions), nothing more than special effects" (Bukatman 75). Scholars who have followed this line of argumentation by building on Mulvey's conclusions have forgotten that she also remarks on how Hollywood "mainstream film neatly combined spectacle and narrative" (750). Ultimately, then, Mulvey understands spectacular elements as occurring within a narrative framework. Like Crafton, Gunning, and Thompson, Mulvey argues that the classical Hollywood cinema has always contained within it certain non-narrative tendencies. The dominance of the classical model was therefore called into question before the issue of a widespread change being brought about by digital technologies was raised.

III. The Persistence of Linearity in the Digital Era: The Post-classical, New Hollywood and High Concept Cinema

The period following the years covered by Bordwell, Staiger, and Thompson (up to 1960) is often referred to as the post-classical Hollywood, New Hollywood, or high concept cinema in order to designate a Hollywood cinema reliant on different forms and stylistic techniques than those of the classical era. Notions of a digital cinema show

much overlap with the post-classical cinema/New Hollywood/blockbuster era, which originated in the late 60s to mid 70s. Various shifts in the American film industry, including the breakup of the studio system following the 1948 Paramount Decree, the subsequent rise of independent production houses and package unit production, the growing dominance of the event film and the blockbuster beginning with *Jaws* (1975), the influence of European art cinema on the form and style of Hollywood film, horizontal integration amongst global multimedia conglomerates, and the prominence of new *auteurs* in Hollywood beginning in the late 60s have all been noted as causes for the breakdown of the classical model.

Steve Neale has summarized some of the important theories of post-classical form outlined by scholars writing in *Movie* and *Monogram* in the mid 1970s, coining the term "New Hollywood Cinema." Many of the scholars examining this phenomenon insisted that with the advent of such special effects as slow-motion and split-screen "plot-linearity [has] been replaced by narrative fragmentation" (Neale "New Hollywood" 117). He concluded that "changes in the nature of Hollywood narrative, though real, are on the whole far less radical than they may appear" (120). Later, in an essay specifically dealing with the rise of digital effects, Neale also acknowledges, despite the increasing prevalence of spectacular elements, the "basis of cinema in narrative" (Neale "Hollywood Strikes Back" 103). The target of this wave of critics may have been special effects, but such effects represented strategies that have been in use since the days of Georges Méliès, long before digital technologies were available to Hollywood filmmakers. Geoff King has provided an updated commentary on these issues,

suggesting that there is a greater frequency of "peaks" or moments of spectacularity in Hollywood narrative films. He makes the claim that, in today's Hollywood films, "distraction or interruption" of the narrative is increasing, with the result that "spectacle is important, sometimes dominant" (King 201).

Recently, more focused attempts have been made to analyze contemporary stylistics and formulate an alternative model to that of the classical paradigm. Spectacle, attractions, and the post-classical all come together in the work of Justin Wyatt. Addressing a perceived a lack of stylistic specificity in theories of the post-classical, Wyatt has created a detailed outline of what he identifies as "high concept," a term that came into use in the film and television industry in the early 1970s. According to Wyatt, high concept is "a form of differentiated product within the mainstream film industry...occur[ing] in two major ways: through an emphasis on style within the film, and through an integration with marketing and merchandise" (Wyatt 7). He identifies high concept style as having "five major elements: the high concept 'look,' stars, music, character and genre" (24). Wyatt identifies the look as being constructed by "production design and cinematography" (24) wherein "the physical perfection of the films' visuals sometimes 'freezes' the narrative in its tracks" (25) and claims that the end results of this style are films full of "visually arresting images which overwhelm their narrative function" (26). Wyatt describes how high concept operates: "the look of the scene makes an everyday, banal sight aesthetically pleasing or at least aesthetically striking. This transformation is, at first, disorienting, causing the viewer to contemplate the strangeness of the image, rather than how the image fits into the developing story" (28).

Wyatt invokes the concept of cinematic excess to describe how high concept style has come to challenge the dominance of cause-and-effect, linear narrative. However, he also states that "high concept is most frequently associated with narrative" (12).[3] He goes on to point out how "in the high concept film, the narrative frequently is composed of stock situations firmly set within the bounds of genre and viewer expectation" (16), the latter being a mirror of Bordwell, Staiger, and Thompson's description of how classical Hollywood narrative form operates. Wyatt ultimately allows for the fact that high concept is "a style with strong ties to the classical cinema, yet with some significant deviations in terms of composition" (16).

Shilo T. McClean addresses scholarship on the supposed rise of CGI-based spectacle, summarizing how many claims have been put forth that argue "classical narrative norms are being challenged by the use of DVFx [digital visual effects]" (152), but finds that "for all the many assertions that special effects are an emerging narrative form, no one has proposed the narrative structure that this new form demonstrates" (155). In action films that make use of numerous and/or extended effects shots, she argues that the criticism directed at them has more to do with the increasing inclusion of violent action sequences themselves and that "effects are materially responsible for creating the images and heightening the verisimilitude of the action, they are not the *reason* for the action shot, they are the *means* by which it is achieved" (160, italics in original), and that, ultimately, "these effects are motivated by story-based elements" (161). McClean also suggests that "the reinvented heroes of the 1980s and 1990s action films were simply the result of a reapplication of old [classical Hollywood cinema]

formula" (106). In her examination of the primary trade publication for special effects

artists, *Cinefex*, McClean notes:

> "Looking through the films with the major effects achievements of the last twenty years...shows that most employ classical narrative structures. Some are better realized than others, yet there is almost always an intention to address classical narrative and these films are ultimately judged on whether they have met narrative standards. In effect, if they are judged to be poor films it is because they do not deliver a satisfactory standard of narrative storycraft." (164)

The drive to always place story before effects also subtends many interviews with

industry professionals working in the digital era. An example comes from John

DesJardin, visual effects supervisor on Zack Snyder's *Watchmen* (2009), who describes

his work on the film as keeping the effects in context and pursuing the creation of "a real

psychological, emotional, spiritual journey…If it's not, then it's just action. The meaning

of it is gone. And nobody working on it wants it to be that" (Aperlo 144). This approach

mirrors *Star Wars* visual effects artist John Dykstra's contention that his "role consists of

helping [the director] tell their story in the best way possible" (Pinteau 68).

Proposing a proper framework for the inclusion of digital visual effects in a "good"

narrative film, McClean suggests that they must "reflect 'real' life within the narrative

world in which they appear, but they also must be truthful to the story and to the

audience's demands for narrative integrity" (141). The overarching significance of

narrative progression is so strong, she claims, that "technically weak DVFx will be

forgiven if they are narratively congruent; it is the strength of the narrative that will carry

them, rather than the other way around" (142). "Digital visual effects derive from their

narrative imperative," McClean argues, "[and] must also arise out of a good script" (147-

8).

The attempt to open out the definition of Hollywood style in the light of changing technologies has gained traction as the use of digital technologies has spread. In the theories of Neale, King, and Wyatt, the idea is put forward that this major shift in form and style has only occurred in recent history and is related to the digitization of cinema. As the critiques of all of these major schools of thought make clear, however, it is apparent that whatever we call it—spectacle, excess, high concept, etc.—this stylistic challenger to the classical cause-and-effect paradigm is not nearly as strong as is often claimed. As McClean argues, narrative will in most, if not all, cases reintegrate excessive elements within its form. What remains to be explained is the way in which this reintegration is achieved.

IV. The Classical Style in Action: Compositional Motivation, Character Goals, and Free and Bound Motifs

The classical Hollywood cinema's style is dominated by the imperative to "transmit story information" through numerous elements comprising the narration (Bordwell, Staiger, and Thompson 24). The various stylistic devices available (continuity editing, centered framings, etc), should be brought into close relation with each other through plausibility, formal unity, a strict series of cause/effect relationships in the action, a fairly predictable stair step story construction, and a realistically psychologically motivated group of characters with believable personality traits that have clearly defined

goals and work towards the realization of those goals (12-18). The unity amongst these elements is achieved via motivation, first and foremost of which is compositional motivation. Compositional motivation is what grants a Hollywood film narrative its "basic coherence" (19) and is crucial to narrative form, as it demonstrates how "certain elements must be present for the story to proceed" (19). In the following analysis, I will focus on three related techniques of compositional motivation common to the classical Hollywood cinema—character goals, stair step construction, and free and bound motifs —and demonstrate how these foundational characteristics of classical narrative form operate in supposed spectacle cinema.

One crucial compositional element of Hollywood-style cause-and-effect narrative is character goals. As Bordwell, Staiger, and Thompson point out, "causality, consequence, psychological motivations, the drive toward overcoming obstacles and achieving goals [and] character-centered—i.e., personal or psychological—causality is the armature of the classical story" (13). These goals, and the drive to reach them, are inseparable from the operations of the stair step construction and free and bound motifs, as without characters, no actions can be undertaken. In the case of *Star Wars*, there would be no conflict and no story without Luke Skywalker and his drive to rescue the Princess, save the galaxy, and fulfill his destiny as a Jedi knight. Compositional motivation could not function without these character goals, but there are other related concepts just as vital.

In her explanation of roughened form, the concept that decscribes how a film works to defamiliarize an object or experience for us, Thompson notes how the

roughening of form is achieved by making "perception and understanding less easy" (Thompson, *Breaking* 37). For her, "one of the most common types of roughened form involves the creation of delays...one of the narrative film's most important sets of devices is that group which functions to hold off an ending until a point appropriate to the overall design. All but the shortest narrative films are likely to have some delaying structures" (37).[4] Moments of spectacle or interruptions, then, are not antithetical to narrative form, but integral to it, at least in the way that it has been manifested in the Hollywood film industry over the past one-hundred plus years.

The key way in which delay is achieved for Thompson is stair step construction. Borrowed from Viktor Shklovsky and familiar to readers of her and Bordwell's *Film Art: An Introduction*, stair step construction is an explanation of a general structure of a narrative, where "events progress toward the ending alternating with other stretches in which digressions and delays deflect the action from its direct path" (37). Thompson explains this operation in more detail:

> "The concept of stair step construction implies that some materials are more crucial to the narrative progression than others. Those actions that move us toward the end are necessary to the overall narrative, and we can call them *bound motifs*. The digressions, or 'landings of the staircase' are there to delay the ending, and they are likely to be tangential actions that could be altered or eliminated or replaced without changing the basic causal line. These delaying devices we will term *free motifs*....Note that free motifs are as functionally important as bound ones, since art depends on delay for its aesthetic effect." (38)

Although dealt with much more thoroughly here by Thompson, she and Bordwell and Staiger also considered stair step construction to be a crucial formal pattern of the classical Hollywood cinema (Bordwell, Staiger, and Thompson 17, 60-9).

The operation of stair step construction can be seen throughout literary and film theory under slightly different names. As Thompson notes, the concept is anchored in the notion of free and bound motifs, or satellites and kernels. According to Seymour Chatman in *Story and Discourse: Narrative Structure in Fiction and Film*, kernels are "major events [that] are part of the chain or armature of contingency...[they] advance the plot by raising and satisfying questions...[they are] narrative moments that give rise to cruxes in the direction taken by events...[they] cannot be destroyed without destroying the narrative logic" (Chatman 53). While he describes a satellite as being "a minor plot event...[and] is not crucial...It can be deleted without disturbing the logic of the plot" (54), satellites are still essential to the overall form of the narrative. He sees satellites as the descriptive aspects that provide decoration surrounding the significant plot events, but he insists that satellites support narrative structure, explaining their purpose as that of "filling in, elaborating, completing the kernel; they form the flesh on the skeleton" (54). Luke Skywalker's excursion to the Tattooine desert to rescue R2-D2 is a bound motif, as it leads to his meeting Obi-Wan Kenobi. The brief skirmish with the Sandpeople, however, is not absolutely necessary, as Skywalker could have easily met Kenobi in another manner, but it adds to Skywalker's characterization and heightens the overall tension as he faces obstacles to overcome in his quest. Satellites and free motifs perform the same function as staircase landings in narrative form.

Mieke Bal, in *Narratology: An Introduction to the Theory of Narrative*, explains how description is often seen to "interrupt the line of the fabula" (37), but that actually "although descriptive passages would appear to be of marginal importance in narrative

texts, they are, in fact, both practically and logically necessary" (36). Paul Cobley

summarizes both Roland Barthes' and Peter Brooks' writings on narrative form in

literary theory, citing Barthes' proairetic code (that which furthers the line of action) and

hermeneutic code (that which delays the resolution of that line) (13). As Thompson

explains, "the proairetic aspect of the narrative is the chain of causality that allows us to

understand how one action is linked logically to others. The hermeneutic line consists of

the set of enigmas the narrative poses by withholding information" (Thompson,

Breaking 39). Cobley cites Brooks' notion of *detours*--"individual retardations on the way

to a narrative's end" (Cobley 13, italics in original). Detours are, Cobley explains,

"woven so imperceptibly into narratives that they may not be instantly apparent as pure

delays but rather as snatches of dialog or sequential description...[and] are a crucial site

of potential enjoyment in a narrative" (13).

Thompson expands on the appearance of free and bound motifs specifically

within the classical cinema, as she describes how "a free motif will have one or more

functions relating to the bound motifs...thorough-going motivation will tend to blur the

distinction between bound and free motifs by making the free ones seem more

necessary then they are" (Thompson, *Breaking* 55). She explains how "devices causing

the deflections away from straightforward linearity will usually be free motifs, while the

bound motifs will pull the narrative back onto a path of progression toward closure—

creating the metaphorical zigzag 'steps'" (55). She compares the short story to the

novel, and finds that because of the greater length of the novel, it must have a

proportionately (perhaps disproportionately) greater amount of "retarding material" (55).

If spectacle cinema existed, it would take the form of a narrative without risers (the vertical counterpart to landings on the staircase), without a proairetic chain, without bound motifs or kernels, all detours, all retarding material, and only a hermeneutic chain. Such a story could hardly be called a story, however, as it would amount to a series of events that do nothing to set the scene, develop characters, or provide suspense about the outcome of a particular narrative trajectory. This type of non-narrative cinema simply does not exist in what is generally considered spectacle cinema: mainstream films produced with digital technologies. All of the instantiations of free motifs in this idea of cinema are compositionally motivated and draw on longstanding conventions of the classical Hollywood cinema—showing that most moments in a narrative that may be seen as in conflict with classical cause-and-effect narrative form are actually inextricably bound up with it.

V. Digital Technology, Spectacle Film, and Narrative Coherence: the Case of Contemporary Science Fiction

Although it is claimed that the non-classical permeates all Hollywood genres, it is science fiction that has often been cited as the most important site of the demise of linear storytelling. This is due to science fiction's reliance on digital visual effects to craft the fantastic technologies, lifeforms, and worlds that are its lifeblood. SF is the genre most closely associated with the use of visual effects and, along with action/adventure, the genre most blamed for the degeneration of narrative cogency through its use of

those effects. Michelle Pierson has noted that "because even though the effects-driven, blockbuster Hollywood cinema of today is by no means an exclusively science fiction cinema, the relationship between special effects and science fiction remains historically important" (3).

The spectacular aspects of science fiction films are often used by scholars as evidence to show that contemporary film can be seen as a resurgence of the non-linear cinema of attractions that was common during cinema's earliest days. Brooks Landon sketches a revisionist history of cinema itself in terms of science fiction, suggesting that "all films made before 1906 [be seen] as science fiction" (31). Following on Tom Gunning's notion that much primitive cinema was based around spectacular entertainment in the form of the cinema of attractions and therefore eschewed a reliance on narrative cogency, Landon suggests that every film made prior to the rise of classical, linear narrative is a template for the types of films we see now. He claims that "since primitive cinema used the spectacle of its production technology to elicit the same sense of wonder and discovery elicited by science-fiction writing, all cinema-of-attractions films can be thought of as science fiction" (32). Landon goes on to state that "a historical view of science-fiction film that recognizes the primacy of spectacle in those early films will also suggest a very different view of more recent science-fiction films, in which special effects—increasingly digital attractions—have overwhelmed or usurped narrative elements" (33). Lining up on the spectacle-over-narrative side of the debate, Landon reminds us that many believe that "spectacular special effects function as a spectacle that interrupts or even disrupts the narrative: the special effect may simply be

so striking as to constitute a kind of show-stopper" and "many of the special effects sequences that have become so important to these films actually halt rather than advance the narrative" (38).

Landon also presents a direct echo of Thompson's proposition that films such as *Ivan the Terrible* can be read in ways other than narratively. He describes how "a series of special effect interruptions may also be seen as a kind of counter-narrative or competing techno-narrative in its own right" (40) and "science-fiction's special effects can be thought of as existing not to support the narrative or the plot, but to provide their own formal rhythm and logic—the special effects story that the film is 'really' built around" (41). However, the films that Landon suggests are prime examples of this aesthetic include *Jurassic Park*, *Toy Story*, *Contact* (1997), *Independence Day* (1996), *Starship Troopers* (1997), and *Godzilla* (1998)—all narrative, cause-and-effect based films and even more resolutely straightforward narratives than *Ivan the Terrible*. And in his attempt to show how David Blair's VRML-based multimedia installation *WAXWEB* is an example of hypermedia spectacle that tosses traditional story-telling modes aside as archaic and Luddite, Landon admits that "its narrative is more or less linear" (45). His conclusions here suggest that reports of the death of narrative may be greatly exaggerated.

Jurassic Park has often been cited as the primary example of Landon's counter-narrative. As Pierson notes, "no other film so perfectly exemplifies certain aspects of Landon's description of the way special effects imagery functions in the science fiction films...in the first scene in which one of the much-anticipated computer-generated

dinosaurs is finally unveiled—both to the characters in the film and to the cinema audience in the theater—the narrative all but comes to a halt" (Pierson 120). This scene has also been described by Michael Allen as one of many "moments of sheer spectacle" in effects films of the period. But this conclusion is ironically reached after he details the "narrative purpose" of the scene and finds that it functions to affect character development and further the action of the plot (211). Despite Pierson's claim that *Jurassic Park* is a prime example of how "the presentation of key computer-generated images produces a distinct break in the action" (124), the effects-heavy sequences all aid in the progression of a very tightly constructed narrative film. Instead of operating as disruptive visual spectacle, the digital tools serve a narrative function; for example by making the fictional world a film is set in more believable and therefore the story more engaging (Prince 32-3).

When the two main protagonists in the film Alan Grant (Sam Neill) and Ellie Sattler (Laura Dern) are first shown the dinosaurs in the narrative, the creatures' physical existence is depicted as a surprise to the characters and, rather than halting the narrative, the scene actually serves as a major turning point in the story. This famous unveiling of the dinosaurs has an important narrative function: it serves as the identification of the mystery animals in the paddock being loaded into the park who kill a man in the opening scene. These creatures will (obviously) play a major role in the story. Also, in addition to an expansion of Alan and Ellie's awareness of how their careers affect the world around them, they must decide whether or not to shift their primary goal and agree to aid the Icarus-like plan proposed by Hammond (Richard

Attenborough) to open a theme park full of living dinosaurs. Hammond has already set up the main goal of the film: to receive endorsement from the scientific community that will appease his investors and allow the park to open. This goal is the motivation for everything significant that happens in the film: the recruiting of Grant and Sattler to endorse the park and the rush to give them the tour before the park is completely ready. This crisis sets up the action for the remainder of the story.

Beyond this goal-oriented line of action, *Jurassic Park* exhibits many other hallmarks of classical Hollywood narrative. When Hammond first lays out his goal, he discusses the 48 hour deadline he is under to gather the endorsement from the scientists that will ensure the project's financial success. Before this even happens, the classical Hollywood cinema structure has already been put in place. There is a clear romantic subplot involving Grant and Sattler (including Grant's gradual acceptance of the traditional nuclear family) established from the beginning that even features an obstacle in the potential competition for Sattler from Ian Malcolm (Jeff Goldblum). Hammond is presented with various obstacles, including the industrial espionage of his employee Dennis Nedry (Wayne Knight) and the tropical storm that hits the island, and these two factors combine to effect the release of the dinosaurs, which brings the main goal to a halt and replaces it with a basic survival story. This point in the film represents a sharp turn in the use of digital effects as well, but it is clearly based on the needs of the narrative rather than on the supposedly story-stopping creatures. Images that could be called spectacular, yet have nothing to do with digital dinosaurs, abound throughout the film. The setting of the island itself is foregrounded in sweeping shots of the

landscape, perhaps best illustrated by the landing of the party's helicopter, as they descend against the backdrop of a gargantuan waterfall. The dinosaurs themselves only appear three times in the first half of the film (once in the scene discussed above and two other brief scenes). Certainly, there are few scenes in the second half of the film (from about the one hour mark) that do not contain computer-generated dinosaurs, but this is to be expected narratively, as they constitute the main threat to the characters new goal of surviving and escaping the island. It seems difficult to perceive the dinosaurs as halting the progress of the narrative when we barely see them for the first half of the film. Even after the dinosaurs take on a more visible role, all of the original plot lines continue, even alongside a new one—the loss of the embryos that open up the possibility of a sequel.

In another of the films that Landon discusses, *Starship Troopers*, a lengthier scene illustrates a similar phenomenon, highlighting the complicated narrative operations of seemingly spectacular moments. The first large-scale battle scene comes about half-way through the film, as the Earth Federation's forces launch a major offensive against the villainous Arachnids on their home planet of Klendathu. Littered with make-up effects, modeling, and digital effects, this sequence represents the apex of effects use in the film and could easily be taken as spectacle given the length of the sequence and the extensive display of space travel, spaceships, alien life forms, alien planets, military technology, and battle scenes. However, the sequence proves to be not just a landing on the staircase, but an essential riser in a number of ways. First, the heretofore-unknown extent of the intelligence and martial power of the Arachnids is

revealed. This is a major plot event that the second half of the film is centrally concerned with developing and resolving. Second, the camaraderie between the film's heroic trio Johnny (Caspar Van Dien), Dizzy (Dina Meyer), and Ace (Jake Busey) is cemented during the battle. This state of affairs increases the impact of Dizzy and Ace's deaths later, and greatly affects the development of Johnny into a successful military leader, a narrative development that represents the fulfillment of his goals and also leads him to the resolution of the romantic subplot between him and Ibanez (Denise Richards). Despite being saturated with both traditional and digital effects, this battle, like the initial appearance of a dinosaur in *Jurassic Park*, are built around major plot points and the narrative simply could not progress without them.

Another widely-remarked on digital film, *Terminator 2*, also demonstrates the narrative uses of digital visual effects. The opening sequence of the film depicts the future war between humans and machines that both reminds us of significant events from the previous film and contextualizes the narrative function of the assassination attempt. The visual scanning operations of Arnold Schwarzenegger's Terminator character provide another continuity link between the two *Terminator* films and also serve as a red herring in presenting us with narrative clues as to who Conner's assassin will be: we believe that Schwarzenegger is the villain at first, just as he was in *The Terminator* (1984). CGI is also utilized in scenes not featuring the T-1000, such as Sarah Connor's (Linda Hamilton) dream of the nuclear annihilation of Los Angeles. Rather than serving as mere spectacle, however, this event initiates the final act of the film, as Sarah's vision inspires her to leave the group and find and kill Sky Net

programmer Miles Dyson (Joe Morton).

By far, though, the use of digital effects technologies are most dramatically seen in the character of the T-1000, as he morphs his way through the film, attempting to kill John and the other characters in various scenes. This is the main narrative conflict in the film, and the use of effects serves to highlight various narrative functions of the character. At first we are held in suspense about who the real adversary is, but when we see a long shot of the T-1000's body in full morphing metallic form for the first time, his identity is revealed and the shot establishes the participants in the main conflict of the story. Throughout the film, as his body changes form into various weapons and he tortures and kills numerous characters, the digital effects generated serve to increase our sense of how powerful and cruel he is, heightening the tension as he pursues the Connor boy. The sophisticated CGI aids in character development, the fluctuations in who knows what when, and the setting in motion of chains of narrative cause-and-effect. The suggestion that the digital effects shift attention away from the operations of a classical narrative is ultimately unfounded.

VI. Digital Innovation or More of the Same?

The Dogma 95 directors sought to bring back an emphasis on narrative and performance that many critics had claimed were being eroded due to the tendency of digital cinema to emphasize spectacular effects. These directors may have altered stylistics slightly, particularly in step with what David Bordwell has, in *The Way*

Hollywood Tells It, called "intensified continuity," with shorter shot lengths, extreme camera angles and more close-ups, and a tendency towards mobile framing or a moving camera, but even their two 'innovative' films bear the hallmarks of classical storytelling that Bordwell argues has persisted since the changes in the American film industry beginning in the 1960s. Despite mildly ambiguous endings which could suggest the influence of European Art Cinema (will Karen remain in touch with her inner idiot? Will the Klingenfeldt-Hansen family be able to repair their fractured relationship?), both *The Idiots* and *The Celebration* mostly exhibit classical unities and even lack the kinds of alterations in narrative form that Bordwell claims characterize some post-60s films, such as flashbacks, puzzle storylines, and deeply unreliable narrators. While these efforts founded an alternative low-key digital aesthetic outside of the mainstream which emphasized slice-of-life realism, they remained within—albeit perhaps at the margins of—the classical tradition.

Other landmark digitally-shot films hearken back to classical sources, while some eschew storytelling conventions altogether in favor of a different formal system that has existed alongside classical narrative almost since the beginning of cinema. As the new millennium dawned, *Timecode* and *The Russian Ark* seemed poised to fulfill classical Hollywood stalwart Alfred Hitchcock's dream of a single-take film. Filmmaking tools were finally capable of realizing the mythical edit-free film that Hitchcock simulated in 1948 with *Rope*. In its appearance of being one continuous take, *Rope* was, for its time, somewhat of a deviation from stylistic norms. Bordwell explains Hitchcock's experiment by identifying how, in the 1940s, "there was something of a competition to see how

complicated and lengthy the cinematographer could make his tracking shots" (Bordwell, Staiger, and Thompson 21). However, the film is still solidly a classical Hollywood narrative that provides an example of extended artistic motivation wherein "flashes of virtuosity remain for the most part motivated by narrative causality" (21). In a film like *Rope*, the very act of deviating from a norm to make an audience notice such virtuosity presupposes more than a passing familiarity with the classical norms being violated (22).

Both films achieve the goal of being a single take, surpassing the likes of *Rope*, which was edited to appear to be one long take, but was actually twelve shots that were joined together by an alternating series of subtle cuts and dollying camera movements. An example of this can be seen in the climactic moment when Rupert Cadell (James Stewart) throws open the wooden chest to reveal the hidden corpse and the top of the chest momentarily blocks out the camera and turns the screen black, allowing for an invisible cut. While celluloid film was limited by the length of reels (about eleven minutes long), digital video allows for much longer, uninterrupted takes. That this has a significant effect on classical narrative form, though, is far from certain.

Timecode, despite its visual novelty and somewhat loose plotting, is ultimately classical in form. Rose's (Salma Hayek) quest for a screen test is one of the principal lines of action and helps to unify the other three parallel plots and the multitude of characters. *Russian Ark*, on the other hand, in its chronologically disjointed journey through Russian history via a tour through the galleries of the Hermitage Museum, offers very little in the way of coherent, unified narrative form that engages viewers in

the way that *Rope* or even *Timecode* does. This is not, however, an example of digital video disrupting narrative form. Its *avant garde* tendencies can clearly be seen in predecessors such as *Empire* (1964), a seemingly eight hour shot of the Empire State Building directed by Andy Warhol, and *Wavelength* (1967), a 45-minute zoom from an establishing shot of an apartment to an extreme close-up of a photograph of a body of water on the wall, with very little action to speak of. In the case of *Russian Ark*, the medium (or rather, the form of the medium) has almost no significant influence over its content in terms of how it differs from its predecessors.

VII. *Star Wars* as Classical Hollywood Cinema

Using the *Star Wars* films as examples of how effects are motivated by story concerns centered on character goals, and therefore as a demonstration that classical narrative form persists in the digital era, may shed some light on the issue. The *Star Wars* films in particular represent the apex of special effects use, with the original trilogy cited as "among the most innovative and important special effects films ever made" (Rickitt 240) and *Episode I* "the most sophisticated digital effects film in the history of the cinema" (365) and "the greatest visual effects film yet made" with the largest number of effects shots at the time of its production (240).

By examining the form of *Star Wars*, I intend to demonstrate how the cause-and-effect aspect of the classical paradigm has persisted into the digital era. Perhaps because of their high-profile box office records, the *Star Wars* films have often been

taken as a limit test for contemporary film, especially in terms of cutting-edge use of digital effects and dominant trends in narrative form. Thomas Schatz criticizes *Star Wars* for advancing the dissolution of narrative, suggesting that the film represents "a shift in the nature of film narrative" ("The New Hollywood" 23). Schatz, while focusing a good deal of attention on the debate between plot-driven and character-driven films, has much to say about *Star Wars* and the New Hollywood that directly echoes the theories of the spectacle cinema theorists. The *Star Wars* films, according to Schatz, are the apex of a changing Hollywood style that is "increasingly visceral, kinetic, and fast-paced…[that results in a] purposeful incoherence" (23).

Central to the differences in narrative form between classical Hollywood and New Hollywood is fragmentation. Schatz explains how the fragmentation in audiences and corporate entities is a parallel to the fragmentation in "the movies themselves, especially the high-cost, high-tech, high-stakes blockbusters, those multi-purpose entertainment machines that breed music videos and soundtrack albums, TV series and videocassettes, video games and theme park rides, novelizations and comic books" (9-10). Although he claims that *Jaws* was the first of these films, the description is far more fitting for *Star Wars*, as there isn't a single one of these ancillary products that hasn't borne the *Star Wars* branding. While offering various elements as the cause of the changes wrought by New Hollywood, Schatz lays special responsibility at the feet of special effects. *The Exorcist*, "perhaps the clearest indication of the emergent New Hollywood," he says, is an "effects-laden exercise" (17) and hallmarks of the changing style such as *Star Wars* are "increasingly reliant on special effects" (23).

However, Schatz also mentions the "ruthlessly linear chase-film plotting" (23) of *Star Wars.* It is noteworthy that he draws on the chase film structure referred to by Crafton as the exemplary narrative structure and simultaneously invokes linear plot construction, as he seems to be describing a classical narrative film. The fact that *Star Wars* has an "oddly nostalgic quality, due mainly to its evocations of old movie serials and TV series (*Flash Gordon*, *Captain Video*, and so on)" (23) lends more weight to the argument that very little has changed since the 30s and 40s. Despite having previously claimed that *Star Wars* represents a shift in formal strategies, Schatz concludes that "Like *Jaws*, Lucas' space epic is a masterwork of narrative technique and film technology" (24). Echoing Schatz's characterizations of the films, other film scholars have commented on the eminent classicism of *Star Wars.* McClean points out that the film simply relies on old genres and themes from the golden age of Hollywood (107) and closely "followed classical narrative structure" (108). The special effects serve primarily as a way to establish the fantastical setting that keeps spectators engaged in the film's plot. All of the reputedly ground-breaking effects in the film, from the Death Star to the lightsabres, "do so without being so spectacular, so cosmic, as to remove the story from human scale" (108).

The main line of action is embodied in the conflict between the heroic Rebel Alliance and the fascist Empire, a standard good vs. evil struggle. The Rebels' goal is to defeat the Empire and save the Galaxy from the Empire's ultimate weapon, the Death Star. The story's main protagonist, Luke Skywalker, joins the Rebels and intertwines his goals with theirs, not only for this film, but for the rest of the first trilogy as well. The

opening battle between the Rebel soldiers and the Empire's Darth Vader and his

stormtroopers is a bound motif, representing the major conflict. The film proceeds with a

series of escalating battles, with additional characters such as Obi-Wan Kenobi and Han

Solo joining Skywalker to support his goal as he nears completion of his quest. The

band of heroes eventually rescues Princess Leia from the Death Star, escapes, and

destroys the Empire's ultimate weapon in a final battle sequence, bringing resolution to

Skywalker's quest to join the Alliance and also the Alliance's victory over the Empire. A

romantic subplot between Skywalker and the Princess, and a love triangle that includes

Han Solo, is introduced in the beginning of the film and binds Skywalker's desire with

his role in rescuing her and helping her side to victory.

The apparently free motifs in the film are, upon closer examination, closely

related to the main plotline and, indeed, absolutely essential to its development. A chase

through the desert complete with battle sequences and a comedic and musical interlude

could be seen as free motifs, but the plot is also significantly developed in these scenes

with the addition of two vital characters in Kenobi and Solo. The search for the escaped

R2D2 in the Tattooine desert that leads Skywalker to Kenobi, and the misadventures at

Mos Eisley spaceport that bring Solo into the group are early examples of this type of

motif which, while seemingly free, are incidents that constitute an integral part of the

staircase. The group's entrapment on the Death Star is perhaps the most significant free

motif or delay, as they are not only being prevented from destroying the Death Star, but

are held prisoner on it for a time. However, this sequence sees Princess Leia join the

group, thereby initiating the romantic subplot, and brings the heroes solidly into the

larger battle between the alliance and the Empire.

This so-called spectacular film that supposedly heralded the dawn of a new era in filmmaking proves, upon close examination, to be quite traditional in its narrative structure. And *Star Wars* is not an exception to the rule of the persistence of the classical model; the same formal patterns are apparent in most films being made today. Despite advances in the technologies used to craft the worlds in which contemporary science fiction (and other genres) takes place, the stories themselves remain very similar in form to those that marked the beginning of Hollywood's classical era at the beginning of the 20th Century. The presence of compositional motivation, character goals, and free and bound motifs demonstrates that the films of the 21st Century rely on the same narrative strategies that their predecessors did, and perhaps will for a long time to come.

Chapter 3: More Real Than Real: Pictorial Realism and Perception

I. Seeing is Believing

Beyond the disruption of narrative form discussed in the previous chapter, digital film is said to have altered the nature of mainstream movies through its tendency to undermine the pictorial realism of the classical style. In "The Myth of Total Cinema," André Bazin writes that the impetus behind technological innovations that led to the invention and evolution of cinema technologies was "an integral realism, a recreation of the world in its own image, an image unburdened by the freedom of interpretation of the artist" (21). Stephen Prince highlights Bazin's valorization of cinema's indexical nature in the photo-chemical process, explaining how many believe this indexicality is something that digital technologies do away with, supposedly to the detriment of cinema's guiding myth (Prince 50). Contemporary commentators on film, according to Prince, perceive that "visual effects are composites, artificial collages, not camera records of reality" and therefore "digital imagery is said to pose a crisis for cinema...for a knowable reality as mediated by visual culture" (51). However, one must question how "real" the reality impulse is behind Hollywood cinema, a cinema whose power to engage viewers has ostensibly long been predicated on its ability to fashion believable worlds as well as linear plot-lines.

Hollywood cinema typically effaces all marks of the constructions it employs to achieve this end. As Bordwell, Thompson, and Staiger point out, the classical Hollywood

film "purports to be 'realistic'" and also "strives to conceal its artifice" (3). But what we see onscreen is never an unmediated version of the physical world in all of its minute detail. Continuity editing is a good example of how stylistic conventions serve to give us an approximation of events in a story. Time and space are fragmented and then reassembled in order to distill the essence of a fictional world into a media format that will fit onto a film screen and play out within the ninety minutes of a conventional feature-length film. This is, essentially, what underlies the concept of fabula and syuzhet, of story and plot, as discussed by the Russian Formalists (Bordwell *Narration* 49). Cinema does not (indeed, cannot) give audiences an entire real world; it gives us pieces of that world that we must put together as a puzzle in order to create a unified whole out of them. Cinema is, from the outset, an illusion twice over: an imitation of the real world on a two-dimensional screen and the incomplete representation of that imitated world within temporal (and economic) constraints. This isn't a weakness in the medium, however, but what allows it to become an art form. It is the crafting of the fabula and its distillation through syuzhet that is its "artistic trademark...we find material obviously created to remove the automatism of perception...the greatest possible effect is produced through the slowness of the perception" (Shklovsy 22).

Nevertheless, the stories told by Hollywood cinema take place in recognizable worlds populated by believable characters performing plausible actions: an attempt to make the unreal more realistic. Visually and narratively, this drive towards an illusionistic realism serves as the very foundation of most of Hollywood cinema, as Thompson has described how the rise of the classical paradigm represents the moment when "an

ideology of the realism of depicted events had taken over" from a more varied cinema landscape prior to 1912 that included animated and trick films (Thompson "Implications" 108). As Hollywood filmmaking technology matures, however, especially in terms of its special effects, we find an increasing number of films whose pictorial realism could be called into question. The perceived crisis that Prince detects in film scholarship may be due to the interference of digital effects after all.

Certainly, some types of images have inherent limitations on how realistic they can be, but audiences are conditioned to accept them as plausible when they appear in specific generic contexts. In a superhero film, we expect to see men flying. While we might know that they cannot, in real life, fly, we suspend our disbelief in order to enter the narrative world. While such images are not realistic in a quotidian everyday sense, they do not disrupt our immersion in the story. It is the visibility of the wires or the matte lines, the unexpected appearance of fantastical material, or deliberate Brechtian distancing techniques that draw attention to the constructed nature of movies. Classical cinema has traditionally used tools that can erase those wires or hide the lines in an attempt to show us what our minds expect to see when Clark Kent's alter ego zooms past in the air. With the advancement of digital technologies, the fantastic, the spectacular, and the unreal in genres oriented towards fantasy and horror can now be represented more convincingly than ever before. This effect, too, can be viewed as a kind of realism[1] insofar as it encourages audiences to suspend disbelief and remain immersed in the story being told. In rare instances, the fantastical computer-generated images that are often employed to spectacular effect in contemporary films may be

foregrounded in such a way as to disrupt audiences' immersion in the story being told. Kristin Thompson has termed this self-reflexive, Brechtian strategy "the baring of the device." Such uses of CGI, however, occur very rarely in mainstream cinema and do not appear significantly more frequently in films made in the digital era than in those made in earlier times.

II. Pictorial Realism and Correspondence

Hollywood filmmakers have used faked images to enhance verisimilar worlds from the beginning of motion pictures. Shipwrecks are often shot in a studio tank; cowboys on horseback appear from the waist up as they sit astride mechanical devices, miniature models offer panoramas of cityscapes, midgets are hired to stand in the background so as to increase the illusion of depth, and so on. In the digital era, with technologies much more capable of generating believable illusions, such effects have become far more pervasive. In *Gladiator*, for example, the magic of CGI enabled crowds to be amplified into multitudes; and Oliver Reed, who died during the production, was brought back to life when head shots taken earlier were grafted onto another actor's body for a crucial scene. In Gaspar Noe's 2002 film *Irreversible*, in a sequence at the beginning of the movie, Pierre (Albert Dupontel) kills and severely mutilates a man with a fire extinguisher. The progressive destruction of the victim's face is depicted in horrifying detail as pieces of flesh and splashes of blood fly off his head as it is bashed in. Although the sequence is dimly lit and presented via quick and disorienting camera

movements, the realism is remarkable, especially given that the graphic violence is shown in close up. The powers of the digital effects employed in this production were responsible for generating visuals that have attained dubious fame as some of the most disgusting filmic images ever made.

Spectators respond to images like these as though they correspond to actualities: the camera may lie, but audiences are not conditioned to infer as much when viewing a classical film. We respond to photographic images as indexical referents to the life we see around us. Expectations about the real world and its contents help us to suspend our disbelief even when the wires sometimes become visible. At times, though, the capabilities of the technology can overreach in generating what we expect to see, and present images that stretch our credulity.[2] While this phenomenon is nothing new in the history of cinema—the images in Merian C. Cooper and Ernest Shoedsack's *King Kong* (1933) can seem unbelievable because of the visible ruffling of fur on the giant ape due to the rudimentary stop-motion techniques used—the evolution of digital effects has increased this capability, while simultaneously raising the bar in terms of how realistic film visuals must be in order for audiences to believe in them. A film like Wolfgang Petersen's *The Perfect Storm* (2000) must provide viewers with images of epic storms at sea that, while only imagined, correspond 100% with what we expect to see based on our daily interactions with the physical world.

Stephen Prince has described how attention to minute detail—from realistic lighting or the replication of studio lighting systems, to texture mapping and the addition of motion blur on moving objects (and while they are freed "from the indexicality of

photography's relationship with its referent")—allows CGI to be visually convincing to audiences by creating the conditions for what he calls "perceptual realism" (30-1). This is even the case, Prince argues, when the CGI is of a fantastical nature; conjuring furniture or moving automobiles is one thing when trying to generate believable screen illusions, but running dinosaur flocks, as in *Jurassic Park*, and shape-shifting liquid-like killer robots such as the one from *Terminator 2* are horses of a different color. These "synthetic realities" (30) must rely even more heavily on the kinds of temporal and spatial situatedness (i.e. realistic motivation) that film viewers are accustomed to in everyday life to maintain the illusion that they've never been real, but are real enough that audiences will engage in suspension of their disbelief. "What is new and revolutionary about digital imaging," Prince writes, "is that it increases to an extraordinary degree a film-makers' control over the informational clues that establish perceptual realism. Unreal images have never before seemed so real" (34).

Prince has analyzed the effects on film form that digital imaging has had, concluding by making the claim that the long-standing dichotomy between realism and formativism in film aesthetics is resolved by the arrival of what he terms perceptual realism (28). He identifies the two primary ways in which CGI effects the filmic image: one, CGI can change the content of a traditionally photographed (i.e. using celluloid film) image; two, CGI can create images that have no profilmic existence (i.e. they are generated in production or postproduction and simply do not exist in the physical world).

Prince revisits Bazin's notion of the ontology of the photographic image, noting that Bazin "based his realist aesthetic on what he regarded as the 'objective' nature of

photography, which bears the mechanical trace of its referents" (28). In his survey of

digital images, Prince notes the opposite set of conditions in filmmaking relying on CGI:

"digital imaging operates according to a different ontology than do indexical

photographs...digital imaging can depart from photographically coded realism. Objects

can be co-present in computer space but not in the physical 3D space which

photography records" (29). While Bazin insisted that it is "production by automatic

means" and "the objective nature" that confers upon photography a "credibility" superior

to all other visual arts (13), if those automatic and objective aspects are so well-

fashioned by human hands so as to be no less convincing, such as in a digitally-altered

3D film such as James Cameron's *Avatar*, what model of realism is at work?

Prince identifies this process at work in mind of the viewer as perceptual realism,

which relies on "a correspondence-based model of cinematic representation" (31).

Citing a corpus of well-developed research in cognitive psychology and visual

perception, Prince notes how "correspondences between selected features of the

cinematic display and a viewer's real-world visual and social experience" work to make

even the most unbelievable digital creations on screen acceptable to a viewer as she

engages in the narrative world in which they are presented on screen (31). If the CG

dinosaurs or morphing robots replicate basic human biological functions and imitate

"edge and contour information...motion parallax... [and] screen geography with coherent

coordinates", the viewer is able to willingly suspend disbelief (31). These "unreal

images," because they are perceptually real to the viewer, and in spite of the fact that

they are "representationally fictional," become real enough to anchor viewers in the

screen reality they are witnessing (32). The result of the success of these "falsified

correspondences" (34) is that the significance of the debate over whether film is a realist

or formativist medium is rendered unnecessary. As Prince states, "digital imaging

exposes the enduring dichotomy in film theory as a false boundary. It is not as if cinema

either indexically records the world or stylistically transfigures it. Cinema does both"

(35).

The consequences of this, to Prince, are revolutionary, although his findings on

this point are of a mixed nature. He acknowledges that "the creative manipulation of

photographic images is, of course, as old as the medium of photography...[and] the

tension between perceptual realism and referential artifice clearly predates digital

imaging. It has informed all fantasy and special effects work where film-makers strive to

create unreal images that nevertheless seem credible" (34). And if the unreal has

become real to us, perhaps the realist-formativist debate has now finally been settled in

the age of digital cinema.[3]

III. Genre and Realism

Genre conventions (and therefore generic motivation) enable another level of

verisimilitude in classical film. Spectacular, non-realistic images have historically been

linked to formulaic plots in musicals, for example. Bordwell, Staiger, and Thompson

describe how the numbers in a musical may not be realistic, but maintain classical

narrative conventions by appealing to generic motivation (19). People in real life may

not spontaneously break into song and dance routines, but we as audiences accept the

presence of these actions as plausible given our experience with them from other

musicals. Though fantastical, these scenes lose their Brechtian capabilities by being

familiar to us from other products Hollywood has marketed to us.

Genres such as fantasy, horror, action, monster movies, superhero adventures,

science fiction, and animation that deal with the fantastical have always had to rely on

special effects to help create a believable backdrop for narratives that might otherwise

fail to engage viewers due to their lack of realism. In such films, the suspension of

disbelief enables audiences to remain immersed in a story even though it contains

images unknown in the world outside of the theater. In both science fiction and fantasy

films such as Peter Jackson's *The Return of the King* (2003), special effects are tasked

with creating a fictional world from the ground up. It is the completeness of the details

that makes an imaginary realm like Middle Earth seem real. Everything must be in its

right place and visible to us, from the flora and landscapes to the various races

including elves, dwarves, and ogres to the half-sized dwellings the hobbits inhabit. In a

fantasy film like *Jason & the Argonauts* (1963), the lack of digitally-generated effects in

the skeleton fight scene could be seen as a limitation in the generation of a "realistic"

fantasy world. Conversely, sometimes leaving things left unseen is exactly that which

the genre calls for. In a pre-digital horror film like Robert Wise's *The Haunting* (1963),

the fear comes from never being able to see the evil presence that terrifies the

characters. Such supernatural horror films are more believable because, while we may

be afraid of ghosts, we never actually see them. Jan de Bont's 1999 remake of the film

violates this realist (and generic) mandate by actually showing the spirit and coming off as laughable rather than terrifying. The related genre of monster movies function in exactly then opposite manner, as the visibility of the monster is what drives the narrative. The 1933 *King Kong* differs from the 2005 *King Kong* in the sense that the numerous shots of the gorilla in the latter add to the realism of the film due to the capabilities of the technology. In superhero and action films, realism is maintained by balancing the mundane with the exceptional, as both take place in what we consider to be the everyday world that we live in. However, these films will contain elements that could break the boundaries of believability: a man whose body turns to sand as in *Spider-Man 3* (2007) or an exploding building such as in *Die Hard* (1988), but they are brought back down to earth by only providing us with the minimum required visual thrills.

An example of a film that crosses generic boundaries and uses special effects to serve the story through the varied conventions it is is built on is *Jurassic Park*. If I was typical of cinemagoers in 1993, then most of those who went to the theater to see *Jurassic Park* had a strange reaction to the now-famous scene of Sam Neill and Laura Dern's initial encounter with a flock of computer-generated dinosaurs. The scene was certainly one of spectacle: the fast-paced editing, the swooping camera movements, the dramatic music, the loud sound effects, and the shared point of view between the characters and the audience all served to heighten the visual drama of the scene. The spectacular nature of the digital effects could have easily led viewers to forget about any expectations of realism that they normally have for Hollywood films. Digitally-generated dinosaurs certainly inspire awe, but they do not reflect our everyday experiences. This

fantastical illusion only dubiously purports to be realistic and conceal its artifice. It could

be argued that any representation of content such as dinosaurs is, by its nature, anti-

realist and draws attention to itself as a construct; that the increase in material such as

this in the age of digital technologies has only added to the anti-realist element in

contemporary film. However, the generic context of the film allowed a degree of

unbelievability. And the seamless integration into the narrative and mise-en-scène

offered no direct acknowledgment that they were intended to be seen as anything other

than real for the purposes of the story world. Because that representation in *Jurassic

Park* followed a handful of informally established rules, audiences could continue to

follow the story. The images of dinosaurs, however fantastical, were also depicted as

realistically as possible within the expectations we have perceptually.

IV. Artistic Motivation and the Baring of the Device

The spectacular potential of many digital effects is claimed to be so strong that it

reaches through the fourth wall and alerts spectators to its presence as something that

is not real, thereby shattering the illusion of realism.[4] While Bordwell, Staiger, and

Thompson acknowledged the presence of artistically motivated self-conscious narration

in classical cinema, Bordwell has described how much of that self-consciousness is

very subtle, including such simple devices as the staging of "characters for our best

view" (Bordwell *Narration* 58). A more obtrusive form of artistic motivation has been

described by Kristin Thompson as the "baring of the device." Thompson explains how

"at times the work will include a device that in addition to being artistically motivated actively calls attention to its own lack of other motivation. The concept is an important one because this is a structural strategy that defamiliarizes the form of the work itself; it may prevent the viewer from slipping into too comfortable a perceptual attitude" (*Ivan* 35). She goes on further to explain that:

> "Not every device which is artistically motivated is bared. In the cinema, elements in the background of a shot may be artistically motivated, but they are often not central enough to call definite attention to themselves...A baring of the device, then, is a specific type of artistic motivation that foregrounds the artistic structure the device belongs to—an element appears that is realistically and compositionally unnecessary, and that element becomes, at least momentarily, the most important one present" (36).

Baring of the device represents an extreme, and appears infrequently, especially in Hollywood films. An element such as a visual effects shot of an explosion is not necessarily self-reflexive in the sense that it is calling attention to the constructed nature of the artwork. It may be artistically motivated in its spectacularity, but it is still an essential part of the overall linear narrative structure and is recuperated through its generic context.

In Marc Evans's 2002 horror/thriller *My Little Eye*, self-conscious techniques saturate the film, including hand-held camerawork, night vision filming, fish-eye lenses, rapid edits between various locations, angles that would be impossible for humans to be viewing from, and screens within screens. This referential spectacularity is recuperated into the narrative, however, as the film's premise is that the characters have gathered as contestants on a reality TV show that is being recorded and broadcast. This film also belongs to the surveillance film genre, wherein these supposedly self-referential

techniques are an essential element of the story. This genre precedes the use of digital

technologies, and includes such films as Michael Powell's *Peeping Tom* (1960),

Michelangelo Antonioni's *Blow-Up* (1966), and Francis Ford Coppola's *The

Conversation* (1974). Alexander Sokurov's *Russian Ark* is comprised of a single shot

which travels around the Hermitage Museum as we witness scenes from different eras

of Russian history. The uninterrupted 96 minute single shot was made possible only

through the use of digital video and comes off as a gesture that is intended to draw

attention to itself. A more subtle use of a similar technique in the pre-digital era occurs in

Alfred Hitchcock's *Rope* (1948), which relies on clever visual techniques—albeit non-

digital—to maintain the illusion of a single, seamless shot. This reveals a conflict

between how we see real life events and how we have been trained to see believable

representations of those events, most often in the history of cinema through continuity

editing. In Hitchcock's film, continuity editing rules are not flaunted and the technique

lacks the flamboyance that is on display in Sokurov's production and thus comes across

as artistically motivated rather than a baring of the device. The marketing of, and

publicity surrounding, *Russian Ark* emphasized this self-referential aspect.

Self-reflexive images, by contrast, tear viewers out of their immersion in the story

being told to draw their awareness to the film as a constructed artifact. Steven

Spielberg's image of a little girl in a red dress, in the otherwise black-and-white

Schindler's List (1993), can be viewed in this light: it serves to heighten our awareness

of a significant thematic element as it draws attention to itself as a construct. Audiences

are meant to be distracted by such an image. Similarly, in Jia Zhang-Ke's *Still Life*

(2006), an animated space ship unexpectedly appears in the middle of a film that before then had cultivated an aura of documentary realism.

Bolter and Grusin illustrate how this logic works in contemporary film as "Hollywood cinema is trying to co-opt our culture's fascination with new media by using digital graphics to refashion traditional, linear films" (147). Citing animation as an example of how Hollywood sometimes leans on the logic of hypermediacy, Bolter and Grusin offer the Disney animated film *Aladdin* (1992) as proof that classical Hollywood cinema does not always rely on realism to construct its diegetic worlds. They claim that the character of the Genie, with his constant non-natural physical transformations, is a prime example of hypermediacy, but they do not explain this claim in depth. Instead, they spend a great deal of time tracing the history of animated films, explaining how early animation "could not achieve transparency" due to the limitations of the technology and so "adopted the strategy of hypermediacy, of making the audience aware of the artificiality of cel animation" (149). Realism was avoided because it was unachievable; ostensibly, filmmakers would have to wait until the requisite technological power could be attained.

The second mode of filmmaking discussed by Bolter and Grusin—hypermediacy (a type of self-reflexivity and a reworking of formativist ideas)—includes the creation of fantastical characters, worlds, events, and actions, such as those involving the shape-shifting cyborg and futuristic setting in *Terminator 2*, that could only be created for viewers through the use of digital technologies (optical practices being either too expensive, dangerous, or simply incapable of creating this type of imagery).

Hypermediacy is said to draw attention to itself as a mode of presentation given that it "expresses the tension between regarding a visual space as mediated and as a 'real' space that lies beyond mediation...In the logic of hypermediacy, the artist (or multimedia programmer or web designer) strives to make the viewer acknowledge the medium as a medium and to delight in that acknowledgment" (Bolter and Grusin 41-2). Bolter and Grusin ultimately argue that hypermediacy and immediacy are two sides of one coin: that of remediation. These "seemingly contradictory logics not only coexist in digital media today," they conclude, "but are mutually dependent" (6). They believe that audiences of movies like as *Jurassic Park* ultimately "go to such films in large part to experience the oscillations between immediacy and hypermediacy produced by the special effects" (149, 157), thus adding to the argument that realism and formativism are perhaps not so mutually exclusive, particularly with genres in which special effects are expected.

V. Digital Realism and *King Kong*

It would be difficult to find a more appropriate film to illustrate these concepts than Peter Jackson's *King Kong* (2005), as it is a remake of a landmark special effects film made during the studio era, updated to utilize contemporary cutting-edge digital visual effects. The simple plot of both original and remake is textbook classical Hollywood cinema, with a goal-oriented protagonist (the character of filmmaker Carl Denham, portrayed by Jack Black) whose drive to make a movie initiates the journey to

Skull Island and the capture and display in New York of Kong) confronting and overcoming obstacles. The romantic subplot involving Ann Darrow (Naomi Watts) and Jack Driscoll (Adrien Brody) is also a prominent feature of the story, especially as it contrasts with the ultimately unsuccessful "romance" between Darrow and Kong, and represents the victory of traditional American values over that which threatens them from the outside.[5] Although some plausibility issues arise (Would the Captain really risk the lives of his crew multiple times to rescue Darrow? Why does Kong drop Darrow and allow her to escape during his fight with relatively tiny bats when he previously did a perfectly good job of holding onto her during an epic battle against three T. Rex?), it is child's play to map the film onto Bordwell, Staiger, and Thompson's classical narrative paradigm. Beyond the dramatic images of Kong, dinosaurs, and giant insects, digital effects are used throughout the film, especially in the opening shots of Depression-era New York City in the "seamless" manner that Shilo T. McClean discusses. Seamless effects are often used to "underpin the period in which the story takes place" (McClean 82) and their purpose is to "preserve story coherence and support contexted verisimilitude" (78). Jackson, McClean argues, "makes extensive use of [digital effects] to take the audience into the experience and and to reveal character" (147). Charges that the remake is a prime example of spectacle cinema (it is twice as long while telling essentially the same story, and much of the added scenes are comprised of battle scenes driven by digital effects) are easily dismissed when one considers what the purpose of these scenes actually is. Beyond furthering the narrative (albeit a simple one of Denham and Driscoll's search for Darrow and Kong), at least two of the scenes exist

primarily to develop the crucial relationship between Darrow and Kong. The first comes approximately half-way trough the film, when Kong and Darrow are first alone together and she does her vaudeville routine for the monster in order to prevent him from hurting her. There is an excessive number of close-up shots of Kong's facial movements, but rather than seeing these as an attempt to show off the effects technology,[6] they serve to establish the emotional complexity of the animal as he moves from treating Darrow first as a toy and finally as a companion. The second of these scenes comes near the end of the film, as Kong takes Darrow ice skating in New York just before he climbs the Empire State Building. Again, while some may see this as a visual diversion from the narrative, it allows us to witness the affection the two have for each other, making Kong's death at the end that much more painful for Darrow and therefore us as well.

But beyond the narrative (over spectacle) functions of these uses of digital effects, the tools employed in the film all help establish a sense of realism in a story that is utterly fantastic and unbelievable. At the time of production, the film was considered to be in a class almost of its own in terms of number and complexity of digitally-altered shots, with the *Star Wars* prequels and the *Lord of the Rings* films its only peers. However, as discussed earlier in this chapter, the effects work in various ways that make the material more, rather than less, realistic. First, as Prince writes, the task of the digital effects is to generate a feeling of perceptual realism. This is perhaps most easily understood in the context of the use of subsurface scattering in the film. Subsurface scattering involves "simulat[ing] the way that light penetrates translucent materials, being absorbed and refracted before exiting with different qualities" (Rickitt 204). Rather

than simulate light bouncing off of a reflective surface and traveling in a different direction with its basic appearance unchanged, the digitally altered "light" in subsurface scattering is rendered into a phenomenon far more in line with what we actually see in the everyday real world. While this element alone does not convince us of the reality of a giant gorilla, it certainly makes that gorilla look more like what we would expect (based on our experiences with normal gorillas) a giant gorilla to look like.

Second, the expectations about the realism of the film must be considered in the light of it being a monster movie and also a remake. We expect, or even demand, unreal monsters in a monster movie; we are willing to suspend our disbelief because of our genre experience and become absorbed into the narrative. That this story and its monster have been presented to us in two previous film versions (and comic books and video games) makes it that much easier for us to accept Kong and the other inhabitants of Skull Island as "real" for the sake of the film experience. Finally, the digital effects never reach the level of baring the device. While there is an element of self-reflexivity in the film, as it concerns the making of a movie during its first two-thirds, this is (as mentioned above) a function of compositional motivation: the characters encounter Kong and bring him back to the U.S. only because Denham has enlisted them in his mission to make a movie. The fourth wall is never broken and we are left with a digitally-generated monster whose tragic death we mourn just as much as we would any of the real, human characters.

VI. Conclusion

In a framework for the possible different uses of digital effects, McClean suggests that only two of seven categories of effects usage include effects that are intended to go unnoticed by the viewer (69-102). On the surface, this general function of digital technologies seems to be at odds with the drive to create convincing illusions of people, objects, landscapes, cities and entire worlds that do not exist in reality, both furthering the narrative and adding to the overall realism of the film and thereby bolstering the classical foundations of contemporary film. However, Robert Stam has suggested that reflexivity and realism "are not necessarily antithetical terms...[not] strictly opposed polarities but rather interpenetrating tendencies quite capable of coexisting within the same text" (226-7). The supposed conflict between these two different drives as embodied in digital effects merits closer attention, but in order to do so, we must travel back in time through cinema's history.

The power to present the unreal to audiences, whatever its ultimate effect on them, is not only true of films made with digital technologies, but of film in general. It is often noted that cinema is endowed with the ability to create screen illusions that bring fantastical imagery to life. McClean calls this the "fantastical" drive in digital effects usage, where "effects sequences in films use DVFx to create images of astonishing qualities and realize the impossible to the highest standards of perceptual realism" (89). Commentators since the beginnings of film have noted this supposedly magical power, which is applicable to all genres and forms. Siegfried Kracauer, for example, writes that

"movie directors have at all times rendered dreams or visions with the aid of settings which are anything but realistic" (37). But the power to astonish— that of formativism— has always been in tension with the tendencies of realism (wherein representation attempts to meet the high standards of reality). This tension is represented in the long-standing conflict between the theories of André Bazin and Rudolf Arnheim. These theories have been called different things at different times—mimesis and discourse, reality and image—but the basic idea is centered on competing notions of what cinema can and should do: either faithfully represent the real world or craft its own images unique to its formal capabilities.

Where Bazin valued in cinema the blossoming of "an integral realism, a recreation of the world in its own image, an image unburdened by the freedom of interpretation of the artist" (21), Arnheim believed that cinema's inability to present a perfect version of reality represented a vital "artistic effect" inherent in the medium and that those who "want to keep on getting nearer to nature…do not realize that they thereby make it increasingly difficult for film to be art" (Arnheim 75). Hindsight suggests that the perhaps archaic binary opposition drawn between realism and formalism is less useful than finding common ground between the two competing theories. Some commentators have presented arguments for discontinuing the segregation of these two currents in film form; Kracauer suggested that cinematic art could realize its true potential only in "the 'right' balance between the realistic tendency and the formative tendency" (39).

As Prince notes, the perceptual cues that optical printing could never exactly

replicate across image layers are easily finessed in a digital composite. Digital

composites thereby achieve much higher levels of perceptual realism than optical

printing could ever attain (5). Comparing the effects work in Jurassic *Park* to previous

effects technologies, Prince writes that "because [the dinosaurs] are perceptually

realistic, they are able to compel belief in the fictional world of the film in ways that

traditional special effects could not accomplish. The creation of perceptual realism is a

major goal of visual effects artists" (33). In this way, "visual effects in narrative film

maintain a continuity of design structures and formal functions from the analog era to

the digital one. Digital visual effects build on stylistic traditions established by

filmmakers in earlier generations while providing new and more powerful tools to

accomplish these ends" (4-5). As David Bordwell writes about the New Hollywood

directors' response to the preceding generation of cinema *artistes*:

> "[N]o major filmmaker had mastered an impressive illusionism of special effects. My high school friends made fun of the rear projection and matte paintings that hung on throughout the sixties, and it's not surprising that our contemporary, Spielberg, insisted that his telefilm *Duel* (1971) not use these phony effects. The engineering-minded filmmaker could confront the challenges of upgrading mechanical monsters (from *Jaws*, 1975, to *Jurassic Park*, 1993) or creating truly plausible impressions of flight (*2001: A Space Odyssey*, 1968; *Star Wars*, 1977). Although critics tend to dismiss special effects, the best are triumphs of human ingenuity and post-1970 filmmakers made them powerful additions to the tool kit of representational art." (*The Way Hollywood Tells It* 24)

It seems, then, that digital effects are not only not anti-realist, but generate an even

greater realism for the kind of cinematic worlds that Hollywood has built its dream-

products on than any previous filmmaking technologies have ever achieved.

Chapter 4: The End of Traditional Cinema?: Interactivity and Open-ended Forms

I. The Never-Ending Story

The third way in which digital technologies are said to have altered classical narrative cinema as we knew it concerns how that cinema is now exhibited in different contexts and the implications of this shift for an understanding of film form that had traditionally been based on enforced time frames and linear progression. No longer constrained to a formal theatrical setting before a passive public audience, cinema is now viewed in new theatrical and home-viewing settings, many of which allow for interactivity between "text" and "reader." As new media scholars have pointed out, "being interactive signifies the users' (the individual members of the new media 'audience') ability to directly intervene in and change the images and texts that they access...in order to produce meaning" (Lister, Dovey, Giddings, Grant, and Kelly 20-1). This model of interactivity is derived from studies of hypertext on the World Wide Web (WWW) and early forays into electronic literature such as Michael Joyce's 1987 short fiction piece "afternoon: a story." Hypertext can be defined as "a work which is made up from discrete units of material in which each one carries a number of pathways to other units" (24).

These new methods of accessing films, from the WWW to DVD, often offer alternate endings or supplementary materials that allow the viewer to participate in the creation of the story in such a way that it is believed that traditional notions of unified

narrative have been rendered obsolete. With the growing use of these new exhibition

formats, some scholars have claimed that film viewers have gained new powers over

traditional narrative form in that they are able to participate in the construction of the

stories, creating texts that do not necessarily follow the classical model. In addition to

these new sites of reception, narrative films are seemingly opened up by the writing of

fan texts. The new authorial powers granted by novel exhibition contexts would

ostensibly undermine the dominance of the classical model, as viewers can create

unconventional stories of their own devising rather than relying on filmmakers and

studio executives to deliver a conventional type of story to them in a traditional theatrical

setting. Traditional films, with their formally unified, closed narratives, become

something closer to games or hypertexts—open-ended, as in without a predetermined

ending and/or capable of being read multiple times with different narrative trajectories

possible.

      Digital technologies are said to have increased the prevalence of interactive

formats and open, as opposed to closed, forms, radically altering the ways in which we

understand film narrative. Interactive cinema, imagined as a form wherein audiences

determine the path that the narrative will take, resembles video games and virtual reality

environments more so than traditional cinema (Bolter and Grusin 28-9). In an

intermediate step towards this exhibition context, film viewers are increasingly watching

and interacting with those films on DVD, the WWW, and cable and satellite television in

the home. These new modes of exhibition are now outpacing theatrical consumption

(Klinger 4). Alternate endings, director's cuts, "making of" or "behind the scenes"

documentary features, scripts and stories that films have been adapted from, and even hypertextual, "choose your own adventure" points in the film have all become standard inclusions on DVD versions of films. Websites devoted to a film (either studio- or director-sanctioned or not) with additional materials and fan edits have also been cited as places where we are invited to add our own contributions to a given narrative world in a new dialogic, interactive, and open-ended way (Jenkins "Interactive Audiences?" 160, 167). The fan edits that comprise the 2010 phenomenon *Star Wars Uncut* have raised the level of participation to new highs, with Lucasfilm sanctioning reinterpretations of the original film that eventually inspired the creation of a new Emmy category: interactive media.[1] Film narratives are extended beyond the theatrical experience, when they are adapted to video gaming platforms, from the Xbox home console to internet-based role-playing games such as *World of Warcraft* that are played by thousands of users simultaneously. The narratives that were resolved in the film can be played over and over again, directly controlled by viewers who become more like creators, with a variety of possible story lines and endings on offer. Despite all of these very real and tangible changes in the technologies, the form of classical narrative film has changed little, if at all.

Furthermore, the origins of these supposedly divergent forms often lie in the pre-digital era. If we take "cinema" to mean what the Hollywood studios have almost from the beginning insisted it is—a feature-length narrative film (with a standardized narrative structure inherited from theatrical traditions) that is the focus of an evening's entertainment—then it could be argued that cinema has changed significantly in the

digital era. However, it is clear that from the beginning of the history of motion pictures,

the forms have never been truly closed, and "cinema" has always been something more

than what the studios told us it was. Intermixing live entertainment, exhibitors'

rearranging of programming, audiences' arbitrary arrival times, doubts about individual

authorship of film "artists," and competition and cross-platform repurposing (with

television in particular) have been around longer than digital technologies and all offer

objections to the notion that it has been those technologies that have been the main

challenger to the standardized forms of cinema.

The forms of traditional films themselves have also been described as more open

than many assume. Kristin Thompson sheds some light on the structure of open-ended

narratives, as she explains how:

> "the narrative is at its most open at the beginning, for at that moment anything
> can happen...the film's violence occurs in the first scene, throwing the
> hermeneutic and proairetic chains in motion, and the possibilities narrow
> rapidly...the narrative could be compared to a cone-shaped figure lying on its
> side. The wide, open end is the narrative beginning; gradually certain lines of
> action are shown to be impossible...the possibilities narrow more and more until
> only one thing can happen: the ending comes; the cone's apex is reached. In
> contrast, in an "open" narrative, the possibilities never narrow off to a single
> inevitability; the cone remains open" (45).

Examples of this phenomenon can be seen in films that Bordwell has described as

following conventions of art cinema narration, rather than classical narration. For

Bordwell, the narrative strategies of these films center around the presentation of holes,

fragments, ellipses, and "permanent causal gaps" that result in an "open-ended" sense

of ambiguity about what is happening in the narrative (*Narration* 206-7). This can occur

though a minor plot point such as in *The Big Sleep* (1946), where there is uncertainty

over whether the chauffeur was murdered (and by whom) or committed suicide.
Ambiguities can occupy a more central symbolic role, however, such as in *The 400
Blows* (1959), which famously ends in a freeze frame on protagonist Antoine Doinel's
(Jean-Pierre Leaud) face, leading us to question whether his escape will ultimately be
successful and wonder what will happen to him next. *Blow-Up* is even more radically
open, as we are ultimately left without an explanation of whether or not the central plot
device (a possible murder) ever really took place outside the mind of fashion
photographer Thomas (David Hemmings). Although this art cinema narration began in
Europe in the late 1950s, its techniques were transferred to the United States in the
1960s, resulting in American films that violated their own classical norms, such as *The
Conversation*, almost a remake of *Blow-Up* that deals with auditory ambiguity and
technologies rather than visual ones.

Even before the advent of digital technologies there were attempts at creating
truly interactive and open-ended options for cinemagoers. Open-endedness and
interactivity were introduced in limited forms as a mode of viewing in the pre-digital era
at least as far back as Radusz Cincera's 1967 film *Kinoautomat*, which allowed
audiences to vote—via buttons on their seats—on which course of action the
protagonist should follow at various points in the narrative. Practitioners of aleatory film
such as Fred Camper, with his 1984 celluloid film *SN*, attempted to give audiences a
sense of open-ended form by arranging a series of discrete film passages that were
projected randomly each time the film was screened. This trend has continued, as
witnessed in Fiat's interactive narrative car advertisements from 2006.

The notion that film is open-ended perhaps dates back to the very beginnings of cinema. Exhibitors in the early days were responsible for arranging an evening's entertainment out of the numerous short films they had access to. The popularity of serialized films such as *The Perils of Pauline* and *Fantômas* demonstrate alternative options for story-telling besides the classical cinema's closed, single-sitting viewing experience. Even when the classical cinema exerted its dominance in full-length narratives, forms were not tightly woven; for viewers were accustomed to many years of coming and going whenever they pleased during the unfolding of the story, giving rise to the phrase "This is where we came in."

An examination of the influence that new media technology has had on classical film form must be undertaken in the realm of the various new sites of exhibition that are increasingly competing with traditional Hollywood theatrical exhibition. For example, *Troops* (a reality TV spoof utilizing characters and narrative gaps from *Star Wars: Episode IV)* and *George Lucas in Love* (a documentary parody of Lucas's creative process during *Episode IV*) are presented as narrative entertainment and can be reasonably subjected to a formalist analysis. On the other hand, sports games or the interactive flash animations that litter the web as advertisements cannot be held up as examples of how cinema has changed in the last 50 years anymore than carnival rides could be in establishing how narrative forms did not dominate cinema in its first decade. That short films have much in common with feature-length films, while ads do not, illustrates the need for a reasonable boundary to be established around the objects being studied. The classical narrative film, as described in Chapter 2, is potentially

subject to change, but the extent of these changes can only be determined by focusing on what is still being marketed to audiences as "an evening's entertainment."

These new formats and contexts raise the question of whether digital technologies (specifically those of reception) and their analog predecessors that differ from a projector/screen/theater model have significantly altered what we refer to as a "film." Some, such as Anne Friedberg, would reply in the affirmative, arguing that all moving images are part of a much broader history than Film Studies has heretofore allowed, one that dictates previously distant cousins television, video, and new media must be considered immediate family if an accurate genealogy is to be written. This is a sound thesis if we focus our attention on the ways in which consumers of moving images operate as spectators, and it would be foolish to argue that these technologies have not altered viewing contexts, constructing a radically altered landscape from the one we might have found in 1900. However, this same point alerts us to the fact that the viewing contexts are now so diverse as to be near infinite.[2]

How much focus on individual viewers and interactivity is necessary to understand the larger art form under consideration? Changing modes of distribution and exhibition are certainly deserving of historical study, but sometimes too much responsibility is placed the hands (or eyes) of the consumer, effectively negating the significant role played by two other presences: the artist or artists who made the film, and the industry that shapes their art (both diachronically and synchronically). As John Belton has pointed out, however much speculation is conducted in the name of an investigation of the "digital revolution," any actual historical changes in film exhibition

(and production for that matter) that can be measured are effected by the Hollywood studios (or their parent companies), driven by the desire to increase revenues that extend to all of these myriad viewing possibilities (102).

II. DVD: There's No Place Like Home

Even as sites of exhibition expand beyond movie theaters, the classical model persists. David Bordwell addresses the effects that the use of DVDs for film-viewing may be having on the form of those films as they are being engaged with and even while they are being created, asking "hasn't the DVD transformed cinematic storytelling?" ("New Media and Old Storytelling" 5). He points out that the advent of the DVD has allowed viewers to become more like readers of novels have always been: able to pick and choose their starting and ending place, reading sections in any order at any pace. Despite this seeming invitation to "graze and browse," Bordwell insists that viewers will "settle down to watching the show at the order and pace of a theatrical screening" (6). Eventually, despite the hypertextual possibilities, "the person who starts a novel will proceed in linear order in order to follow the story. It's a revealing phrase: we're following a path laid down for us, not racing ahead or falling back" (6). Even while we may sometimes engage in "pausing" or "paging back" or "scanning for the good bits," subverting the unified narrative whole, Bordwell points out that this is a much less common way of approaching the text (and often happens on a second viewing following the initial linear one) and deflates the notion that digital technologies are responsible for

this potential change in viewing habits, as "this doesn't seem to be a radically new way of using any medium, because the purpose—scanning a text for immediate gratification rather than narrative involvement—was common well before DVD" (7).

Addressing questions of formal unity in this open-ended arena, Bordwell finds that "fans do use home video to repurpose films to their tastes and moods...[but] the fact that clips can be pulled out and enjoyed on their own doesn't prove anything about the unity of the overall movie" ("Anatomy" 12). Considering the perspective of filmmakers, Bordwell asks "does the DVD format change the very act of conceiving and executing the story presented by the film?" (8). He notes that the kind of cinema-literate audiences that are supposedly being catered to in a post-classical cinema can engage with a film in repeat viewing with a VCR or repeat trips to the theater as they can with a DVD, downplaying the notion of a digital revolution; the only change the digital format brings about is that this kind of scrutiny is more convenient (8-9). Even with films that are ostensibly structured in their DVD versions to embody hypertextual principles, "the story possibilities are closed. As in a *Choose Your Own Adventure* book, you're hopping among trajectories that are already designed...furthermore, the trajectories themselves are linear, running along a cause-effect pattern very familiar to us from classically constructed stories...this interactivity rests upon classical guidelines" (9). He concludes that filmmakers who know that viewers are able to later examine their films in greater detail may have, by planting clues such as in *Memento* (2000), actually inaugurated a "hyperclasscial" tradition, or "films that are even more tightly woven than we tend to find them in the studio years" (9). Directly addressing the challenge of the cinema of

attractions, Bordwell recalls the days when some moviegoers were inclined to enter the theater after the beginning of the film:

> "If viewers can come in at any point, a vaudeville-like cascade of acts and incidents—what people are now calling a "cinema of attractions"—would be best. In fact, however, Hollywood feature filmmakers told complex, linear stories...they didn't seem to care if viewers were entering midway. But they really had no choice. If the filmmakers wanted to tell a fairly coherent story, how could they cater to a viewer who might enter at any moment? The only feasible plan, then and now, is just to go ahead and present a story in the linear way, but make sure it's presented so clearly that even a viewer entering in the middle can pick up what's happening. That was, and still is, the default practice. The redundancy of Hollywood storytelling, bent on clear and cogent presentation of the action, is the most effective response to a fragmentary viewing....In design and execution, the films have stayed remarkably stable. They have relied on our understanding of general principles of storytelling and more specific ones typical of Hollywood. In most cases, this default will stay in place. It works very well, and there's no alternative that can anticipate all the different ways in which viewers can consume the movie" (10).

Bordwell points out that "We can't easily draw conclusions about how films are constructed on the basis of how they're presented and consumed...Changes in viewing practices don't automatically entail changes in storytelling" (10).

The film *28 Days Later* (2002), which tells the story of a man-made plague that turns those it infects into enraged, cannibalistic zombies, offers a good example of the different kinds of forms storytelling is taking in the digital age. The DVD release features four alternate endings, all of which have the film end with [SPOILER ALERT] the death of the story's protagonist Jim (Cillian Murphy), rather than with his survival as in the theatrical release, which is the primary story told on the DVD. The other endings were all considered too dark by test audiences, and despite the insistence of Boyle and screenwriter Alex Garland that the bleaker endings were more in line with their true

vision for the film, they eventually went with the happier ending (Cadorette). Of the four

endings, one (the "Radical Alternative Ending"), was never filmed and hence presented

on the DVD as a series of storyboards and voice-overs from the director and

screenwriter. Home viewers are clearly distanced from perceiving this ending as a true

alternate, by both its presentation and the fact that the creators themselves disown it.

The other three, while filmed and edited, demonstrate what may be the single

most convincing reason why audiences don't consider alternate endings or deleted

scenes as part of the artist's vision and/or canonical version of the story: there was a

reason the scene was cut or rewritten and ended up compartmentalized on the DVD in

an "extras" section rather than as an actual part of the story. While a home viewer can

easily "page back" in Bordwell's terms, the structure of the DVD features and the menus

used to access them proves that they are still just ancillary material. Two additional

aspects of *28 Days Later*'s bonus features serve as testimony to the intransigence of

classical Hollywood form in the face of changes wrought by digital technologies. First,

one of the alternate endings was actually added to the end of the theatrical prints shortly

after its U.S. release (albeit marked off from the main story by appearing after the end

credits and preceded by a title reading "what if..."), a phenomenon having nothing to do

with interactive digital technologies, but everything to do with retaining the aura of the

classical Hollywood narrative's traditional format as it separates the alternate realities

from the official version of the story.[3] Second, all of the alternate endings include Jim's

death—three of them ending with the depiction of this event. Despite the influence of

digital technologies that could purportedly violate classical Hollywood cinema stylistic

traditions, all of these endings hearken back to the opening of the film where Jim wakes up from an almost fatal accident, thereby closing the film with a powerful gesture of one of the classical Hollywood cinema's most familiar characteristics—what might be called rhyming bookends. This concept, which links the beginning of the story to its end, is integral to the basic form of the classical Hollywood cinema, as unity is cited as "a basic attribute of film form" (Bordwell, Staiger, and Thompson 3). While Bordwell's conclusions about the ultimately classical nature of the DVD are sound, he has seemingly not considered that Hollywood might be attempting to expand the boundaries of the evening's entertainment in a less radical manner that retains some elements of open-endedness while stopping short of true interactivity. *Timecode* is a good example of this: while there are four simultaneous views of the fictional world that the characters inhabit, options for viewing specific events are limited to the four, and director Mike Figgis manipulated the soundtrack to highlight certain events over others at various times.

Bordwell's assertions are echoed even by those who have studied the form of television since its inception into an era where shows are available on digital formats such as DVD. As Jason Mittell points out, the availability of entire seasons and runs of various shows has allowed creators to focus on a serial structure over the episodic structure demanded of their craft by the practices of syndication which never ensured that viewers could see a season or run in its entirety and original sequence (1). This new "narrative complexity" that television shows are capable of expressing is indeed evidence that "the rise of the DVD has had more direct impacts on television storytelling

than Bordwell suggests for film" (2), although pre-digital precedents for this format exist in film serials and television soap operas. Ironically though, the dominance of a serial structure over self-contained episodes in TV has led, in many respects, to more classical style storytelling, with greater emphasis on recurring motifs, dangling causes (an event that is not immediately resolved or whose significance is not immediately explained, but which reoccurs later in the film in order to more fully develop narrative unity), and character development.[4] Even more ironically, the digital format, rather than revolutionizing the way that viewers consume (and perhaps "author") shows has constrained those open-ended possibilities through "the reframing of a television series or season as a discrete object, a narrative volume with its own integrity and unity which creators can use to guarantee that viewers will be able to consume the story in its proper order and pace" (2).

The notion that narrative worlds can be expanded and narratives can be continued after an individual film concludes, therefore resisting the straitjacket of traditional form in a different digital manner, is taken up by Will Brooker in his essay "Internet Fandom and the Continuing Narratives of *Star Wars*, *Blade Runner* and *Alien*." Focusing on the fan communities that have arisen around these films and perpetuate themselves on the Internet, Brooker lists the numerous ways in which this continuation takes place through what he calls "secondary texts" (50) or "supplementary narratives which push back the boundaries of the existing stories" (51): "sequels, directors' cuts and prequels...CD-ROMs, comics and novels" (50), in addition to video games and fan fiction. As a result, for contemporary film franchises, the story, as fans of *Star Wars*

know, literally never ends. But while some fans may take the franchise into their own

hands at times, the end results are not accepted blindly as the opening up of the

narratives. The fate of these secondary texts that are poised against the "'official'

narrative" (52) in a battle for acceptance by fans and an attempt to push boundaries is

made clear by Brooker in his description of the numerous platforms that the *Star Wars*

universe is continued in:

> "[Y]et all the intricacies of this secondary work would be made redundant in the
> eyes of most fans if their detail were to be contradicted in the slightest by the
> forthcoming prequels from Lucasfilm. Although fans rate the novels and comics in
> a hierarchy of quality and fidelity to the 'original,' this remains very much a
> second-order ranking which the gospel of George Lucas would collapse in an
> instant: even the 'best' novels are widely regarded as a collection of fables about
> Solo, Skywalker and Organa which will pass the time pleasantly enough until the
> prequels are released but which ultimately have no canonical status" (53).

Within the fan community, Brooker claims, "there has clearly emerged a certain

consensus, based around what can only be called a fetish for authorship—George

Lucas' involvement is absolutely paramount for a text to be considered genuinely

canonical...along with fan fiction and role-playing scenarios, comic books and computer

games...are by definition far removed from Lucas's authorship and can only be regarded

as tributes to his original creation" (67). This was exactly the case with the *Star Wars*

Uncut project. As much as the film was "remade" by fans on the internet, Lucasfilm still

had to grant its approval for the creators not to be sued, let alone for them to win an

Emmy. In his examination of fan forums, Brooker celebrates the enthusiasm of fans

celebrating their favorite story worlds, but finds that "every single post deifies George

Lucas as the guarantor of 'authenticity'" (68), acknowledging that those energetic,

creative fans know where the limits of the *Star Wars* narrative universe lie. This

supposed digital expansion of authorship still demonstrates a firm stability of the classical system and its closed forms.

Another piece of evidence used in the prosecution of contemporary films that seem to deviate from standard narrative form is that some films are relying on narratives filled with gaps in the story, especially when they are positioned within a franchise or sequel-based structure. The events of the two *Star Wars* trilogies have nineteen years between them, allowing for a wide range of fan-authored texts which attempt to fill the gap. To counter this, Shilo T. McClean offers the example of the *Alien* franchise, in which "there has been a consistent effort to ensure narrative closure" (172). However, McClean does note that many successful franchise films began their extended lives as a single film whose box office success allowed for the crafting of sequels (172). While we will never know what might have happened had the first installment failed, George Lucas insisted from very early on that the films he was making were to be part of a much larger narrative. The gaps themselves need not be seen as evidence that this narrative is not classical, as Bordwell and Thompson suggest that disunity often exists to some degree within classical films (*Film Art* 74).

III. Tales from the Console

One major competing media platform that is said to have influenced film art into moving in more open-ended directions is video games. Cinema and video games may often seem like horses of a different color, as a quote attributed to filmmaker and game

developer George Lucas contends: "There's games, and there's movies. Movies are storytelling; you tell somebody a story. A game is interactive; you participate in some kind of event with a lot of other people or with yourself, or with a machine. Those are two different things, and they've been around forever. Games have been here since the Greeks, and so has storytelling" (Kelly and Parisi). Lucas should know; he's created one of the most successful media franchises built on both platforms. But are these two so different from each other? Are product and performance discrete media categories? How far into new media scholarship do we have to look to find other examples this false dichotomy?

An analysis of the changing mise-en-scène from George Romero's *Night of the Living Dead* and its influence on the game *Resident Evil* and then onwards to the film version of *Resident Evil* and then back to Romero's *Land of the Dead* is an interesting place to begin an investigation of the phenomenon of cinema vs. video gaming. The sparse, almost minimalistic set design of Romero's *Night* (largely the product of the director's budgetary constraints rather than well-thought-out art direction) was shockingly realistic for audiences in 1968. The intervening years between its release and the debut of the first *Resident Evil* game in 1996, produced by Japanese gaming company Capcom, led audiences of the subsequent sequels (*Dawn of the Dead* in 1978 and *Day of the Dead* in 1985) to demand something more in terms of horror mise-en-scène. The first entry in the video game franchise expanded on the amount of detail in the zombie-infested setting, with broken window panes and battered-down doors swinging on one hinge, seemingly endless hallways and tunnels that abruptly turn into

deep shadows at every corner, and underground laboratories containing the debris of

an immense science experiment gone apocalyptically wrong. The first *Resident Evil* film

(2002), directed by Paul W.S. Anderson, with production design by Richard Bridgland,

successfully brought this look to the big screen. The film's direct influence can be seen

in Romero's *Land of the Dead* (2004), a movie that served as a tribute to not only

Romero's own landmark films, but those of his numerous imitators as well. The path of

zombie blood and empty shotgun shells from film to game and back to film shows how

cinematic mise-en-scène exerts a potent influence over its competing media platforms.

However, an even more explicit example of the power dynamic in the relationship

between these two seemingly different media can be seen in a development in the

gaming phenomenon known as machinima.

Rather than games influencing films, it is films that influence game design, and

narrative is actually overthrowing its supposed nemesis in games through the ways in

which gamers are turning the potential for open-ended forms into traditional narrative

stories with the rise of what is called machinima. Before the age of convergence culture,

video games and films were two distinct entertainment formats. Although an exact birth

date is difficult to identify given the multifarious platforms and their respective timelines

under consideration, the first time film and video games came together in a single

format—and truly interactive film was born—could be considered the 1983 video game

Dragon's Lair. The game involved digitization of traditional cel animation sequences and

directed players to perform various gaming actions that played back portions of a

Disney-style narrative cartoon from a laserdisc inside a typical arcade-style video

gaming machine. At critical junctures in the story, players would use a joystick to choose a particular course of action which would then result in success (and continued gameplay) or failure. The successful completion of the game experience would result in the gradual playback of the entire narrative.

Dragon's Lair was a novelty for its time, but its legacy lives on. Although a typical top-selling console game such as the the science fiction first-person-shooter game series *Halo* may contain only some narrative elements, especially as a framing device or direction towards an ultimate goal during play, that is assuming the player is one person playing in "Campaign" mode (where a narrative framework exists and closure of the storyline parallels completing the various levels of play), and not in any of the other modes such as "Capture the Flag" (where teams face-off against each other with the sole purpose of winning this electronic version of the popular real-life children's game), which contain no narrative elements whatsoever. This is of course, not to even mention the complete lack of such narrative elements in popular sports titles such as *FIFA Pro* or *Tony Hawk's Pro Skater*. However, the framing device has become more widespread, along with the inclusion of cinematics or cutscenes (video sequences that serve as transitions between aspects of gameplay), but they do not allow for active control of the game by the player. In these instances, cinema is seen to assert its control over gaming.

In an essay on the changes wrought by new media formats, Jon Dovey outlines the contours of what he calls "hypertextual narrative," a concept which, based on its name, isn't difficult to grasp the shape of: an open-ended story without a predetermined

route or final destination, made possible by travel protocols based on non-linear movement between nodes via links. These protocols have pre-digital antecedents to be sure, but the concept of hypertext did not reach its ultimate embodiment until the advent of the world wide web. However, its genealogy can also be traced to video games, with the open-ended, non-linear gameplay of a title such as the digital folk devil console hit *Grand Theft Auto* or the massively multi-player online role-playing game *World of Warcraft*. Dovey, drawing a distinct line between two competing media formats, suggests that hypertextual narrative has as its current embodiment the computer game and that that format "and its associated narrative forms may turn out to be as significant a part of twenty-first century popular culture as film has been of the twentieth century" (144). Interestingly, despite this line of demarcation, Dovey attempts to illustrate how hypertextual narrative operates in a brief discussion of a film: the 1999 American movie *Memento*. The film, he argues, "is of the cultural moment of hypertext...[largely due to its] disregard for a conventional narrative timeline" (141). He further observes that the film "stubbornly refuses conventional narrative resolution" (142).

Despite viewpoints such as this, this dichotomy has been undermined by the work on new media in the past fifteen or so years, and four key concepts related to the phenomenon of machinima illuminate this. The concepts are: convergence, remediation, the algorithm, and procedural authorship. Henry Jenkins has defined convergence as "the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behavior of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want"

(*Convergence Culture* 2). In Dovey's historiography, convergence is enacted as film audiences migrate to video games, an abandonment that statistics bear out today, with 63% of Americans having played video games in the past month as opposed to only 53% who have gone to the movies, according to a May, 2009 article (Cheng). Current annual revenues for the gaming industry and the motion picture industry are estimated at $25 billion and $10 billion, respectively. However, there is more than one angle to view these statistics from. Most of these studies focus on theatrical box office without taking into consideration the increasing number of home viewers watching films via internet-based services such as Netflix. And Microsoft reported in March 2012 that just over half of the users of its Xbox Live service are using it for movies and music rather than for games. These conflicting numbers bear out Jay David Bolter and Richard Grusin's contention that an important aspect of remediation is that it "operates in both directions" (48). Convergence and remediation do not happen in a linear manner, suggesting progress, so claims that video games supplanting cinema should be looked at suspiciously. Movies, however they are viewed, remain in the ascendant.

The third concept, algorithm, is employed by Lev Manovich to suggest the actions performed by both readers of a narrative and players of video games. In each of these formats, there is a collection of material (called a database) that we as users are granted access to via an interface or a selection between interfaces. Although he sets narrative (temporal) against database (spatial), he suggests that all media in the computer age is actually a database; it is only the constraints on the interfaces we have access to that determine how we perceive the database: as more database or more

narrative. He writes that with video games, for example, it is evident that "not all new media objects are explicitly databases...[as games] are experienced by their players as narratives " (221), so we can discern from this comment that one of the salient aspects of a media object created in the computer age is how explicit it is in terms of its transparency as a database. The WWW is very explicit, a video game much less so, and a film even less; the important point being that a video game and a film are much closer to each other on this continuum than a video game and the WWW. It is the algorithm—"the rules that operate in the universe constructed by [the] game...its hidden logic" (222) inherent in video games that makes them so.

The process of discovering this algorithm, and thereby winning the game or figuring out whodunnit in a detective novel, is the purview of Janet Murray's procedural authorship. She employs this term in order to suggest that user-based interactivity, while still an engagement with a text, is a far less powerful act than that of the originating author. Indeed, the originating author is the only true author, as opposed to the interactors who follow him. As Murray writes, "authorship in electronic media is procedural. Procedural authorship means writing the rules by which the texts appear as well as writing the texts themselves. It means writing the rules for the interactor's involvement" (152). Procedural authorship is the writing of the algorithm and the determination of the interface. It is the same governing artistry that oversees both the viewing of a film and the playing of a video game, and I believe that it operates at a much more powerful level than many of us would realize. Hollywood style and the industry that undergirds that style is the originating author who is writing the texts of

video games and the rules by which we understand those texts. As Bolter and Grusin remark, "the genre of computer games...remediates cinema" (470), but perhaps much more so than previously realized.

If we are to believe Jon Dovey and those like him though, we have to conclude that classical cinematic form is under threat by an "other" that is video gaming. On the contrary, the machinima phenomenon illustrates how narrative is capable not only of resisting the push to become user-directed and open-ended, but even of turning the tide of battle completely. It has its roots in the 1994 first person shooter game *Doom*, produced by id Software, which presented gamers for the first time with the ability to record their game play—the demo mode. Essentially a method of videotaping actions within the game environment, demos were at first simply recorded examples of superior gaming skills or dramatic battles with other players—a digital primitive cinema. The potential for expanding the horizons of the output of this gaming feature soon took machinima in an entirely unexpected direction that once again demonstrates the resilience of classical narrative form.

With the 1996 release of the 3D game *Quake*, gamers were able to create narratives using similar tools for staging and shooting as those wielded by professional filmmakers. As Paul Marino, an early machinima innovator remarks, with *Quake*, "demos had become more than the digital recordings of the game events—they became entertainment for a new audience," entertainment that rapidly began to resemble Hollywood-style films (Marino 4). The 1996 *Quake*-based short "Diary of a Camper" is considered to be "the first true machinima...[and] marked the transition from sports

footage to true moviemaking" (Kelland, Morris, and Lloyd 28). The years 1999-2000

marked the most dramatic change of direction for machinima. In 1999, id Software,

developers of *Quake,* decided not to allow support for machinima tools with the release

of *Quake III*. This forced machinimators to capture and edit their gameplay outside of

the demo function. Initially seen as a constraint, this move opened up the machinima

creation process to an even wider field of film production tools. Videos would now be

edited in Adobe Premiere just as "real" movies were. In 2000, *Quad God*, by Tritin films,

became the first feature-length machinima film to be edited outside of the demo function

and exhibited via the internet as a traditional mainstream video file rather than

depending on playback by hardcore gamers within the game environment itself.

With these changes, machinima films began to resemble their old media

counterparts more and more. As the popularity of machinima increased, websites and

film festivals devoted to their appreciation proliferated (Marino 13-17). Hollywood even

began to sniff around for possible applications to aid in feature filmmaking, as Steven

Spielberg used machinima techniques during the previz of *War of the Worlds* and *A.I.*

(14). Perhaps most famously, *Halo* has had its original purpose as an interactive video

game turned upside down as gamers used the game's recording feature to act out and

capture for future viewing a film that follows a pre-written script and adheres to classical

continuity editing techniques. Rooster Teeth Productions, the creators of *Red vs. Blue,*

represent the drive to return to classical narrative structures even within the realm of the

most radical interactive technologies. Developed into a series of films and later sold on

DVD, the *Red vs. Blue* series even led to its creators becoming sponsored by Electronic

Arts to produce more machinima shorts to promote newly released games such as *The Sims 2* (Kelland, Morris, and Lloyd 58). Given these developments, the future of machinima seems to point in the direction of more Hollywood-like productions. As Bolter and Grusin note, "the fact that the classical cinema predates computer games by a hundred years gives it a repertoire of visual techniques that computer games in fact want to appropriate" (87) and the appeal of video games "is generated in large part by the player's expectations derived from the medium of film," with a multitude of games "based on Hollywood originals...[using] three-dimensional graphics to recreate the atmosphere and cinematic style of the original film...[with some] string[ing] together segments of live-action film" in order to engage players (98).

Some of these visual techniques that Bolter and Grusin are alluding to, all hallmarks of the classical Hollywood style, can be seen in the first episode of *Red vs. Blue*: framing for clarity techniques including centered composition and frontality of characters, establishing shots, over-the-shoulder shots, shot-reverse-shot pattern, fluid shot scale emphasizing medium and close-up shots, an axis of action that adheres to the 180 degree rule, and the use of analytical/continuity editing to govern the narration, with multiple spaces and crosscutting. Even non-visual techniques that are key to the classical system are evident, such as psychologically realistic characters and recurrent motifs. Another well-known machinima film, *Yesterday's News*, using the *World of Warcraft* engine, tells the story of a dwarf who finds that his life's work—that of carving meeting stones—is becoming obsolete. He becomes a goal-oriented protagonist as he ruminates on his craft's glorious past in a sequence using parallel editing and begins to

search for something that will fill this new void in his world and give his life meaning. Through quick scenes evincing, in addition to many of the techniques seen in *Red vs Blue,* match-on-action cutting and the play between restricted and unrestricted narration, our protagonist brings the story to a formally unified close in the grand Hollywood manner of tying up the main line of action alongside a heterosexual love subplot. Along the way, we are heavily guided into this character's emotional world by another key Hollywood technique: music.

When we delve into the history of the supposed conflict between cinema and video games in an attempt to understand how games have or will supplant films as our culture's dominant entertainment format, we do, as Dovey suggests, need to remember the lessons of *Memento,* a film that David Bordwell cites as an example not of post-classical cinema, but of intensified continuity, that is the continuation of the classical Hollywood style. *Memento*, for him, is one of many new Hollywood films that "exploit the redundancy built into the classical norms and often mobilize some underused resources of studio-era moviemaking...although the innovations look fresh on the movie screen, many rely on our acquaintance with story schemas circulating in popular culture at large" (*The Way Hollywood Tells It* 82)—schemas that have been around since about 1915, with Hollywood as the originating author. It is striking that the history of machinima is often written as the accidental discovery of the filmmaking potential for this medium when games as far back as 1992's *Stunt Island* featured recording, editing, and playback functions. The gaming (and movie) world would never be the same. The publisher? Disney Interactive.

Clearly this arsenal of classical techniques will continue to be built into games—Hollywood as procedural author. Leaf through any instruction manual for creating machinima and you'll find it largely almost copied and pasted from traditional filmmaking manuals, in terms of both storytelling basics and cinematography, editing, and sound techniques. *Machinima for Dummies*, written by Scottish machinima firm Strange Company, discusses in detail everything from adhering to the 180 degree rule to narrative reversals. The pioneering book on machinima history and aesthetics, *Machinima: Making Animated Movies in 3D Virtual Environments* by Paul Marino, repeatedly offers advice for those want to, and examples of those who have (including the staff at Strange Company), broken in to Hollywood through their machinima work.

The Movies, a game where the object is to create a movie, is another example of this trend towards the Hollywoodization of games. But there is an almost unknown precursor to all of these: *Charlie Chaplin* from 1988, wherein players strive to recreate the scripts from Chaplin shorts. This game has been swept under the digital carpet, as if machinimators want to maintain the illusion that the film industry has no power over them. If we're tempted to arrive at a conclusion where games supplant cinema, the example of machinima practice must cause us to pause, as Leonard does at the close of *Memento*, and return to an earlier point in history in order to understand the present. The persistence of the classical Hollywood cinema forces us to stop at the end of the era of the interactive, open-ended video game and ask, as Leonard does, "Now, where was I?"

Chapter 5: Digital Divergence?: The Merging of Pre-Production, Production, and Post-Production and the Maintenance of Classical Form

I. And Never the Twain Shall Meet?

While this dissertation argues that most aspects of filmmaking and film form have remained the same with the advent of digitization, it seems inevitable that some changes may have occurred. One of these possible changes wrought by digital technologies on traditional Hollywood production methods might be seen in the blurring of boundaries between pre-production, production, and post-production. The standard model suggesting that a movie is pre-planned by one set of workers, shot on film with a camera by another set of workers, and then is later edited together in a different room by still different workers with different technical skills is no longer an accurate description of the process that delivers a finished product to audiences. In the days before the digitization of many elements of filmmaking, one could walk into a film studio or onto a location shoot and see something very mundane in terms of production: actors wearing costumes and makeup, walking around on sets. Now, sets are often generated using digital matte painting (bearing the exact relationship to traditional matte painting as the name implies), or created via a digital backlot, which involves shooting characters against a colored screen with background detail such as landscapes, foliage, or buildings to be added later digitally. It has been suggested that total digital creation was the original explicit goal of George Lucas when he made *The Phantom Menace* in

1999 (Pierson 138).

This is, of course, not an entirely new phenomenon, as the coming of sound in the 1920s forced studios and filmmakers to rethink how sound and image could be successfully combined. They were faced with challenges, particularly in the noise created by arc lamps, that required technicians on the set and in the editing room with different skills sets to collaborate more closely (Bordwell, Staiger, and Thompson 300). This effect of collapsing the production and post-production phases suggests that planning ahead becomes more important as film technologies become more advanced. The pre-production phase has been affected as well. As Bordwell, Staiger, and Thompson point out, the innovation of Technicolor necessitated Max Factor changing its makeup formulas because the sensitivity of the new film stock to previously used colors was not something that one could fix in post (245). This process of accommodation, or "insert[ing] new subdivisions into the work process" (245), has reached new heights in the digital era, as the number of new technical processes has expanded exponentially.

II. **In the Beginning: Digital Previzualization**

At every phase, there are significant "invisible" digital technologies that have been responsible for changes in the way films are made. Even before a film goes into production, digital technologies can have a transformative effect on the final product. Previsualization is the process of replacing traditional storyboarding—with its hand-illustrated thumbnail sketches—as the means by which a director envisions their shots

before arriving at location. Steven Spielberg, in comments about the pre-production of *War of the Worlds* (2005), discusses his delight in digital previz, and concludes that it has greatly enhanced his visual creativity and made production more efficient in terms of both time and money (*War of the Worlds* DVD).

Spielberg (inspired by Lucas' use of digital previzualization) claims he used digital previz for all the special effects shots in the film, even going so far as to postpone the construction of sets until previz had been completed so as to reduce the chance of having to redo shots. This preliminary digital step—something Spielberg claims he previously avoided—has at least in this anecdotal instance significantly altered the workflow. A self-admitted on-set improviser found himself meticulously planning shots in advance when presented with digital previz tools. ILM technicians working with the 3D modeling application Maya provided Spielberg with a great deal of raw material that helped save the director time and money. Spielberg even remarks on the assistance digital previz gave him in helping the actors deliver more convincing performances when they could see on-set what they were supposedly looking at in the final film. *War of the World*'s producer Colin Wilson speaks of Maya and its programmers as a crucial link between the imaginative vision of Spielberg the artist and the numerous technicians who help create the nuts and bolts of the final film; presumably without which the movie would not have been so richly realized. In this instance, the digital incarnation of a pre-production technique generated radically different results than its analogue predecessor could have. Similar—or sometimes even the exact same—tools are used during production and post-production to create digital models and animate them, and are

used to generate components of the film at every level, from art directors determining the overall look of a film to cinematographers setting up specific camera angles in advance of scenes actually being shot (or crafted in greater detail for the virtual camera), as will be shown below.

III. The Two Become One: The New Digital Workflow

At the level of what we would normally consider production, digital filmmaking tools, most simply, involve the recording and storage of filmic images digitally, rather than on traditional celluloid film. The first juncture in the history of digital film came in an analog image-recording format: video. Light is taken in through the lens of a camera, much in the same way that it is in traditional filmmaking, but instead of taking part in a physical, chemical reaction with the materials that celluloid is coated in, the images are converted into electrical signals by a charge-coupled device or CCD. Analogue video like this served television producers and video artists like Nam June Paik throughout the 1960s, but the next crucial steps were still to come. One of the first uses of digital computers in film production was a rather mundane application: motion control of cameras moving around filmed objects in order to replicate panning and tracking movements otherwise done manually by human camera operators. This technique has been in use since 1914, albeit with mechanical tools (Rickitt 146), but it was with this digitization of one aspect of the workflow on *Star Wars* that the digital era had its humble beginnings, as ILM's John Dykstra built a digital system that allowed precisely

controlled tracking shots around the elaborate models and miniatures used in the film

(147). It was work on this very same film that inspired the next step into the digital era,

involving editing.

Because its role in the classical Hollywood cinema generally was to remain

unseen, editing does not often attract as much attention as cinematography and effects,

but still remains vital to the creative process. Prior to digital computers, editing on a

Moviola or Steenbeck was linear, meaning film footage had to be accessed frame-by-

frame in a forwards and backwards fashion and physically spliced together to create the

final cut. Digitizing this process allowed film editors to store film footage on computers

and access frames randomly, creating multiple virtual cuts of a movie without altering

the original film before the final edit. Following the Laser Edit and EditDroid systems

discussed in Chapter 1, the Avid system was developed in 1989 and soon followed by

Adobe Premiere in 1991 and Apple's Final Cut Pro in 1999. Originally intended for home

use by amateurs, Premiere and Final Cut soon became prime examples of "prosumer"

technology, with films that used Final Cut, such as *Cold Mountain* (2003), *No Country*

for Old Men (2007), and *The Curious Case of Benjamin Button* (2008), garnering

Academy Award nominations for best editing, and one film—2010's *The Social Network*

—winning the award.

From the super-powered heights of the comic book world, down to the smallest

detail on real-life human beings, the advance of digital cinema could not be halted. With

the recent innovation of "digital cosmetic enhancement (DCE), the computerized

equivalent of plastic surgery, which gives stars blemish-free skin, breast enhancements

and even longer legs," elements of the 'production' phase are sometimes done after the filming of a scene (Rickitt 302). Extreme examples of this post-production work, which normally would have taken place during production and before shooting, can be seen in the erasure of Gary Sinise's legs in *Forrest Gump* and the near-total body modification of the actors who played hobbits in *The Lord of the Rings* trilogy. The same is true of costuming, as can be seen in *The Avengers* (2012), with Iron Man's armor digitally generated entirely or partially programmed and added onto a motion capture or standard performance (Prince 146). The Hulk, another character from *The Avengers*, demonstrates the practices involved in digital modeling. Modeling is the generation of objects and characters that exist in three dimensional space. Any element that will be put in motion or be seen in different spatial relationships to other objects must be created in all its complexity as if it were real. The two major divisions for 3D objects are hard surface and organic (Rickitt 156); the former referring to objects such as cars and buildings that have smooth surfaces and may remain relatively stationary, the latter identifying objects such as people and animals whose surface textures and movements are far more complex. An example of this duality can be seen in *The Avengers*, with Captain America's shield in contrast to the aforementioned character of the Hulk, whose green skin is stretched over his superhumanly large muscles and subtly flexes with every movement. While hard surface and organic models are initially generated in similar ways, the main difference between the two lies in the amount of detail that must be programmed into each.

Hard surface objects are usually built in 3D space by drawing lines between

points on X,Y, and Z axes and then connecting those lines to form shapes, or polygons, the basic building block of 3D digital modeling. Modelers work with pre-packaged shapes called primitives, including cubes and spheres. These primitives can be combined *ad infinitum* to generate more and more detail in the overall shape of an object. The time and labor involved in crafting complex hard surface objects such as a forest seen from high above can be generated via procedural modeling, which simplifies the modeling process by following predetermined rules that have built-in descriptions of what trees and forests should look like. Hard surface objects can also be envisioned via traditional illustration techniques, or can be created by scanning the corresponding real life objects or a sculpted physical clay model of then object (a process that is much more common with the creation of organic objects). The basic shapes are then inputted into a computer and further detail is then added. Finally, objects are given exterior detail by texture mapping which is similar to painting a pelt and then stretching it onto the featureless body of an animal. The last step in the process of digital modeling in this fashion is the application of surface shaders, which provide effects simulating light reflecting off of the surface of an object in a realistic manner. Organic objects, while containing more steps, are also be created in this way.

As discussed above, organic objects are usually created by scanning the corresponding real objects of clay sculptures of objects that do not exist (e.g. the heads and other body parts of aliens or monsters). Sculpting is more and more often being done digitally now that programs such as Z-Brush have become capable of generating incredibly complex models directly in the computer (196). The next step is one of the

significant differences between hard surface and organic modeling in many cases:

character rigging. In character rigging, bones and joints are added to the 3D character,

allowing its body to move in complex and realistic ways that follow preset rules about

physical laws related to movement. After a character is rigged, surfaces such as skin

are added in a similar manner as texture mapping as described above. Additional

processes are added in such as subsurface scattering, which more accurately portrays

how light is reflected off semi-translucent surfaces like human skin. One of the digital

visual effects industry's masterworks in the use of subsurface scattering to give realistic

detail to a creature that does not exist is the character of Gollum from *The Lord of the*

Rings trilogy (204). If need be, even more complex surface detail such as the fur

covering Sully from *Monsters Inc.* is added. After these models are built, the process of

animating them can begin. These digital techniques are not so different from some

traditional animation techniques that preceded them early in the 20th Century.

Once objects are designed, they must be enabled to move, the key concept

behind animation, which is derived "from the Latin verb, *animare*, which means 'to give

life to,' and within the context of the animated film, this largely means the artificial

creation of the illusion of movement" (Wells 10). This definition is inadequate, however,

if we consider the many ways in which characters, especially (but not limited to) digital

characters, talk and express emotions. The aforementioned Gollum and Sully

demonstrate how "life" is brought to fabrications in many ways besides simple

movement. 1995's *Toy Story* — the first entirely computer-generated feature film —

created an entire world of unreal images populated by living, speaking toys. Rather than

evincing the so-called spectacularity of effects—a concept that suggests that traditional narrative techniques are overwhelmed by the attention-grabbing, dramatic visual sequences interjected into the flow of the story—the film demonstrates how genres beyond science fiction, but still based on classical Hollywood storytelling techniques, could be rebooted by using digital technologies. Animation, just as every other effects technique discussed above, has analogue predecessors. Willis O'Brien's work on *King Kong* is a prime example of complex analog modeling using rigged puppets and miniature sets. While the effects are, in hindsight, primitive, they solidified animation practices that O'Brien had pioneered in his previous work on *The Lost World* (1925) (Rickitt 184). This work with stop-motion models, as well other types of animation including claymation, a technique that dates back to at least 1908 in the United States, experienced a "fad" period in 1916 (Frierson 82) and is still in use today as evident in the Wallace and Grommit films, demonstrate 3D animation's lineage. 3D animation is, simply, the manipulation of physical objects in real space for the purposes of filming, but there is another category of animation that is represented in analog and digital form as well: 2D.

2D animation can be as simple as hand-drawn images photographed onto film—what we know as "cartoons"—although the artistry evident in work by early practitioners such as Winsor McCay in his *Gertie the Dinosaur* (1914) belies the use of the term "simple." 2D animation became an industry standard only when the labor- and cost-intensive process was made more efficient with the invention of cel animation. As Kristin Thompson notes in "Implications of the Cel Animation Technique," cel animation

"consists of separating portions of a drawing onto different layers to eliminate the

necessity for re-drawing the entire composition for each movement phase...[which] not

only saves labour time for a single artist, but it also allows specialisation of labour"

(107). This animation process, when combined with the multiplane camera invented by

technicians at Disney in 1937, allowed for incredibly nuanced 2D animated images with

depth and contained complex lighting and movement (Rickitt 172) and brought 2D into

the 3D realm.

Animation need not be created entirely from scratch in a computer. Sometimes,

such as in *Waking Life* (2001), actors are shot on video and then drawn over with

computers—the digital version of rotoscoping. This technique, also involving the use of

keyframes and tweening, creates an animated approximation of the live action with an

expressionistic effect added. In another use of live action to animate a film, motion

capture was employed throughout *The Polar Express* (2004). The movements of

characters, including subtle facial expressions, are first enacted by real human actors.

Markers—which allow digital cameras to record detailed movements—are placed on the

actors' bodies and faces. The action is then inputted into a computer and the markers

have digital characters mapped onto them. This process of animating fictional

characters would take much longer to generate *ex nihilo,* and would likely never achieve

the subtle details and naturalistic movements generated by recording real human

actors. This process allowed Tom Hanks to play three different digital characters (the

boy, the train conductor, and Santa Claus) that all appear together in one scene (209).

This breakthrough in 2004 in the use of digital technology that was used to animate the

digital characters was directed by special effects enthusiast Robert Zemeckis. The levels of detail achieved in digitally mapping and transferring the movements of the facial muscles of the actors (particularly Hanks, who played a total of six different roles in the film) raised the profile of motion capture technologies enough so that the subtleties filmed began to be referred to as "performance capture."

Zemeckis' film uses digital effects in many of the ways audiences have come to expect: difficult shots that might require more exact staging and repeated takes, such as the images seen in reflections of the boy's hubcap toy and Santa's sleigh bell; shots that would be too cost-prohibitive to stage and shoot conventionally, such as the train pulling up in front of the boy's house, and the roller coaster scenes on the journey to the North Pole (accomplished via virtual camera movements that work by shifting the final optical point-of-view to be presented on screen in relation to objects in the digital dimension); shots involving too much danger to actors, including the boy's pursuit of the flyway ticket atop the moving train; and impossible shots featuring images that simply could not be created conventionally, such as the gathering of elves at the town square on Christmas Eve. While the film seems to fit the description of a movie that has veered into digital spectacle, it is easy to see *The Polar Express* as a children's film with a simple plot that features occasional visually dramatic pieces, such as the musical number with the hot chocolate-serving waiters aboard the train, but concludes with a classical ending concerning a boy overcoming doubt about the magic of Christmas.

Complex processes such as facial animation can also be driven by raw, real life data that is captured via multiple cameras (similar to the scanning techniques discussed

above) or by scanning clay sculptures of key expressions and creating further

expressions via image interpolation (a process that will be explained below) in a

technique known as blend-shape animation (213). When the scale of animation shifts

from the minute details of Yoda's face to the vast armies of Orc warriors, a different type

of animation is called for. Using a program called Massive, animators from Weta Digital

working on *The Lord of the Rings* conjured seemingly endless battle lines of magical

combatants. This process is perhaps best explained by the technicians themselves:

> "Massive combined digital character animation techniques with a form of artificial intelligence that allowed us to control how thousands of characters looked and behaved...We built a kind of artificial brain which was a system of rules governing how characters might behave or react in various situations. The brains were a network of 7,000 to 8,000 nodes, each node being the equivalent of a decision that had to be made, such as "Do I lift my sword or not?" or "Is this person so strong that I should run away?" Our characters could recognize who to attack, which weapons to use, and how to stand, run, or fall on different types of surface. Warriors even knew how to die in a manner suited to the way they were attacked and where they were standing" (Visual Effects Supervisor Joe Letteri, as quoted in Rickitt 216).

Digital animation also, again as a parallel to its static counterparts, uses procedural

animation processes to realistically replicate complex natural phenomena. Fire, smoke,

and sandstorms, for instance, are digitally generated using tools that instruct the

individual particles or elements to follow pre-programmed rules that reflect how these

phenomena behave in real life. Water has been a particularly difficult natural element to

create digitally, until procedural animation allowed animators to fill the seas in *The

Perfect Storm*, often considered "the breakthrough for realistic digital water" (224).

Beyond the creation of images, digital technologies are also used for the

combination and alteration of traditionally filmed images. Almost since the dawn of

cinema, the combination of separate images filmed at different times has played a major role in filmmaking, and is so commonplace that it almost can't be considered a "special" effect. This category of techniques is known as compositing and its analog antecedents consist of the construction of traveling mattes and the resulting images which are joined together on film by an optical printer. Nowadays, these effects are more efficiently achieved via digital techniques, but many still resemble their early 20th Century counterparts. One technique known as rotoscoping, which was invented by Max Fleischer in 1917 as an aid for hand-drawing animation (67), has a digital parallel in use today, as seen in the 2005 version of *King Kong* (102).

The creation of a digital intermediate or DI is becoming more common, as it is a cost-efficient and high-resolution way to scan 35mm film and prepare it for adding digital effects. These digital effects can range from some of the more noticeable techniques discussed above, down to what have been called "invisible" effects such as digital grading. Grading involves changing the contrast or color in filmed images to more richly saturate certain aspects of the mise-en-scène, such as making a sky more blue. It can also "create an overall stylistic 'look' or 'mood' for a film" such as *The Aviator* (2004), which was made to appear to have been shot on film stock from the 1930s, the era in which the film is set (99). Rather than creating spectacular images for their own sake, these kinds of invisible digital effects are "deliberately concealed" and their purpose is to achieve "perfect verisimilitude that does not draw attention away from the narrative" (McClean 76-7).

Digital effects are also used to change filmed images in a slightly more noticeable

manner. Objects and entire scenes can have their focus changed or be made to appear distorted and warped, as if a different lens was employed than the one actually used, and tracking effects can be created within a shot (Rickitt 106-7). This type of "seamless" technique again does not "seek to draw attention to itself for spectacular purposes... [but] to ensure the narrative coherence with classical Hollywood storycraft" (McClean 82). They try, as much as possible, to emulate traditional cinematographic techniques. At the end of far edge of this digital image manipulation lies morphing, which falls into the effects category of "fantastical," which "extend the real world into the realm of fantasy but without necessarily disrupting the diegetic world for spectacular observation" (91). The detailed case studies above of two films that used morphing in novel ways—*The Abyss* and *Terminator 2*—is illustrative of these techniques.

Another effects category is that of image interpolation. Both traditional animation and digital animation make use of the key frame, which serves as a reference point that in-between images are drawn around. Image interpolation is an automatic process that fills in the images between key frames, or, in the case of live-action filming, between actual shots. Like undercranking and overcranking, this technique can extend slow-motion shots or speed up action (such as in ramping) far beyond traditional techniques. One particularly visually dramatic instance of image interpolation is that of the "bullet time" effect used in *The Matrix*. In this technique, action was filmed in the round by multiple still cameras, and then, "using frame interpolation these images were then used to create additional synthetic in-between frames of action, turning a five-second sequence into a ten-second one" (Rickitt 110). Bullet time is ostensibly a technique that

could be produced optically, but is undoubtedly made much easier and cost-effective by the use of digital technologies. Image interpolation, in this instance, is an example of "exaggerated" effects. These effects "exaggerate events and seek to heighten the dramatic tension" (McClean 86). Despite the visually dynamic action aspect of this example, exaggerated effects are still utilized within a formal system in which "the narrative does not stop so much as get driven along by the action sequences" (88).

Extending even beyond the creation of components of a scene or the alteration of traditionally filmed images, though, the power of digital filmmaking tools to fold production and post-production into one another is most evident in the concept of the virtual mise-en-scène and cinematography. While digital matte painting creates backgrounds for actors to be composited against, the "digital backlot" can consist of even more extensively encompassing computer-generated imagery. Films such as comic book adaptations *Sin City* (2005), *300* (2007), and *The Spirit* (2008) all used green-screen technologies almost exclusively, eschewing location or studio sets and shooting action against a colored backdrop (in all three cases only using real sets in a few instances) that digital imagery would later be added to. Landscapes, buildings, interiors, entire cities, and even worlds can be generated on a digital backlot, often in the service of a fantastical mise-en-scène that couldn't otherwise be created economically. Perhaps the most notable to date film employing such techniques has been *Avatar*, whose technicians fashioned the fully-realized detailed alien planet of Pandora with its multifaceted geography populated by exotic (and unreal) flora and fauna. The groundbreaking use of effects in crafting such engrossing detail garnered the

film Academy Award nominations for Best Picture and Best Director, and earned it

Oscars for Best Art Direction, Best Cinematography and best Visual Effects. At the time

of this writing, *Avatar* holds the all-time record for box office revenue.

Evincing even more power than the digital backlot to supplant traditional

filmmaking techniques is the virtual camera. While animated characters crafted in the

ways discussed above are complex in their own right, they must inhabit a three-

dimensional world or they remain disconnected, floating in space, and unrealistic. The

3D spaces created for them contain a "camera" which is actually just the viewpoint on

that space that a technician programs into various shots and scenes to be assembled

later as the finished film is put together. A film camera can't simultaneously shoot every

angle on every object in every location, so choices have to be made as to what will

appear in a film as if it had been chosen by a cinematographer shooting on celluloid film

with a traditional camera. This is the function of the virtual camera; it does not create

worlds, but it creates the vantage point on them that will be shared with movie

audiences. Cheaper, lighter, not needing to be reloaded after eleven or even ninety

minutes, capable of reproducing any effect from any combination of all possible lenses,

filters, depth of field and exposure settings, and moving at any speed and angle into any

location and through any object, the virtual camera is perhaps the ultimate digital

filmmaking tool. It replaces operators and countless pieces of equipment, doesn't need

to be transported anywhere, and doesn't suffer mechanical problems, all at the lowest

cost imaginable. These cameras' "filmed" scenes are illuminated by digital lighting and

then, as the final process in digital filmmaking, rendered—what is referred to as "the

most time-consuming and processor-intensive task in the production of digital images...

[and] the deciding factor in the quality of the visual effects that appear in a film" (Rickitt

236). Rendering the virtual worlds completes the digital film by having all components

blended together, with final touch elements such as ray tracing—which simulates the

realistic reflection of light off of various surfaces—and motion blur, a naturalistic effect

that simulates how human beings perceive moving objects in the real world. At this

point, the digital film is complete and ready to be transferred to 35mm for exhibition—

unless of course, it is to be projected digitally.

The result of all of these new techniques coming at various stages of production

and contributing to the finished film is that "the move to treat computer animation not as

a specifically effects-oriented medium but as the ground for all cinematic figuration

seemed to mean using digital imaging techniques to remake film in the mode of

something closer to traditional feature film animation" (Pierson 132). This concept is not

completely new, but has been suggested by new media theorists, perhaps most

famously Lev Manovich who has stated that "digital cinema is a particular case of

animation that uses live-action footage as one of its many elements" (302). He further

goes on to state that:

> "The same logic applies to the relationship between production and post-production. Cinema traditionally involved arranging physical reality to be filmed through the use of sets, models, art direction, cinematography, and so forth. Occasional manipulation of recorded film (for instance, through optical printing) was negligible compared to the extensive manipulation of reality in front of the camera. In digital filmmaking, shot footage is no longer the final point, it is merely raw material to be manipulated on a computer, where the real construction of a scene will take place. In short, production becomes just the first stage of post-production." (303)

The conclusion he draws from this, however, is that the return of cinema's repressed—

animation—signals a new era of avant garde aesthetics, a painterly cinema that is not

afraid to express its artificiality and deny its aspirations to realism. "Although

marginalized by the twentieth-century institution of live-action, narrative cinema, which

relegated them to the realms of animation and special effects," Manovich writes, "these

techniques are reemerging as the foundation of digital filmmaking" (308). In contrast to

Manovich—and perhaps in this context somewhat in contradiction of her position on the

return of animation—Pierson describes the filmmaking industry's conceptualization of

the changing tools they are making and using. Offering non-linear editing as an

example, Pierson writes that while new digital non-linear systems may offer editors

more flexibility and lighten their workload:

> "[A]ny suggestion that these changes might be having more far-reaching—if less
> tangible—consequences for the craft of editing has been most vigorously resisted
> by the companies marketing the leading digital platforms...to the film industry. It
> has been their claim that (in Hollywood) editing decisions are fundamentally
> guided by the need to arrange images into sequences that tell a story and that
> these decisions are not substantially altered by the technologies used to execute
> them." (142)

While Manovich's opinions have garnered widespread attention, they may be in

the minority. Instead, the implications of the increasing use of digital technologies in

filmmaking for the classical narrative style may be more in line with Pierson's

conclusions about film technicians finding digital tools as a powerful aid to classical

storytelling techniques. Numerous contemporary film scholars have remarked on the

state of affairs in the digital Hollywood era. McClean writes that "traditional storycraft

practices are what drive the use of effects" (218). If Hollywood cinema has to any

degree become narratively incoherent, it is not due to digital effects, but to "bad storytelling" (221). Stephen Prince argues that, while digital effects may have become more prevalent, "industry consensus tends to view a disregard for narrative as a sign of poor filmmaking" and that there is a "continuing relevance of narrative as the organizing framework for popular cinema and for the deployment of visual effects" (223). Citing films such as the digital effects landmark *Jurassic Park*, Geoff King downplays the alleged role of those effects as agents of spectacle, as he states that the contemporary Hollywood blockbuster does not represent a clear break from the studio era, but is still strongly driven by the dynamics of the feature-length narrative" (206). David Bordwell writes that despite the fact that "today's computer-generated imagery has encouraged dynamic graphics," the classical Hollywood style is alive and well, with "a stable, powerful body of conventions shaping virtually every film" (*The Way Hollywood Tells It* 50). Despite the slight influence of digital effects on the Hollywood workflow, little in the way of formal change has taken place, providing even more evidence for the resilience of the classical Hollywood style.

Conclusion

      In a review of the technological changes Hollywood faced in the 1990s, the editor of a collection of scholarly essays published in 2001 and entitled *The End of Cinema as We Know It* declares in the volume's introduction "[n]ew technologies radically changed production, distribution and exhibition" during the decade (Lewis 3). Entering into the darkened theater of the 21st Century with only a hazy digital video image on the screen of what was to come for cinema, this writer chose to, along with many of the other prognosticators of the end of the 20th Century, predict that things were about to drastically change for the classical Hollywood cinema. In the shadowy, high-contrast imagery of a 50s film noir, the usual suspects are trotted out: Dolby digital sound, effects-driven action sequences, and MTV-inspired stylistics and marketing. One essay in the volume, titled "End of Story," makes the pronouncement that "traditional notions of storytelling [have] disappeared in the hyperactive montage of a new cinema that is essentially visual entertainment, the eye candy of image culture where the referent vanishes amid a whirlwind of spectacular editing" (Sharrett 320). This insert shot in postmodern cinema announced "a panicked predicament for narrative," to be replaced by "[t]he visual hysteria of the new Hollywood" (320).

      The same writer holds up the *oeuvre* of Quentin Tarantino as proof that Hollywood, apparently a tired and old gunslinger, has finally hung up its well-worn six-shooters in the form of the stylistic and formal traditions it has secured the safety of its territory on. What the writer seems not to have noticed as the trailers for digitally-

125

inflected cinema started to roll on the screen (perhaps due to the distracting glimmer

from scores of Samsung Galaxy S III screens wielded by those dashing off a final quick

text message—"movi abt 2 strt ttyl"—is that Tarantino's films don't change Hollywood

(and Hong Kong wuxia and Italian spaghetti westerns), they celebrate it. His films follow

traditional genre conventions closely, only deviating enough to have some kind of

impact on the world outside the multiplex. It turns out that contemporary Hollywood film

might not just be eye candy, but something we can digest that might matter in real life.

African-American Studies scholar Henry Louis Gates, Jr. attested to the power of

contemporary Hollywood film art to transform our minds and our lives when he said of

Tarantino's 2012 slave-revolt narrative *Django Unchained,* "one of its most salutary

effects is that it has generated a greater conversation about the enslavement of our

ancestors than any that I have witnessed perhaps since *Roots*" (4). Returning to the

editor's introduction to *The End of Cinema*, it seems that even those who have accused

digital technologies of the murder of the classical Hollywood have conflicted notions

about whether or not the body has any life left in it. Lewis writes, "American film has

always had a tendency toward repetition...[e]ven such technological developments as

the advent of sound, color, and the introduction of TV have only revealed the flexibility

and resilience of the industry and the medium it produces" (8).

Perhaps the debate over whether digital technologies have changed the soul of

cinema might be summed up in this off-the-cuff reminiscence from David Bordwell, in a

book culled from his blog entries and released and sold online as a PDF. While he

addresses digital distribution and exhibition specifically, his words might echo around

the spaces inhabited by all other digital technologies as they engulf Hollywood films:

> "I can't mock the kid who watches *Melancholia* on VOD, or *His Girl Friday* on an iPhone. Is it any more absurd than me watching *The Wizard of Oz* on a small black-and-white TV in the 1950s, or *Potemkin* on 8mm in the 1960s, or *La passion de Jeanne d'Arc* on a 16mm dupe in the 1970s? In these and many other encounters, something powerful came through and led me forward, regardless of the faults of the format." (*Pandora's Box* 216)

It seems that the story of the classical Hollywood cinema, whether it continues as a digitally-graded video delivered by Netflix over a wifi router and viewed on a Google Nexus 10 tablet, is far from over.

NOTES

CHAPTER 1

1. The images were created by Larry Cuba and Tom DeFanti, programmers in the

    Electronic Visualization laboratory at the University of Illinois at Chicago.

    2. Rick Rickitt provides this figure and compares it to a normal effects film, which he

    writes may contain around 200 digitally-enhanced shots (240).

CHAPTER 2

1. The term "spectacle" presents special difficulties. The main problem with the term

    is that no one can seem to agree on what it means in the context of Film Studies.

    It is tenuously linked with the larger concern surrounding spectacle in culture,

    drawn from Guy Debord in *The Society of the Spectacle* and illustrated in detail

    by Douglas Kellner in *Media Spectacle*. Kellner claims that contemporary cinema

    has become an extension of the "pacification and depoliticization" of society that

    Debord described in the 1960s. What Kellner actually means by 'spectacle'

    cinema is unclear, as he alternately uses the term to indicate the media event of

    the Academy Awards, saturation advertising campaigns for blockbuster films, *and*

    the scene of frogs raining down from the sky in P.T. Anderson's *Magnolia*. Despite

    the ambiguity, Kellner assures us that film is a central cite of spectacle culture. In

    this dissertation, the term "spectacle" is used to refer to descriptive passages that

focus attention on the image to the detriment of narrative progression.

2. Musser finds that "American narrative cinema around 1908-1909—the cinema

that Gunning focuses on most intensely—is notable for its relative lack of

attractions" (411). If non-classical elements were less common than thought in

the period Gunning looks at, it follows that they are likely not nearly as prevalent

in the time following that period, as the classical paradigm began to assert itself

fully. Musser even questions the validity of the concept of a cinema of attractions

based on what he sees as a flaw in Gunning's characterization of all film before

D.W. Griffith as such. In short, Musser argues that narrative was always an

important feature of cinema, whether in its form or in the manner in which it was

presented to audiences. He observes that the presentation of early films often

"emphasized the exhibitor's role in constructing narratives out of a succession of

short films" and allowed for "a range of possibilities for the organization of

programs ranging from variety to unified narrative programs" (391-2). Musser

challenges Gunning's thesis in an analysis of George Méliès's *A Trip to the Moon*

(1902) and Edwin S. Porter's *The Gay Shoe Clerk* (1903), presenting a

convincing argument for the presence of narrative even in supposedly non-

narrative films, at least as Gunning has identified them. Musser notes that in

these two films, according to Gunning, "narrative may sometimes provide a

container for attractions but it is the attractions that ultimately provide the film's

substance, its kick...[and it is] the unpredictable succession of transformations

[that] offers the genre's *raison d'etre*." Ultimately though, Musser finds that

"attractions and narratives are effectively imbricated, even integrated" (394-5). Concerning *A Trip to the Moon*, he concludes that "Méliès's cinematic dexterity performs a narrative function" and claims that "if the tale was a pretext for Méliès as he began work on the film, it seems to me integrally important at the end" (395). About Porter's film, Musser says that the supposed attraction of the woman's ankle ultimately "operates within a quite complex narrative unfolding... [and we must therefore] recognize the important role of narrative and the way it operates throughout the film...[as] story plays a central role in *The Gay Shoe Clerk* rather than being of 'little or no importance' as Gunning has asserted" (396-7). Ultimately, Musser shows that those few films that do contain excessive elements are most often still strongly narrative films, with all the associated characteristics identified by Bordwell, Staiger, and Thompson.

3.   Albeit a "striking, easily reducible narrative which offers a high degree of marketability" and relies "heavily upon the replication of and combination of previously successful narratives" (Wyatt 13).

4.   Interestingly, Thompson notes that the heavy reliance on delay in Hollywood film may have less to do with aesthetics than commerce, not likely a surprise to anyone familiar with the history of Hollywood. She mentions that a film's "length is arbitrary" (*Breaking* 37), suggesting that delay may serve primarily to preserve the feature-length format which was established in imitation and competition to stage drama and short fiction (*Classical Hollywood* 164,167), thereby extending the evening's entertainment and allowing audiences to feel as if they have

received more for their money.

CHAPTER 3

1.   The aesthetic effect of realism, in this context, is often referred to by a number of

        other terms, including: transparency, verisimilitude, and immediacy.

2.   Digital effects can be seen as the embodiment of at least two widely divergent

        modes of filmmaking: the first, immediacy (associated closely with realism), is

        one in which plausible and cognitively-comprehensible images are designed to

        ensure viewers will accept them as 'real': it "dictates that the medium itself should

        disappear and leave us in the presence of the thing represented" (Bolter and

        Grusin 6). As Arnheim points out, "we can perceive objects and events as living

        and at the same time imaginary, as real objects and as simple patterns of light on

        the projection screen" (29). Indeed, it is this seemingly impossible co-existence

        that "makes film art possible" (29). Albert J. La Valley has argued that special

        effects must "show us things which we immediately know to be untrue, but show

        them to us with such conviction that we believe them to be real" (144). In order to

        achieve that conviction, effects have to be "rendered with the same degree of

        realism as the more normal [world]" (145).

3.   What Prince's work suggests beyond this is a new type of motivation, one

        perhaps implied by the work of Bordwell, Staiger, and Thompson, but never

        actually described by them: cognitive or perceptual motivation. This type of

        motivation goes beyond the requirements of realistic motivation and also offers

more powerful potential for motivating devices that may not be easily described as realistic.

4. Bolter and Grusin, in *Remediation*, write "when all computer techniques are taken into account, popular film is becoming progressively more hypermediated... [and makes the viewer] conscious of itself as a medium" (154) and "computer-generated remediations [instill] amazement or wonder [that] requires an awareness of the medium" (157-8).

5. Whether the monster is taken literally or read as a metaphor for the dark-skinned, foreign savages who inhabit Skull Island (or those same purported menacing folk back home), it is obvious that the relationship between Kong and the actress is forbidden, and her rightful place is next to the very human (and white) Driscoll.

6. It is also important to keep in mind the multitude of non-digital effects techniques used in the film. Jackson and his crew notoriously bought an entire forest of actual trees and fashioned miniatures from them rather than digitally create them for their environments. The director thought they looked more real. See Rickitt 126-8.

CHAPTER 4

1. However, as some scholars have pointed out, the operation of these open-ended formats does not qualify as authorship in the true sense of the term, but rather in a modified manner that suggests the viewer or interactor is merely following one

of a handful of predesignated paths that have been laid out by the filmmaker

(Murray 212). In any event, whether it is the author or the viewer who assembles

the provided parts into a whole, the end result of that whole is ordinarily a unified

narrative. Clearly, these are not phenomena limited to the influence of digital

technologies, as many film scholars have pointed out the ways in which

marginalized audiences such as queer viewers or African-American moviegoers

have historically appropriated film texts to generate their own readings and

meanings; this phenomenon can be extended to every film viewer if one accepts

the notion of Henry Jenkins' "textual poaching."

2. If a viewer's response to a "film" in its many forms is to be fully understood, the

an almost infinite number of criteria must be taken into account: film or video,

encoded on a commercial DVD or ripped and downloaded from a peer-to-peer

network, audio and video bitrate, original source, CRT or LCD screen, laptop,

tablet, mobile phone, or iPod, resolution, contrast ratio, refresh rate of the

hardware, playback software (e.g. Windows Media Player, QuickTime, VLC),

audio and video codecs (e.g. DivX, Xvid, Matroska), lighting conditions in the

room, brand and model of sound and video cards, etc. In the digital age, there

clearly is no one set ideal, or even predictable viewing context.

3. This phenomenon is not unique to the digital era either. Frank Capra shot up to

five different endings for the 1941 film *Meet John Doe*, at least two of which were

previewed before test audiences. The bleaker versions were rejected by the

moviegoing public and Capra settled on an upbeat ending. The director claims he

even received anonymous fan mail that provided the suggestion for the best

ending (Alpers 120).

4.   This can be easily seen in the narrational techniques of the first three *Star Wars*

films. While *The Empire Strikes Back* can be viewed as open-ended, it is

essentially a giant dangling cause, with Darth Vader's ascendancy and the

capture of Han Solo, that links *Star Wars* and *The Return of the Jedi.*

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