

5-3-2007

Reality & Effect: A Cultural History of Visual Effects

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REALITY & EFFECT: A CULTURAL HISTORY OF VISUAL EFFECTS

by

JAE HYUNG RYU

Under the Direction of Ted Friedman

ABSTRACT

The purpose of this dissertation is to chart how the development of visual effects has changed popular cinema's vision of the real, producing the powerful reality effect. My investigation of the history of visual effects studies not only the industrial and economic context of visual effects, but also the aesthetic characteristics of the reality effect. In terms of methodology, this study employs a theoretical discourse which compares the parallels between visual effects and the discourse of modernity/postmodernity, utilizing close textual analysis to understand the symptomatic meanings of key texts.

The transition in the techniques and meanings of creating visual effects reflects the cultural transformation from modernism to postmodernism. Visual effects have developed by adapting to the structural transformation of production systems and with the advance of technology. The studio system strongly controlled the classical Hollywood cinema by means of the modern economic production system of Fordism. Breakdown of Hollywood classicism as a production system gave rise to the creation of digital effects with the rise of the concept of the blockbuster and with the development of computer technologies. I argue that the characteristic feature of time-space compression, occurring in the process of the transition from Fordism to flexible accumulation, clearly reflects that of compression of multi-layered time and space,

generated in the development process from analog visual effects, such as trick, rear and front projection, to the digital effects, such as rotoscoping and CGI animation. While the aesthetics of analog visual effects, without computing, can be compared to a Fordist production system, digital effects, which hugely rely on CGI manipulation, are examples of flexible accumulation.

As a case study of the local resistance or alternative of Hollywood today, I examine the effects-oriented Korean nationalist blockbuster. The Korean nationalist blockbuster films have sought large-scale filmmaking and presentation of spectacular scenes, including heavy dependence on the use of special effects, which is frequently considered a Hollywood style. This paradoxical combination of peculiar Korean subjects and Hollywood style can be viewed as a form of cultural jujitsu, taking advantage of the force of the dominant culture in order to resist and subvert it.

INDEX WORDS: Special Effects, Visual Effects, Digital Effects, CGI, Tricks, Modernism, Fordism, Postmodernism, Reality Effect, Time-space Compression, Trickality, Korean Blockbuster, Cultural Jujitsu, Korean Wave, Hallyu, *Shiri*, *Tae Guk Gi: The Brotherhood of War*, *Welcome to Dongmakgol*, *2009 Lost Memories*

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JAE HYUNG RYU

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2007

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May 2007

ACKNOWLEDGEMENTS

I would like to thank, foremost, my advisor, Dr. Ted Friedman, for his unconditional support, guidance, and generosity. He is a dedicated teacher, but at times, I look to him as an older brother, and a good friend. If my advisor was not him, I could not stand here now. I love his passion for fostering scholarship, his consideration of students, and I admire his belief in his advisees. Dr. Friedman will be a model for my way of scholarship.

I also wish to thank my everlasting mentor, Dr. Yong-soo Kim, who is Professor of School of Communication at Sogang University, Korea. He is a father in my academic life. He opened my eyes to film studies and led me to the way of learning. His continuous consideration and encouragement have provided the vital energy for my struggle in overseas. Dr. Kim has been and will be the cornerstone of my way of learning.

I am grateful to my committee members, Dr. Kathy Fuller-Seeley for her kind mentoring and warm encouragement, Dr. Angelo Restivo for his precise reading and acute comments on the earlier draft of the Korean film chapter, Dr. Jung-Bong Choi for the critical suggestions derived from his wide range of knowledge, and Dr. Alisa Perren for her helpful comments and suggestions on the earlier drafts.

Finally, infinite thanks go to my family: my parents, RYU Jong Yeol and PARK Kyung Sook; parents-in-law, CHOI Dong Kwon and RA Ssang Ju; my wife, CHOI Won-Jeong; my daughter, Jennifer Yujin RYU; and my soon-to-be son, Jason, who will arrive this June; my brother and brother-in-law, RYU Jae Yong and CHOI Hyuk Seung. Words cannot express how much I am loved by them and I love them. I wish to live as repaying their love. I dedicate my humble dissertation to my wonderful family.

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1. INTRODUCTION

1.1 Overview

Special effects in cinema have presented the cutting edge technologies of their eras. They have even functioned as harbingers of future reality. Through examination of the direction of visual effects history, from the past to the present, we can imagine what the visual effects of the future may entail. The representation of the future by means of visual effects provides us with a vision of future reality. Thus, visual effects function as a measure of the times, of contemporaneous visions of reality and technology. The purpose of this dissertation is to chart how the development of visual effects has changed popular cinema's vision of the real, producing an ever more powerful "reality effect." I will examine the implications of visual effects in film, in particular in science fiction films (SF), and inquire about the function of their reality effect in contemporary culture.

Key Terms

In this project, I follow the industrial definition of the terms "*visual effects*" and "*physical effects*." "Visual effects" are "any visual manipulation of motion picture frames, whether accomplished in cameras, projectors, optical printers, aerial image printers, front and rear screen systems" (Smith, 1986, p. 270), and in digital composition with computers including computer graphic imagery (CGI). "Physical effects," on the other hand, are "mechanical effects or practical effects that take place on the set during filming, such as explosions, wire tricks, bullet hits, etc." (p. 264).

I employ the term "*reality effect*" to describe the cinematic illusion of reality created by visual effects. Visual effects make impossible events seem realizable. This process produces a

perceptual effect: the audience perceives the artificial representation of impossible events as reality.

The origin of the term reality effect derives from Roland Barthes. In examining the realist novels of writers such as Flaubert, Barthes (1982) argued that through the accumulation of so many “concrete details,” the signifier becomes alienated from the referent; the more the referent is concretely described, the more the signifier is distanced from the referent; the signified, the concept of the signifier, is “expelled from the sign”; as a result, the referent survives alone within the narrative. This is the “referential illusion” of realist literature (p. 16). At the moment that the signified is eliminated from the sign and that “the referent stands as or for itself in the midst of narrative line,” “language disappears” (Cole, 2005, p. 81). What remains is the illusion of reality. This is the reality effect.

Although realist novels are fictional constructions, their writing conventions hide their artificiality and create the illusion of reality. Barthes writes “It suffices to recall that for the ideology of our time, obsessive reference to the ‘concrete’ is always brandished as a weapon against meaning...” (p. 14). It means that the concrete detail does not show reality itself but represent only “vraisemblable/verisimilitude” as the meaningless illusion of reality. It is Barthes’ criticism on the reality effect to attack the authoritative Authors and Literatures as the cultural agents and implication that reality is our ideological screen. In filmmaking, visual effects produce excessive cinematic details to make impossible scenes possible. As a result, the relationship between signifiers and their referents is blurred. In the middle of this blurring, cinematic illusion is created. Thus, the term reality effect can refer to the perceptually illusionist effect of reality in both literature and film.

I want to limit the use of the term reality effect to the aesthetic aspects of the cinematic

illusion. Barthes' original intention of the term was to criticize the function of verisimilitude that hides ideological construction. However, the reality effect of visual effects in SF genre films, which is the major object of my dissertation, provides, in most cases, the clear cultural window of the present view on technology—in particular computer technology—that our anxiety and expectation coexist, rather than represents and reinforces the present ideology by means of meaningless visual illusion. In this sense, I believe that the directors and digital effects engineers in the contemporary effects-oriented films are not the objects of political criticism from the aspect of extension of 1968 French movement's critique of traditional authority. Thus, my use of the term reality effect does not imply Barthes' ideological criticism on the Author but merely indicate the effect of cinematic illusion that visual effects create.

The reason why I focus on visual effects, not physical effects, has much to do with the term reality effect. Although scenes with physical effects that present exploding cars or rampaging monsters provide the audience with a plausible *mise-en-scene*, they do not inspire perceptual illusion of the effects among viewers because the audience is watching a scene that really did happen in one contiguous physical space. However, scenes with visual effects that portray Superman flying, T-1000's finger-morphing to the sharp gimlet, and Trinity transferring through the phone line all produce the reality effect. In comparison to the wire action in the 1950s and 1960s, 1978's *Superman* produces a different kind of visual illusion, because the scene is impossible in the real world. It was created by the combination of live-action footage and pre-filmed scenery, through the visual effect of rear projection. I cannot say that all kinds of physical effects never produce a reality effect. However, in majority of cases, visual effects are much more related to the reality effect than physical effects. Visual effects include rear/front projection, rotoscoping, and, more recently, digital effects such as CGI digital composition.

Naturalism indicates the effects-added shot or scene's perceptual indistinguishableness from live-action footages. Visual effects have developed with seeking naturalism of the reality effect in the effects-added scene. Naturalism depends on the plausibility of the effects-added scene. Superman's flying is plausible, in other words, when the audience cannot perceive the existence of the wires and the actor's awkward motion, naturalism can be obtained and the reality effect of the effect is raised.

Invisibility of visual effects is the necessary condition of seeking naturalism, or of achieving the reality effect. If the audience senses the wires on which Superman is hung, naturalism cannot be guaranteed and the reality effect is lost. For maximizing the reality effect, visual effects should be invisible.

Trickality can be defined as the prototype of reality effect. The term trickality derives from André Gaudreault. Gaudreault (1987) named Méliès's vision of filmmaking as trickality concentrating on the use of tricks and visual image with alienating narrativity. Because to perform the tricks during filming was a purpose of Méliès' filmmaking, the level of their reality effect or cinematic illusion became minimized. The visibility of the tricks or visual effects is the necessary condition of seeking trickality. For maximizing trickality or for minimizing the reality effect, visual effects should be visible. If the purpose of reality effect is to give the amazement of perceiving the invisible effects to the audience, that of trickality is to provide the amusement of seeing the self-exposition of effects. In *The Mask* (Chuck Russell, 1994), the scene in which Stanley (Jim Carrey) with the mask sees the performance of Tina (Cameron Diaz) embodies the modern example of trickality: The heart of Stanley, entranced by Tina, is popping. His tongue is put to become mini-stairs. His eyeballs protrude. The audience is amused by seeing the animated effects thoroughly exposed. Even though visual effects were born from trickality, the purposes of

reality effect and trickality stand in the opposite directions.

Research Question

Through an examination of special effects history in relation to SF films, I will argue that the transition in the techniques and meanings of creating special effects reflects the cultural transformation from modernism to postmodernism. My examination of visual effects history will not only study the industrial and economic context of visual effects, but also the aesthetic characteristics of the reality effect. I will look at how cinematic time and space is transformed by visual effects, and how this transformation calls into question traditional film theories, in particular, realist theories. I will discuss the cultural differences and different perspectives of reality as posed by modernism and postmodernism. To do this, I will investigate the differences of aesthetic characteristics of time and space between analog visual effects, such as stop-motion technique, and digital effects, such as CGI effects. I will examine the aesthetics of analog visual effects with reference to the classic realist film theories of Bazin and Kracauer. The aesthetics of digital effects will be analyzed in light of the special effects/new media theories of Lev Manovich, Scott Bukatman, and Michele Pierson.

Thus, the dissertation will develop three key themes:

- 1) An examination of the history of cinematic special effects. It will deal with the history of technological development of special effects from turn-of-the-century “trick” films, to CGI effects, in the aspects of the history of the reality effect. I will suggest that, throughout film history, special effects have sought more natural representation of reality effect—that is naturalism. Naturalism of reality effect means perceptual indistinguishableness from live-action with the support of cutting-edge artificial technology. When realism cannot absorb the aesthetics

of CGI effects because of its emphasis on the non-manipulative reality and the real reference, naturalism includes the CGI effects aesthetics because it pays attention to the issue whether the audience can recognize the artificiality of the reality effect. If a CGI scene is visually truthful as live-action, we can say that its reality effect is natural.

2) A discussion of the response of realist film theories to the development of special effects, from classic realisms to new media theories in relation to the transition from modernism to postmodernism. I will demonstrate that Bazin and Kracauer's realist theories do not explain the special effects in this digital period but primarily those in the analog period. I will then suggest that the digital realist theories of Manovich, Bukatman, Pierson, and Stephen Prince offer an alternative realism in the digital period. At the same time, I will situate classic realist theories within the context of modernity, and digital realist theories within the condition of postmodernity.

3) A genre study of SF films in an international context. This will include the textual analysis of South Korean special effects-oriented films and Hollywood SF in a global context. The direction of the development of visual effects that will be discussed in Part 1 and digital realist aesthetics as a result of the development and as the condition of postmodernity in Part 2 will support the textual application of the national films under the discourse of the globalizing network of world film industries. Part 3 represents the transition of the relationship between Hollywood films and South Korean films that approaches the new order of capitalism beyond the discourse of cultural imperialism. I will argue that this transition is accelerated by digital effects and technology. The South Korean film industry and the aesthetics of South Korean films are rapidly changing in the postmodern globalized economic condition through the development of digital technology. The transformation of the reality effect in this new global context will be

examined, and it will be shown that this transformation reflects the socio-cultural realities of South Korea today.

Significance of the Project

How are the digitally manipulated visual effects created in the computer, such as CGI, different from the visual effects produced on studio sets, such as rear projection? What are the cultural implications of the computer's creation of reality, which perceptually goes beyond reality? How does the computer's reality reflect characteristics of contemporary culture? Do digital effects distort the reality of the world today, or represent it more naturally or clearly? Any attempt to answer these questions should consider audience's hunger for more marvelous spectacle; thus, the film industry depends on the deployment of an increasing number of digital effects. My dissertation project will serve as a cornerstone for an approach to answering those questions.

The theoretical focus will be to study the socio-cultural implications of the reality effect by examining the intersection of cutting-edge technology, special effects, and traditional literary realism. This project will bridge the gap between humanistic studies and scientific technology, and is a mutually-beneficial interdisciplinary work, expanding the realm of the social sciences. Humanistic studies support scientific technology, in that classic film theories of realism help to interpret the meaning of special effects with regard to the reality effect. Conversely, scientific technology helps to update humanistic studies, in that the implications of digital realism help to revise and replenish classic film theories, while keeping pace with the times. Thus, through the combination of digital study and film, this project not only fills a gap, but also proposes a new vision to both theories.

This project will also suggest a new relationship between Hollywood and national cinemas in the following aspects: With the support of digital technology, the South Korean film industry is rapidly becoming independent of the power of Hollywood. However, the style of these new South Korean films is following Hollywood. Even though the formal style resembles Hollywood, in their context Korean blockbusters seeks a Korean nationalist theme.

1.2 Research Methodology

Close Textual Analysis & Symptomatic Meaning

This project employs a theoretical discourse which compares the parallels between visual effects and the discourse of modernity/postmodernity, utilizing close textual analysis to understand the symptomatic meanings of key texts. Since this study is a research of the cultural meaning of special effects, theoretical discourse about classic film theories, new media theories, theories of spectacle, special effects theories, and postmodernism is the first approach. By means of theoretical discourse, I want to juxtapose analog special effects, classic realist film theories, and modernism, and draw a parallel between the digital special effects and theories of spectacle, new media theories, and postmodernism. In this way, analog special effects are supported by classic realist film theories and economy of modernity as well. CGI effects supported by computer technology can not only be explained by new media theories and special effects theories, but also fitted to the condition of postmodernity. Thus, I would like to use the research of theoretical discourse as the first method of this project.

Since the digital effects, within specific films, will serve as the research data, a close textual analysis is the appropriate methodology for this project. Using the method of close textual analysis, I will analyze the scenes in which digital effects are used, grasp the meaning of

the recreated reality within the whole narrative, and gain a thorough understanding of its function, in relation to the socio-cultural implications. Thus, the close textual analysis of each scene and sequence in which digital effects are used is essential. To understand the meaning of special effects in a film is not to define the position of a creator, but to grasp contextually the function and meaning in the whole narrative, and simultaneously, interpret the relationship between the culture and society and the special effects. Thus, the contextual meaning of special effects relates to the socio-cultural implication.

Fredric Jameson (2003) argues that literary criticism is a “theoretical kind of symptomatology.” According to Jameson (2003), while the works of the past can produce all kinds of unique aesthetic possibilities that can be applied to those past times, the works of the present include all kinds of “coded data,” due to the fact that we are living now. Thus, cultural products’ form and contents are full of the symptoms of the coded social. When I follow Jameson, a film as well as special effects as cultural forms should be considered as the “coded data” including symptoms for the “absent thing called the social.” In this respect, the meaning of a whole film, the function of special effects, and their significance within the context generate the symptom of culture, such as historicity, nationality, or socio-political peculiarity. Criticism should decode the coded data of cultural forms that represent socio-cultural implications. I will closely analyze texts, understand the meaning of the films and special effects, and grasp the socio-cultural or socio-political symptoms of the special effects and the films.

Texts

For Chapter 2, I will examine early landmark SF/fantasy films using visual effects, understand their significance in the history of special effects, and discuss the development of

reality effect accompanied by the development of scientific technology. The texts I will use are *Train Arriving at a Station* (Auguste & Louis Lumière, 1895), *A Trip to the Moon* (Georges Méliès, 1902), and *The Thief of Bagdad* (Raoul Walsh, 1924). Even though *Train Arriving at a Station* is not an SF or a fantasy film, I will consider the film as a visual effect itself.

For Chapter 3, I will deal with *Forbidden Planet* (Fred M. Wilcox, 1956), *2001: A Space Odyssey* (Stanley Kubrick, 1968), the original *Star Wars* (1977), and *Superman* (Richard Donner, 1978) to study modernist aesthetics of visual effects. Even though *Star Wars* and *Superman* were produced in the late modernist era, I will categorize them under the modernist effects films because the films are the most influenced SF films using analog visual effects. In particular, periodical and spatial setting of *Superman* is a typical modern urban. The classic theme that promotes the good and punishes the evil is also classical. Modern subject and modern effects are beautifully matched in this film.

For Chapter 4, I will investigate *Tron* (Steven Lisberger, 1982), *Terminator 2: Judgment Day* (James Cameron, 1991), *Jurassic Park* (Steven Spielberg, 1993), and *The Matrix* (The Wachowski Brothers, 1999) in order to grasp postmodernist aesthetics of visual effects. I will understand postmodern aesthetics of reality effect that digital visual effects create. In particular, *The Matrix* represents a manipulated virtual reality, which is thought, by the people who are caught within cyberspace, to be the real world. People live in the virtual reality of matrix, which artificial intelligence, as a symbol of the digital technology, constructs. The main character, Neo, rescues the real society by means of the omnipotent digital power. Also, the digital effects, as the cutting edge of contemporary technology, are brightly presented from the beginning to the end. Thus, the films' themes and formal aspects are typically related to the subject of digital reality and/or culture. In this context, *The Matrix series* is the best-suited text, in which the relationship

between the contemporary world and the digital environment can be extracted.

In Chapter 5, I want to discuss and analyze South Korean effects-oriented films in relation to the recent extreme globalization of South Korean films. *Shiri* (KANG Je-gyu, 1999), *2009: Lost Memories* (LEE Si-myung, 2002), *Tae Guk Gi: The Brotherhood of War* (KANG Je-gyu, 2004), and *Welcome to Dongmakgol* (PARK Kwang-hyun, 2005) are the best texts not only for discussing the characteristics of Korean effects-oriented films, but also for representing Korean national history.

1.3 Theoretical Framework

History of Special Effects

Special effects are not exclusive possessions of film. They existed before the appearance of film, dating back to the Middle Ages. God descended from the ceiling to the stage by a machine in medieval dramas. This special kind of effect accentuated the reality effect of the theater's staging spectacle through embodying the imaginary scene in front of the audience. The use of special effects in theater was the peak of prosperity in the staging system of melodrama with sensationalism in the nineteenth century. In this period, film was invented. The Lumières' *Train Arriving at a Station* (1895) provided a reality effect by means of its pictorial realism for the audience of that time period. For the audiences in the 1890s who were well aware of two-dimensional image of painting, the presentation of the three-dimensional moving picture of the locomotive was a stunning visual effect itself.

The visions of special effects in the nineteenth century stage continued in a new medium through Georges Méliès' trick effects (Vardac, 1949, pp. 174-175). Méliès' *A Trip to the Moon* (1902) presented the possibility of special effects in the realm of a new art through cinematic

tricks such as the stop-motion technique. The flying carpet sequence in Raoul Walsh's *The Thief of Bagdad* (1924) introduced in earnest wire action with pulleys and suspended tracks. Wires made Douglas Fairbanks fly. The film used superimposition, projecting miniaturized sets with live action (Pintea, 2004, p. 29). At the same time, traveling mattes were introduced and became the foundation for visual effects since the 1920s (Rickitt, 2000, p. 45). Then traveling mattes techniques were developed for the rear projection technique through the 1930s to the 60s. The front projection technique, first shown in *2001: A Space Odyssey* in 1968, again raised the standard of the reality effect.

Since the 1970s, when computers became the mainstream, digital technology has rapidly developed. In 1977, Lucas' *Star Wars: Episode IV – A New Hope* introduced a “computer-linked camera control system,” precisely recording the camera movement and making the camera repeat exactly, in order to take fast-moving spaceships (p. 31). In *Tron* (Steven Lisberger, 1982), dealing with the story within the computer, CGI footage was directly inserted into the film. In 1983, *Star Wars: Episode VI - Return of the Jedi* depended on the technological support of the rotoscoping technique, which made it possible to insert animated images between the foreground and background (p. 55). Raising the degree of reliance on the digital effects in the 1990s, Hollywood blockbuster science fiction films such as *Terminator 2: Judgment Day* (James Cameron, 1991), *Jurassic Park* (Steven Spielberg, 1993), and *Star Wars: Episode I – The Phantom Menace* (George Lucas, 1999), sought the naturalism of the reality effect by means of computer technology.

The desire of transforming the marvelous to reality has existed from the realm of the arts prior to the film. It was an artistic embodiment of human imagination and desire for making the impossible possible. The invention of the film presented a more advanced embodiment of

realization of the marvelous, in terms of the arts based on imagination and desire. Development of technology has always provided the opportunity for the progressive presentation of the marvelous.

Michele Pierson's *Special Effects: Still in Search of Wonder* (2002) is a cultural study of the history of special effects focusing on the development of connoisseurship and the evolution of fan-oriented publications. We can grasp Pierson's interpretation of the history of special effects that has approached toward more natural representation of the reality effect. Pierson (2002) describes special effects as "natural magic" (pp. 17-22). She investigates the origin of the term, "natural magic" from David Brewster's *Letters on Natural Magic* (1832) to Erik Barnouw's *The Magician and the Cinema* (1981). Barnouw regards early tricks such as magicians' experiments in film as "natural magic," the staging of magic in front of audience as "optical illusions" (p. 112). According to Barnouw, in comparison to stage magic, the magic projected on a screen seemed too real to understand as magic; so, he mentions, the "new industrial magic may be closer to 'black magic' than to 'natural magic'" (p. 112). Thus, for Barnouw, the special effects of the early trick were the embodiment of the "scientific temper of the times" (Pierson, p. 17). Barnouw's term "natural magic" is borrowed from David Brewster, who in 1832 defined "natural magic" as "popular scientific cultures," rather than "the supernatural" (p. 19). In this context, special effects as natural magic have been the symbol of scientific experiments of the times as Pierson insists. The history of special effects exemplifies not only the technological advancement of presentation, but also the suggestion of the historical direction of natural representation - that is, towards more perfect photorealistic imagery. Therefore, the history of special effects has been the power and motivation of sustaining a "popular scientific culture of wonder" (p. 22).

In addition to the historical interpretation of special effects as the artistic representation of scientific culture, Pierson argues that art-and-effect direction of SF had a definite inclination toward a “presentationist mode of exhibition”—that can be defined as the emphasis on the presentation of spectacle rather than representation of narrative—from the late 1970s to the mid-1990s (p. 118). According to Pierson, Hollywood’s resolute investment in CGI effects has changed the art-and-effects direction that SF’s stylistic elements have sought, leaning towards a more heavily exhibitionist presentational direction (pp. 118-119). After the 1970s, production with digital effects progressively developed with the spread of personal computer (PC). From a historical perspective, the reality effects created by analog visual effects have been displaced by digital visual effects. The history of special effects has developed in the direction of accelerating films’ presentationist mode. Visual effects frequently present to the audience future reality, particularly in SF and fantasy. The spectacle of the future is presented as plausible and/or possible reality and events. As a result, the audience’s perception can overly incline to the spectacle of the visual effects rather than the storytelling of the narrative. The presentationist mode is spectacle’s domination over narrative. Thus, the history of special effects has developed through the traces of art-and-effect direction of presentationist mode that is the development of spectacle-oriented artistic effects. As Pierson mentions, this line of research was introduced in Brooks Landon’s *The Aesthetics of Ambivalence* in 1992, then further developed by Tom Gunning in his influential essay “The Cinema of Attraction: Early Film, its Spectator and the Avant-Garde.” Gunning’s essay will be reviewed below.

While Michele Pierson argues that the history of special effects shows the approach toward more natural reality effect and presentationist mode, Scott Bukatman suggests the history of special effects can be understood as the shift from modernity to postmodernity. Bukatman

(2003) makes use of Fredric Jameson's conception of modernity. Modern products tend to be vestiges of "a modernizing economy." Cultural products created by a manual typewriter, for example, are modern; those produced by computer keyboards are in some sense inherently postmodern (pp. 43-44). Bukatman states that the hand-powered typewriter that Gibson used to write the cyberpunk classic *Neuromancer* (1988) is related to the object of modernism; however, the cyberspace he describes in his manuscript is postmodern (p. 44). Likewise, analog special effects such as rear projection are modern because they are produced under the conditions of modernity. The system of modern economy is hierarchical and vertical, and its operational system is linear. This is the mode of production of analog special effects, which are created in a huge plant-like-studio. However, the mode of the postmodern economy is flexible, horizontal, and non-linear. Digital special effects are generated with the PC or laptop computer. The operation of the computer is very much flexible. Effects engineers can do CGI composition in a studio, an office, or even at home. Digital editing performs non-linear process. Thus, as economic systems have changed from modernity to postmodernity, their cultural products have followed from analog special effects to digital effects.

For Bukatman, in addition to the modern object, superheroes in SF films have much to do with urban modernity, in that superheroes "glide through the complexities of urban space, emerging in bursts of flamboyance into public view, then disappearing into the anonymity of the crowd" (pp. 8-9). He writes, "These fabulous negotiations of body, self, and space contrast sharply with electronic fantasies of abandoning the body, becoming a cyborg, becoming virtual" (p. 9). Bukatman considers superheroes to be the archetypes of modernity, cyborgs of postmodernity. Bukatman's argument suggests that digital visual effects create cyberspace as the catalysts for the postmodern.

Bukatman's dichotomy of the modern/postmodern by means of body, self, and space represents the history of special effects used in particular in SF films. It can also be explained with the transition of the economic system. The scene where Superman flies through the urban cityscape was created by the "front projection" technique—"a method of simultaneously filming performers in a studio and pre-filmed background images which are projected on to a highly reflective backdrop from in front" (Rickitt, p. 309). This technique is representative of special effects of the 1950s to 70s' Hollywood studios under the modern industry. On the other hand, the scene that T-1000 rises out of a hospital-floor pattern was produced by a program called "Make Sticky" which "allows CG artists to project the 2-D images from a live-action plate onto 3-D computer models" (Vaz & Duignan, 1996, pp. 205-206). That is the breakthrough software invented under the postmodern production environment.

Likewise, the presentation of the superhero's modern body, self, and space could be described by analog special effects; however, computer software can create that of postmodern cyborg and cyberspace in the postmodern computer age. As Bukatman categorizes, the history of visual effects can be divided into two parts: one is the period of analog visual effects, including any kind of visual effects without the use of the computer, and the other is the period of digital visual effects generated or composited with the computer. In this context, the transition from analog to digital effects, in relation to the SF genre, implies the transition from the superhero's body and self, and of the modern cityscape to the cyborg of virtual self, within the postmodern cyberspace. That is the history of special effects progressing from modernity to postmodernity, as the reality effect grows even more powerful.

Theories of Periodization

Visual effects have developed by adapting to the structural transformation of production systems and with the advance of technology. The early films depended on individual capability and working environment, giving birth to the “tricks” as individual techniques. The studio system strongly controlled the classical Hollywood cinema by means of the modern economic production system of Fordism. The powerful domination of the studio system in Hollywood was inseparable from the aesthetics of rear and front projection in that the efficiency of their production was maximized in the studio. Breakdown of Hollywood classicism as a production system gave rise to the creation of digital effects with the rise of the concept of the blockbuster and with the development of computer technologies. In this sense, analog visual effects can be categorized under the periodical frame as a socio-economic formation of Fordism, uniting Hollywood classicism and the studio system; and at the same time, digital visual effects can be said under the Post-Fordist period.

Siegfried Kracauer (1975) considers the “mass ornament” as “the aesthetic reflex of the rationality aspired to by the prevailing economic system” in his early essay “The Mass Ornament” (p. 70). Kracauer examines the phenomenon of the *Tiller Girls*, which is a dancing troupe dressing in same costumes and performing the synchronically same style of formation movement, such as high kicks. He argues that the physical movement of the *Tiller Girls* mirrors the automatic and minutely calculated flow of the conveyor belt which is constructed under the Taylor system, the aesthetics of mass ornaments reflecting the capitalist production process. Kracauer writes, “The bearers of the ornaments are the *masses*,” the pleasure of dancing is not derived from an individual performer but from “communal groups” (p. 68). Not as an individual dancer but as an element of the mass, human beings contribute to the function of the

synchronized movement. Thus, the mass ornament not only represents the aesthetics of capitalism but also describes Taylorization of culture industry itself. Kracauer writes, “The hands in the factory correspond to the legs of the *Tiller Girls*.” For Kracauer, the physical movement of the *Tiller Girls* and the phenomenon of its international popularity are “surface manifestations of an epoch,” revealing the underlying reality of the existing mode of production (p. 67).

Kracauer’s metaphorical analysis provides a significant clue for understanding the material reality of analog visual effects like rear projection. Analog visual effects can be said to be mass ornaments in three ways:

First, as the products of the *Tiller Girls* are “not individual girls, but indissoluble female units” (p. 67), the products of analog visual effects are not individual pre-filmed background scenery or live-action footage in front of the scotchlite screen but an indissoluble bundle. In other words, when analog visual effects are produced, pre-filmed scenery, live-action footage, and the scotchlite screen have to be located at a same place in a single studio.

Second, the effects engineers have to cooperate with each other to produce a single effects scene. Not only filmic facilities such as pre-filmed scenery, live footage, and the screen, but also human engineers, must all be located at the same studio. The hands of workers have to be stuck together on a conveyor belt in a factory. The legs of the *Tiller Girls* have to be aligned on a stage. The analog visual effects engineers have to be placed together in a factory-like studio.

Third, as the bodily performance of the *Tiller Girls* produces regular patterns, analog visual effects generate standardization of production aesthetics. The process of creating analog visual effects mechanically repeats the same process of simultaneous recording or mixing pre-filmed background scenery and live-action footage in a studio. Thus, analog visual effects can be regarded as “surface manifestations” of the underlying socio-cultural reality of Fordism as a

capitalist production process. The reality analog visual effect generate is what Kracauer calls “material reality.”

On the other hand, digital effects are produced in an isolated place. The workplace is fragmented to the extent that CGI can be created in any place where there are computers. Moreover, the computers can be networked and not physically contiguous to the extent that parts of a CGI can be produced at different places in different nations. The process of creating digital effects is not the mechanical automation of the studio system. Rather, it is a series of individual taskforce projects, each in charge of a scene in which digital composition is needed, under the vision of director. Thus, the digital effects production system is less hierarchical and more fragmented than the centralized, authoritarian studio system which produced analog effects. The reality digital effects create is the reality effect or hyperreality rather than “material reality.” These are the aspects of production system in postmodern era. In this sense, the production process and aesthetics of digital effects can be considered as the postmodern update of the mass ornament in that digital effects’ ornamental features reflect enough postmodern condition of flexible accumulation.

Michael Curtin (1996) considers the change of configuration of cultural production as the cultural transformation from Fordism to flexible accumulation, and argues in terms of marketing and distribution that the culture industry in the era of what he calls “neo-Fordism” has two tendencies: one is to focusing on “mass cultural forms aimed at broad national or global markets”: the other is to target intensely at “niche audiences” (p. 197). Curtin focuses on the dialectic of “globalization/fragmentation,” which means drawing attention to niche market in order to maximize profits in the status of globalization. Thus, from Curtin’s perspective, in the era of Neo-Fordism, Hollywood not only seeks to find mass taste but also to satisfy the tastes of

niche audience groups. Hollywood itself changes.

David Harvey's research on the relationship between the transition of social formation and cultural change provides a more thorough description of the transition of the production and consumption of cultural products, and reflects the most of this periodical framing between the structural transition of production system and the development of visual effects. Harvey (1990) argues, in *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*, that the transition from Fordism to flexible accumulation has led to "accelerating turnover time." Accordingly, postmodernist aesthetics, such as "ephemerality, difference, spectacle, fashion," have dominated present culture (p. 156). Transforming Fordist mass production to flexible accumulation, the new capitalist system has provided a larger scale of market demand, resulting in accelerated product innovation; turnover time has been extremely reduced. The "time horizon" for decision-making has shrunk (p. 147). Any decision can now be instantly delivered to the opposite side of the earth with the new communication technologies. As a result of this process, a sense of time and space has converged to zero-degrees. Harvey describes this phenomenon as time-space compression. For Harvey, time-space compression, in the process of the transition to flexible accumulation and/or as a result of the transition, is the condition that produces postmodernity.

I want to argue that the characteristic feature of time-space compression, occurring in the process of the transition from Fordism to flexible accumulation, clearly reflects that of compression of multi-layered time and space, generated in the developing process from analog visual effects, such as trick, rear and front projection, to the digital effects, such as rotoscoping and CGI animation. While the aesthetics of analog visual effects can be compared to a Fordist production system, digital effects are examples of flexible accumulation. Speed-up of turnover

time in the transition process of the capitalist production system can be compared to the ongoing acceleration of development of the computer. “Moore’s Law,” first proposed by engineer Gordon Moore in the 1960s, suggests a concrete pattern to the development of computer technology. As Ted Friedman (2005) writes, “the number of transistors that could be built on a piece of silicon of a given size had consistently doubled every eighteen months. That shrinking in the size of transistors translates pretty directly into a doubling of speed” (p. 87). As Moore’s Law reflects “not simply an increasing *rate of change*, but an increasing *rate of acceleration*” (p. 88), computer processing capability is increasing rapidly. This continuous acceleration of development of the computer has catalyzed the transformation from analog visual effects to digital effects in use of special effects in cinema, reflecting the transformation of the capitalist production system from Fordism to the speed-up system of flexible accumulation.

The process of time-space compression as the change of the sense of global space, led by innovations in transportation and telecommunication, can be juxtaposed with the process of compressed projection of multi-layered time and space. Time and space of live-action and those of CGI renderings are recorded onto a single frame in a digitally composited scene. Finally, we can recognize that the postmodern features of ephemerality, spectacle, difference, and so forth, which are the result of digital effects’ time-space compression and spectacle-oriented representation of reality, are real, but never maintained in the real world. They temporally appear when the effects are needed, and instantly disappear right after the effects’ functions are finished. This is different, ephemeral, and spectacular; it is postmodern. In the next section, I will provide a theoretical framework for periodizing analog and digital visual effects into Fordist and Post-Fordist (or flexible accumulation production) aesthetics.

Analog Visual Effects and Hollywood Classicism under Fordist Production System

The aesthetics of analog visual effects have many parallels with Fordism. The following section will address four of these connections: the mass production system, time-space displacement, a centralized authoritarian system, and periodicity.

Mass Production System

The Fordist mass production system influenced the formation of the studios' main goals of standardization, efficiency, and product differentiation, structuring the classical Hollywood cinema, which has produced and popularized analog visual effects. Standardization, efficiency, and product differentiation, on which Fordist manipulation of labor and assembly lines was established, has influenced Hollywood classicism's features or main goals of standardization, efficiency, and product differentiation. Fordism accomplished an extreme progression of productivity and standardization of products and production processes, by means of applying kinetic movement of labor to movement of conveyor belts. According to Harvey, Fordist mass production has become the implication of "mass consumption, a new system of the reproduction of labor power, a new aesthetic of psychology; a new kind of rationalized and modernist society" (pp. 125-126.). Repeated kinetic movement, like that parodied by Charles Chaplin in *Modern Times* (Charles Chaplin, 1936), has improved labor skill and made mass production possible. It was a symbol of the production and consumption culture, and new labor. For mass production, laborers' physical activity was planned and restricted in a time slot that was ruled by seconds. Laborers' resistance against the machine-like work, which should follow the flow of a conveyor belt, was prevented by a centralized authoritarian control system, a managerial feature of Fordist manufacturing. Fordism, as the aesthetics of assembly lines, generates standardization of

products and process, production efficiency, and product differentiation. A production manager set laborers' kinetic movement, so that they could efficiently move their body parts according to the movement of conveyor belts. Continuous repetition of this physical/kinetic movement improved laborers' skill; as a result, the manufacturing process and products were standardized. Within these flowing assembly lines, some parts were assembled and some parts were not; the products were differentiated. Thus, Fordism, characterized by the automation system of assembly lines, had the values of standardization, efficiency, and product differentiation.

These three values or effects, produced by Fordism, parallel the three goals of the classical Hollywood cinema. In *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960*, Bordwell, Steiger, and Thompson (1985) indicate that Hollywood's mode of production to maximize profit is very similar to Ford's factory automation system. Henry Ford's mass production system, which can be summarized "interchangeability, standardization, and assembly," had a huge influence on the production culture of this century, and affected the Hollywood studio system through "detailed division of labor" (pp. 90-95). Standardization of kinetic movement, produced by Fordism, has been represented by detailed labor formulation of the Hollywood studio system. Filmmaking sites needed to be centralized to a single place, in order to raise efficiency of filmmaking; this centralization meant that the studios adopted Ford's mass production oriented factory system. As Bordwell, Steiger, and Thompson state, the early studios were called 'factories' (p. 124). Centralizing the labor process into the studio factories, Hollywood studios raised production efficiency, and at the same time, standardized cinematography, filming equipments, and even content, including narrative. The studios' marketing strategy, with the purpose of profit maximization through monopoly, differentiated film-goods through the use and diversification of technology, stars, and genres.

In particular, as I noted earlier, as sound was introduced in 1926, factory-like filmmaking in the studio was strengthened. In the early stage of sound films, the studios had difficulty with location, due to the qualitative limitation of recording instruments, such as microphones. Thus, as Rickitt mentions “From about 1933, sound recording restricted filming on location, and for the next twenty years the great Hollywood outdoors would be filmed almost entirely within studio walls,” when the film entered the sound stage, filmmakers were naturally restricted to the studio (system) (p. 21). As a result, the use of the special effects was focused on producing location effects within the studio. “The technology that was developed enabled the first practical use of rear projection” (p. 21). The rear projection technique was one of the representative analog visual effects maximizing the efficiency of the studio system in that it produces location effects by projecting pre-filmed background scenery onto the rear screen behind the actors while filming in the studio. Hollywood studios have supported a mass production system, by means of the special effects of the rear projection technique, bringing the values of standardization and efficiency to studios. Rear projection was a symbol of cinematic technology, reflecting the historical context of Fordism, and simultaneously defined the production culture produced by the studio system.

Time-Space Displacement

If the production logic of early Hollywood was clearly Fordist, the aesthetics of early visual effects likewise reflected the modernity of Fordism, by means of indexical displacement of time and space. Fordism, as a production culture and a “total way of life,” produced uniformity and the standard of products and processes; Fordism was founded on “functionality and efficiency” of the aesthetics of modernism (Bordwell et al., pp. 135-136). The time and space represented by rear projection do not distort reality, although dual time and space are

overlapped and projected. If digital effects distort the reality of time and space, analog visual effects, like rear projection, *displace* time and space. If we say that Bazinian time and space is a modern concept, trying to determine the ambiguous truth of reality by means of the camera with faith in technology, the rear projection technique, unlike the digital effects, at least does not distort the reality of time and space. The pre-filmed scenery is displaced from its original time and space to the background of live-action foreground in the studio. By displacing time and space, rear projection uses the camera more efficiently and seeks to reveal the truth of reality underlying Fordist economic system.

As Singh (2004) mentions, Harvey classifies “time-space displacement” as a characteristic feature of Fordist capitalism and “time-space compression” as that of the postmodern capitalism (p. 103). Time-space displacement, which can be defined as the export of surplus domestic products and the import of lacking products, indicates the “new internationalism” that is the “globalization of the supply of cheaper raw materials particularly energy supplies” (Harvey, p. 137). Through the foreign trade of Fordist mass production, products were displaced to different time and space, which represents the beginning of internationalism. This capitalist notion of time-space displacement can be applied to the aesthetics of non-digital special effects. For example, in the use of rear projection, time and space of pre-filmed location footage was displaced to the space and time of the studio shooting actors’ performance in front of that background, which displaced the time and space of the film’s cinematic field. The camera takes time and space of the rear projection of analog visual effects, displacing the time and space of location, and simultaneously projects that kind of time and space on the time and space of the actors’ real performance in the studio. Although time and space in the studio and location are displaced, the reality resulting from the mixed time and space

represent the ontologically real. Thus, mise-en-scene of rear projection includes an ambiguous reality of the world as it is. In this sense, the aesthetics of rear projection is modern, as it is reflected by time-space displacement of Fordist capitalism.

Centralized Authoritarian System

Hollywood studio's centralized authoritarian system has adapted that of Fordist mass production. As I noted earlier, laborers' kinetic movements were strictly controlled in the assembly lines, using conveyor belts to standardize production times. Centralized authoritarian management was not only a method to maintain the quality of products, but also a prerequisite for maintaining the values of standardization, efficiency, and product differentiation. It was an internal feature inside the factory. In addition, a national undertaking of control over labor unions intervened outside the factory. As the "Taft-Hartley Act" was established in 1952, the culmination of authoritarian control appeared (p. 133). Hollywood studios strictly controlled the laborers, too. According to Bordwell, Staiger, and Thompson (1985), the general manager of a studio supervised about fifty films in a year by the mid-1950s (p. 320). Under the general manager, there was a hierarchical organization, consisting of the executive manager, the production manager, the studio manager, and a set of supervisors (p. 320). A producer was expected to make six to eight films in a year. If he did/could not fulfill his obligation, while maintaining a high standard of quality, he would be given less desirable films and his career would suffer. This very strict organizational system was called the producer-unit system (p. 330). From the mid 1950s, it was replaced by the package-unit system, wherein the producer had all rights and responsibilities in terms of a film project, rather than an individual studio. However, when the transition from the producer-unit system to the package-unit system was in progress,

the merits of the producer-unit system, including the detailed division of labor and authoritarian management were continued. A few preeminent producers, who overcame the studio's strict management and its limitation, and presented outstanding capability, were applauded as artists; they were auteurs. This was an internal feature inside the studio. Outside the studio, at the almost same period with the Taft-Hartley Act's operation, the House Un-American Activities Committee (HUAC) investigated the screen writers belonging to the studios. In 1947, the first HUAC operated. The government investigated communist infiltration of Hollywood. In 1951, the second HUAC began. As an aftermath of the two HUAC hearings, about ninety percent of the blacklisted filmmakers were lost their jobs (Thompson & Bordwell, 1994, p. 373). Clearly, the centralized authoritarian system inside/outside the studio was very similar to, and influenced by, the Fordist mass production system.

Historical Period

The period that Fordism dominated American industry is well matched by the period wherein the studio system grasped Hollywood. From 1925 to 1960 Hollywood thoroughly employed the studio system, and the three goals of standardization, efficiency, and product differentiation were completely carried out. After 1960, due to the baby boom from 1945 to 1960, the rapid growth of television, and in the aftermath of HUAC, Hollywood classicism broke down. According to Friedman (2005), after Charles Babbage's invention of "the Analytical Engine" in 1833, the digital computer was developed in the mid 1940s, and was substituted for the analog computer in the 1950s. In the 1970s, personal computers (PC) became popularized. The development of special effects techniques has paralleled the development of computer technology. In the period of Fordism, from the 1910s to the 1960s, Hollywood classicism was

prosperous. At the same time, when Fordist mass production began to change to flexible accumulation, Hollywood broke down, the mind of blockbuster emerged, the digital PC was popularized, the studio used the computer in filmmaking, and finally, the digital effects were created.

Likewise, the Fordist mass production system, having the characteristic features of standardization, efficiency, product differentiation, and time-space displacement of the low materials and products, strictly centralized the authoritarian system. The chronological period of the 1910s to the 1960s well explains the aesthetics of analog visual effects themselves, such as stop-motion and rear projection. Time-space displacement, as the aesthetics of analog visual effects, shares a same vein with the foreign trade, as time-space displacement of surplus products. The organically, historically, and interactively related traces of non-digital special effects as filmmaking artifice, under the influence of technology and a Fordist production system as a main frame of national economy, help Fordism to be an economic foundation of analog visual effects.

Digital Visual Effects and Exhibitionist Films under the Post-Fordist Flexible Accumulation System

Digital visual effects reflect the flexible accumulation system, which replaced classical Fordism. This section will address the breakdown of Hollywood classicism and the intensification of time-space compression as aspects of postmodernity.

Breakdown of Hollywood Classicism

The stiffness of Fordism and the breakdown of Hollywood classicism induced flexible accumulation and the use of computers in filmmaking. Fordism and Keynesianism could not

provide a solution to capitalist problems at the later stage of Fordism, from 1965 to 1973, although they had great drive (Harvey, pp. 141-142). The large scale of labor, capital, and government led to rigidity of the labor market. Extreme deflation in 1973 to 1975 required technological revolution, automation, a new kind of production lines, and the search for a niche market. New production and accumulation mechanisms against the stiffness of Fordism rose up in the 1980s and 1990s, the period of social readaptation to economic restructuring, resulting in the flexible accumulation system (pp. 141-147). Since the 1970s, flexibility of the labor market, products, and the propensity to consume has been the focus, stimulating time-space compression of the capitalist world.

The period from the mid 1960s to the 1970s was an age of transition in that the anxiety about contemporary socio-cultural status, the nostalgia of the past prosperity of Fordism, and the transformation to a new status of flexible accumulation co-exist. Out of the films released in this period, *2001: A Space Odyssey* (1968) and *Superman* (1978) mirror the complex periodicity of the era in terms of the aesthetics of visual effects used in the films. The representative effects technique of the two films was front projection focusing on the efficiency of production in a studio. The use of analog visual effects in this period, when the use of the computer was rising up as an alternative tool, represents not only the contemporary anxiety about socio-economic instability but also cultural nostalgia for the rational and stable prosperity in Fordist modern period.

To compete with television in the 1950s, Hollywood's major studios invented the widescreen and 3-D film. This technological innovation was supposed to solve the problem of the studio system's hierarchical stiffness. One of the innovations was the production of blockbuster films. Since the extreme success of Steven Spielberg's *Jaws* in 1975, the blockbuster

mind emerged and catalyzed the investment in spectacle. As personal computers spread to the public in the 1970s, the computer has been vitally used in filmmaking. In 1977, George Lucas first used the computer in filmmaking of *Star Wars: Episode IV – A New Hope*. At this time, the use of the computer was not computer's CGI rendering, but precise control of the repeated camera movement. As Rickitt argues, the blockbuster films in the 1980s were youth-oriented and gradually more focused on their spectacle; so, the special effects have become more and more intense. *Blade Runner* (Ridley Scott, 1982), *Ghost Busters* (Ivan Reitman, 1984), *The Terminator* (James Cameron, 1984), *Back to the Future* (Robert Zemeckis, 1985), and so forth were typical effects-oriented blockbusters. In particular, in *Tron* (Steven Lisberger, 1982), several minutes of CGI footage were earnestly inserted to the real-action footage. It was an epoch-making event in the history of special effects. Likewise, if flexible accumulation is a reaction to the structural stiffness of Fordism, digital effects were an alternative plan of overcoming the breakdown of Hollywood classicism. The use of digital effects with the development of CGI technique began to advance rapidly with the spectacle oriented science fiction films as the central genre since the 1980s.

Time-Space Compression

Time-space compression, as the characteristic feature of flexible accumulation, can be compared to compression of time and space of the digital effects. Harvey's notion of time-space compression means shrinking the sense of time and space caused by development of transportation and telecommunication, speed-up of turnover time, geographical dispersion of manufacturing, and so on. It can be called the sense of globalization. Operation of turnover time, which can be defined as the "speed with which money outlays return profit to the investor," has

contributed to controlling the excessive investment or surplus labors (p. 182). If a factory accelerates turnover time, it can obtain surplus profit by removing over-accumulation of capital, labor, and stock inventories. Productions on demand and just-in-time delivery are the methods of accelerating turnover time (p. 284). Speed-up of turnover time rapidly vanishes temporally, and spatially displaced surplus products through foreign trade, and makes the sense of time and space converges into 0 that is the compression of the sense of time and space. New communication technologies, such as the Internet, are accelerating this convergence of the sense of time and space, that is, decentralization of the corporate labor power (Curtin, p. 195).

Compression of multi-layered time and space, by which CGI renderings are composited, creates a literally perfect combination of multiple time and space. In the case of time-space compression of flexible accumulation, the cultural sense of time and space has converged into 0; however, the digital effects' time-space compression does not mean convergence into 0, but literally 0. For example, as Rickitt states, the digital compositing used in *Lost in Space* (Stephen Hopkins, 1998) compresses several layers of time and space (p. 81). The computer-generated city, digital lighting on the city, computer-generated fighters, explosion light, background and foreground explosion, computer-generated debris, a model of a real freighter and its matte, and so forth are compressed into a single layer of time and space, and projected onto the screen. Several layers of computer-generated time and space and real-action time and space are projected, simultaneously. The layers of time and space are different from each other. Although they may be produced in different time and space/computer, and although they may indicate different time and space, they are composited and compressed into the same time and space, and are projected onto the screen. In this sense, the compressed projections of multi-layered time and space reflect the time-space compression of flexible accumulation.

Postmodernity and Reality of Digital Visual Effects

Digital visual effects are postmodern objects themselves, in terms of their characteristic feature as media, in that they are created by the hybridization between cameras and computers. As Lev Manovich (2001) argues, new media show “a convergence of two separate historical trajectories: computing and media technologies” (p. 20). Thus, new media are the synthesis of the development of modern digital computers and the rise of modern media technologies.

Jean Baudrillard approaches the postmodernity of digital effects from the ontological aspect of simulation. Baudrillard’s notion of simulation has been frequently used to explain the postmodern condition of the reality effect of CGI, in that CGI’s reality is a result of a specific computer program’s artificial rendering onto the film frames. Baudrillard (1994) proposes that simulation is “the generation by models of a real without origin or reality,” and argues that the era of simulation, dominated by hyperreality, is derived from “a liquidation of all referentials” (pp. 1-2). According to Baudrillard, the mimetic representation of reality disappears in the simulation today, because the era of simulation begins with a liquidation of all referents. As a result, Baudrillard’s perspectives of “liquidation of the origin” and “image’s reproduction of image” imply the impossibility of representation of the real, which ascribes meaning to real things of the world. For Baudrillard, all matters are meaningless, and are dominated by simulacra and the hyperreal; all things we touch are simulacra; all meanings which are delivered through media are imploded and disappear; accordingly, meaningful events disappear, and meaningless simulation dominates the representation of the real. Thus, according to Baudrillard, history ends.

However, I would argue that Baudrillard’s perspective is overly inclined to the ontological aspects of the representation of image. Baudrillard differentiates simulation from the

real by means of the dichotomy, whether the referential of an image does exist and/or whether or not the image is produced by code. With the result of the differentiation, Baudrillard judges the existence of meaning in reality. But Baudrillard's approach cannot help us to understand the positive aspects of simulation in the culture of contemporary postmodern world. His perspective is too nihilistic. Baudrillard's thesis is the only argument that purports that the world today has no meaning. For Baudrillard, special effects in cinema are mere distortions of reality and serve as the advance guard point of simulation accelerating the destruction of the meaning of the real world.

However, special effects, in particular digital effects, create a more natural reality effect beyond the barrier in representing human imagination. CGI stands on the cutting edge of artistic culture, by means of fulfilling human desire of the marvelous spectacle via the computer. Standing in the spotlight not only in film arts, but also in the realm of video art, net/web art, and even the plastic arts, digital effects are becoming a significant media of postmodern cultural arts, breaking the barrier of high and low culture.

In relation to Harvey's perspective, the aesthetics of flexible accumulation and the digital effects has transformed the perception of reality. Flexible accumulation, catalyzed by the speed-up of turnover time, is accompanied by a tendency toward not hierarchical unification, but hierarchical subdivision in the production organization. Flexible accumulation has influenced the consumption pattern, by means of reducing the products' life cycle. Thus, the stable aesthetics of Fordist modernism has changed to the fluid aesthetics of postmodernism, representing "difference, ephemerality, spectacle, fashion and the commodification of cultural forms" (p. 156). As Hassan (1987) argues, the postmodernist aesthetics and reality shake the pursuit of development under "totalization," linearity or "paradigm," "hierarchy"-oriented system, which

modernism sought, and the value of “root,” “origin,” and meaning within their relationship; rather, the postmodern aesthetics seek “deconstruction,” “syntagm,” “anarchy,” and the value of “rhizome” and “difference” within their relationship (pp. 91-92). It does not pursue absolute value and meaning; rather it deconstructs, looks at the inside, and examines the relationship. The postmodern aesthetics do not excavate the aesthetic vision about reality itself, the truth or meaning that reality shows, and the grand narrative; rather, it deconstructs reality, determines the process of and relationship within reality generation, and looks at various meanings. As history goes by, reality itself evolves; however, the difference between modernist and postmodernist aesthetics is founded on the difference of vision looking at reality. In this sense, flexible accumulation accelerates, hugely relying on speed-up of turnover time, the transition from the hierarchy-/purpose-/paradigm-oriented aesthetics and perception of reality of postmodernism to those of difference-/spectacle-/syntagm-oriented.

The reality effect that the digital effects generate is typically postmodern. The characteristic feature as media of the digital effects is not stable and continuous from the first, because it is always added onto the real-action footage, and immediately disappears after the specific scene wherein the effects are needed. The digital effects are not objects that can exist alone. When multi-layered time and space are compressed and composited with the real-action footage, the digital effects can exist as a filmic object. Thus, the digital effects’ own root, origin, and meaning do not exist. They only have a digital origin of the binary code of 0 and 1. The digital effects can exist and have a meaning, only within the relationship among multi-layered time and space and not within the linear editing, but the parallel compositing.

As the term reality effect indicates, the reality that digital effects represent is ontologically not real but only illusion, in particular, from a Bazinian perspective of indexical

realism, as well as that of Kracauer. Siegfried Kracauer asserts in “The Mass Ornament” that the aesthetic pleasure one takes in ornamental mass movements should reflect their grounding in the “reality-content” of our world. He writes, “The masses which are arranged in them are taken from offices and factories. The structural principle upon which they are modeled determines them in reality as well” (p.70). His conception of realism is more explicit in *Theory of Film: The Redemption of Physical Reality*. Kracauer (1960) identifies properties of film with the statement, “Film is uniquely equipped to record and reveal physical reality and, hence, gravitates toward it.” His concern about reality in film is only for “actually existing physical reality” that can be also called “material reality,” or “camera-reality” (p. 29). Kracauer takes a serious view of the film’s content, rather than form and camera techniques (p. 215). If we follow Kracauer’s theory of realism, the camera’s techniques always have to support the representation of a real sight or real view, and it should not distort photographic reality on any occasion. Film seems to describe reality as it is, but it tacitly transforms shapes of reality by means of techniques. Despite this transformation of reality, film must yield a dominant position to reality, because the faithful representation of reality is film’s unique function.

Andre Bazin insists in *What is Cinema?* that the camera automatically grasps the truth of time, and projects it onto the cinematic field. Through the ontological approach toward cinema, Bazin seeks to find faith in the camera and in technology. He tries to fundamentally understand ambiguous reality by means of technology. Methodological devices of such understanding are the cinematographies of deep focus and the long take. For Bazin, technology is the essence of grasping and understanding reality. The time and space produced by the cutting edge technology of digital effects, however, is far distanced from the Bazinian conception of time and space. Bazinian space and time cannot be seen in the recent Hollywood blockbusters’ cinematic field,

which uses a huge amount of CGI. Although most CGI is being composited to support human optical capability, and make the more natural reality effect about the world, the digital effects distort the reality of the real world recorded by the camera. In addition, digitally composited time and space is a combination of the time and space of the live action world in front of the camera, as well as that of CGI's additions or deletions of some images from the live action footages.

For Bazin, Robert Flaherty's *Nanook of the North* (1922) and Italian Neo-realist films are the ideal realist films, because the camera presents the referents of the real world as they are. The reality effect of the digital effects does not refer to the referent in the real world, as it does not indicate specific time and specific space. The time of the digital effects merely or virtually refers to the time that they are manipulated and produced by the computer; it does not refer to any real time period. The space of digital effects merely and/or virtually exists as a layer at the moment when the virtual camera composites the effects with the real-action footage; it does not refer to any real space. Instead, when digital effects are composited with the real-action, they generate the virtual and new kind of time and space, and produce an extremely intense spectacle. Even though they have virtual time and space, their spectacle is too intense; they make a deep impression on the viewers' mind; some scenes, such as Neo dodging bullet and flying, set a trend and influence on other films' digital effects.

In *The War of the Worlds* (Byron Haskin) in 1953, wire action was accomplished in a single studio. To hide the wires, a special effects team put Vaseline on a lens filter and sprayed a little extra smoke (Rickitt, p. 116). Although disguising the wires reduced the reality effect, it provided Bazinian indexical realism. However, in Spielberg's version of *War of the Worlds* in 2005, wires were digitally removed and, in many times, computers produced the alien objects. The digital effects create a new kind of time and space, by adding something artificial to the time

and space of the real world. Bazin emphasizes deep focus and long take because the cinematography does not disturb, to the highest degree, the camera recording the reality. The digital effects produce the exact opposite result. The digital effects add something onto, or remove/delete something from, the space of reality or the cinematic field. They even distort the duration of real time; we can see how the bullets are flying by means of the digital manipulation of slow motion. Faith in technology, fifty years ago, is no different from that of the present. However, since Bazin believes that technology can grasp reality and its truth, we can say that his realism is modern. On the contrary, the cinematic field that the digital effects generate is no longer single time and space, but multi-layered time and space; accordingly, identification of the digitally composited time and space and/or that kind of film becomes vague; thus, it is postmodern.

Due to the fact that the spectacle of the digital effects is too dazzling and plausible, the viewers suspend their disbelief. However, this moment of suspension of disbelief is the moment of distortion of the viewers' perception of reality. The moment of suspension of disbelief is the moment that multi-layered time and space are compressed into a cinematic space, and at the same time, it is the moment of embodying postmodernity that the boundary between the real-action footage and the digital effects are blurred; the moment of postmodern in those boundaries are blurred, and the identity is in flux. Thus, when we are amazed by Neo, when we are lost in admiration of the dazzling spectacle, and when we are appreciating the astonishment of technology, we are in the moment of postmodernity of compression of the multi-layered time-space, produced by the computer. This is the same logic that we feel the cultural sense of time-space compression that time and space are convergent to an instant and a spot due to speed-up of turnover time under flexible accumulation system.

Manovich (2000) also argues that new media are dominated by the “postindustrial logic of production on demand and just in time delivery” (p. 36). The Fordist concept of inventory is meaningless in the case of digital effects, which are made up of the binary code of 0 and 1. Digital effects are generated only when some specific scenes need some specific special effects. Since digital effects are produced, restored, and consumed by the computer, they require minimum space of restoration of CD-Rom or DVD-Rom. After CGI is produced, it can be used immediately, over and over again, without additional costs. In addition, because digital effects are composed of digital codes, they can be delivered just in time through the Internet or local network, regardless of location of the producing center. Thus, digital effects are typical examples of postmodern media. Likewise, digital effects, as new media applied to filmmaking, represent the logic of time-space compression not only in the feature as media, but also in the aesthetics. The digital effects produced by the compression of multiple layers of different time and space, at different time and space, represent a digital model of time-space compression.

Film Theories and Special Effects: Theories of Spectacle

Special effects seeking amusement and amazement have existed during every time period. Tom Gunning and Scott Bukatman commonly agree with this point. Regarding the cinema of attractions within narrative films, Gunning (1990) writes, “In fact the cinema of attractions does not disappear with the dominance of narrative, but rather goes underground, both into certain avant-garde practices and as a component of narrative films, more evident in some genres (e.g. the musical) than in others,” the filmic tradition of the cinema of attractions has been continued through mainstream narrative cinema (p. 57). In this respect, despite the time difference between the early tricks and digital effects, the cinema of attractions has contributed to the aesthetics of

special effects of Hollywood blockbusters.

As Gunning (1994) points out, the aesthetic of the cinema of attractions, “improperly” applied to narrative construction, makes the audience member become “a gawker who stands alongside, held for the moment by curiosity or amazement” rather than “a spectator-in-the-text” (p. 190). The technology during the period of the early films portrays the naïve reality of the spectacles through reflection of the referents, interrupts the audience’s empathy to the whole narrative structure, and at the same time, provides amusement. In addition, during the moment that special effects are used, psychological narrativization, which can be supported by Bazin’s classical realist theory, aids audience’s understanding of the tricks. Gunning’s theory of the cinema of attractions asserts that it is the spectacle created by the early films, from 1895 to 1907, that attracted audiences. Gunning (1990) states that the cinema of attractions is the film’s ability to grasp the attention of the audience by virtue of visual effects, and that “a cinema showman” directly places this barrier of absorption between audience and narratives (pp. 58-59). In other words, it is a style of entertainment, regardless of the audience’s empathy toward the narrative; rather, it focuses on machine-made cinematography and technological spectacle. Thus, technology itself, operationalized through the camera, is more momentarily attractive than the central themes generated by the narrative and story. In terms of this technological spectacle, early cinema shares a vein with Hollywood filmmaking today (North, 2001, p. 70). The fantastic CGI in *X-Men* or *Spy Kids* overwhelms the narratives from beginning to end, fascinating the spectators.

Taking issue with this argument, Geoff King (2000) insists, in *Spectacular Narratives: Hollywood in the Age of the Blockbuster*, that although the present blockbusters attract audience by means of dazzling special effects, “narrative is far from being eclipsed” and narrative and

spectacle are frequently interdependent (p. 2). I disagree with King. Cinema is already a visual effect, not a book to read and imagine the content. Cinema needs our vision, and seeks our feeling its spectacle. In particular, recent effects-oriented SF blockbusters are asking the immediate bodily response about the spectacle by the audience. Conversely, the audience is also asking for the continuous stimuli of fantastic spectacle to the blockbusters. If Superman cannot fly, or *Superman* cannot show the scene that Superman is flying, the audience will be no more attracted by the narrative. If there is no power of spectacle in exhibitionist films, they are no more that kind of films. In this sense, these spectacles are evidence of the cultural and technological heritage of the cinema of attractions.

As North indicates, Gunning endorses Méliès' method of filmmaking; making light of storytelling, he celebrates "scenario only as a pretext for the stage effects, the tricks, or for a nicely arranged tableau" (p. 73). For Gunning, storytelling in the primitive films was a mere appendage, serving as a background of cinematic special effects attractions. The attraction has a feature of mechanical aesthetics that is heavily dependent upon technological tricks, a method that has been used in both early and recent films.

Bukatman (2003) also argues, in *Matters of Gravity: Special Effects and Supermen in the 20th Century*, that special effects are the present embodiment of spectacular technologies creating "immediate sensory experiences." According to Bukatman, special effects have always existed. The ways of representation have varied, dependent upon the development of technology. Bukatman says, "Cinema is, of course, a special effect, and that is how it was regarded by its initial audiences" (p. 90). The "sense of wonder" that SF always tries to provide derives from "a new way of seeing," and "artificial infinities" are proportion to the level of technology. Thus, for Bukatman, cinema was already a virtual reality system and visual effects are major tools for the

artificial infinities of a new way of seeing. Special effects of SF reflect “a technology of technology, a cinema of cinema” (p. 109). The reality effect of special effects inspires awe about what they go beyond “human limitations.” Bukatman argues that the effects sequences of SF represent the complex relationship between the human and technology in this unstable historical point, and their reality effect soaks through the complicated culture of visibility (p. 110).

According to Bukatman, cinema is an artificial and technological paradigm that will realize utopian fantasy; if a SF film suggests devastation of the nature and civilization of the future, real “utopian technology” makes a progression to the direction of prevention of the disaster; if dehumanization is presented in some SF films, utopian technology will approve and accept new spirituality and humanity (p. 105). For Bukatman, SF serves as the navigation that indicates the direction of the development of technology. Special effects are the cultural cursor blinking on the navigation for utopian technology; how special effects effectively show the figure of the future heavily influences the activity of the utopian technology. SF frequently describes the future with dark vision, implying an artistic warning to the distorted progression of technology.

Bukatman argues that the exhibitionist spectacle that special effects create relates to the conception of the sublime. According to Bukatman, technology creating the Stargate in *Stargate* (Roland Emmerich, 2001), the Voyager in *Star Trek*, and the Tyrell Corporation building in *Blade Runner* (Ridley Scott, 1982) have inspired the emotion of the sublime in audience. Bukatman states that the sublime is produced by “the combined sensations of astonishment, terror, and awe that occur through the revelation of a power greater, by far, than the human” (p. 91). Thus, the sublime visibility is crystallization of technology, and at the same time, the exact function of SF; to provide the sublime experience through showing the audience something beyond the human is the reason for being of SF. Accordingly, for Bukatman, special effects are not only media

between science fiction films and their sublime visuality, but also the major mechanism that makes SF films maintain their presentational mode.

Vivian Sobchack differentiates the use of the special effects in fantasy and SF. According to Sobchack (1980), if special effects support the viewers' suspension of disbelief in fantasy, those of SF reinforce the viewers' belief (p. 88). The reality effect takes the place of the function of the viewers' imagination. The human eye cannot actually see something; however, the visual effects make it be seen as real, a phenomena that, in the past, was produced by the viewer's imagination. If SF looks at the present with the mirror of the future, and if fantasy looks at the present with the mirror of the past, visual effects are the cinematic apparatus of rendering the present projected by the two mirrors: SF and fantasy.

Sobchack divides the use of special effects into the two categories, belief and suspension of disbelief. Similarly, Pierson (2002) classifies the two domains, a simulationist and a technofuturist. Technofuturism is based on utopian paradigm of technology, "always representing new technologies as an improvement on older ones" (p. 85). According to Pierson, the effects aesthetic of *Jurassic Park* (Steven Spielberg, 1993) or *Jumanji* (Joe Johnston, 1995) can be an example of a "simulationist" and that of *The Abyss* (James Cameron, 1989), *Terminator 2: Judgment Day* (James Cameron, 1991), *Johnny Mnemonic* (Robert Longo, 1995), and *Virtuosity* (Brett Leonard, 1995) use a "technofuturist" effects aesthetic (pp. 95-96). Pierson says,

...an aesthetics of CGI effects initially developed along two contiguous axes: the first, simulationist; and second, technofuturist. Both types of imagery exhibit the photorealistic capabilities of contemporary digital imaging systems, but whereas a simulationist aesthetic is geared both toward the phenomenological simulation of photographic or cinematographic reality and the representational simulation of objects in the natural

world, technofuturism describes a hyperreal, electronic aesthetic that is not entirely commensurate with either of these projects” (p. 101).

In other words, a simulationist effects aesthetic derives from what simulation of CG creates impossible scenes; a technofuturist effects aesthetic does from the composition of CG to which scientific imagination is induced. In this point, Pierson’s simulationist effects have a thread of connection with Sobchack’s effects for the suspension of disbelief, and Pierson’s technofuturist effects connect with Sobchack’s effects for the viewers’ belief.

Visual Effects and World Cinema

Hollywood and World Cinema before Globalization

Film as the motion picture that Auguste and Louis Lumière produced and introduced a new technological invention was distributed in France first. At December 28, 1895, the first commercial release of Lumière brothers’ works including *Workers Leaving the Lumière Factory* took place in the Grand Café in Paris. They continuously succeeded through the release of their films, from *Train Arriving at a Station* (1895) to *Feeding the Baby* (1896) to *Sprinkling the Sprinkler* (1896). Georges Méliès constructed his own studio to invent the early forms of special effects in 1896. The studio’s wall was made by glass in order to use natural sunlight in the middle of shooting (Pintea, 2004, p. 23). It was the first special effects factory. Méliès created serial experimental films such as *A Trip to the Moon* and *Gulliver’s Travels* in 1902. His works were internationally distributed (p. 24).

However, these early hegemony of France was transferred to American film industry around World War I. The American film industry was controlled by the studio system from the 1910s to the 1960s. According to Thomas Schatz (1988), Hollywood studio system was born and

developed by the 1920s. It grew faster in the 1930s, “peaked in the war periods, but then went into a steady decline after the war” (p. 4). From the era of the studio system, Hollywood films have dominated the international realm of not only economic market but also film aesthetics. The Asian film industry, in particular Japanese industry, absorbed Hollywood as their model from the 1920s. Hollywood studios, such as Universal, permeated Japanese film market and technology. Japanese producers bought cameras and other facilities at Los Angeles, “while back at home scenarists were urged to study Hollywood scripts, and cinematographers counted and timed shots as they watched American films” (Bordwell, 1988, p. 19).

Table 1. Attendances and Market Share of Korean and Foreign Films

Year	Korean Films		Foreign Films		Total Attendances
	Attendances	Market Share	Attendances	Market Share	
1983	17,55 -, - -	39.80%	26,48 -, - -	60.10%	44,04 -, - -
1984	16,89 -, - -	38.50%	27,03 -, - -	61.60%	43,90 -, - -
1985	16,44 -, - -	34.20%	31,66 -, - -	65.80%	48,10 -, - -
1986	15,62 -, - -	33%	31,66 -, - -	66.90%	47,30 -, - -
1987	13,11 -, - -	27%	35,49 -, - -	73%	48,60 -, - -
1988	12,16 -, - -	23.30%	40,07 -, - -	76.80%	52,20 -, - -
1989	11,15 -, - -	20.20%	44,15 -, - -	79.80%	55,30 -, - -
1990	10,81 -, - -	20.20%	42,65 -, - -	79.70%	53,50 -, - -
1991	11,06 -, - -	21.20%	41,14 -, - -	78.80%	52,20 -, - -
1992	8,72 -, - -	18.50%	38,39 -, - -	82%	47,11 -, - -
1993	7,69 -, - -	15.90%	40,54 -, - -	84.10%	48,23 -, - -
1994	9,93 -, - -	22%	38,42 -, - -	79.50%	48,35 -, - -
1995	9,44 -, - -	20.90%	35,69 -, - -	79.10%	45,13 -, - -
1996	9,76 -, - -	23.10%	32,44 -, - -	76.90%	42,20 -, - -
1997	12,12 -, - -	25.50%	35,40 -, - -	74.50%	47,52 -, - -
1998	12,59 -, - -	25.10%	37,59 -, - -	74.90%	50,18 -, - -
1999	21,72 -, - -	39.70%	33,00 -, - -	60.30%	54,72 -, - -
2000	22,71 -, - -	35.10%	41,91 -, - -	64.90%	64,62 -, - -
2001	44,813,519	50.10%	44,550,254	49.90%	89,363,773
2002	50,825,199	48.30%	54,312,524	51.70%	105,137,723
2003	63,913,246	53.50%	55,562,063	46.50%	119,475,309
2004	80,188,543	59.30%	54,977,632	40.70%	135,166,175
2005	85,441,539	58.70%	60,082,637	41.30%	145,524,176

Source: Korean Film Council. Full data is available on the Internet at <http://www.kofic.or.kr/contents/html/index.aspx?MenuId=131>

The early Korean film industry was under the influence of Japanese occupation. During the military occupation days, from 1910 to 1945, the narrative of Korean films included anti-imperialism against Japan. However, the style had to be following Japanese films (Yomota, 2000, p. 129). As a result of this imperial chain, the Korean film industry was indirectly influenced by Hollywood from its early period. Korean War and military regime set limits to natural vitality of the Korean film industry by means of strict censorship and the screen quota system, requiring local theaters to screen Korean films at least 106 days out of the year. As the import of foreign films was deregulated in 1985, the screenings of foreign films were quickly increased. According to Korean Film Council's official statistics, Korean films' share of the domestic market in 1985 was 34.2 %, foreign films' share of that was 65.8%. In 1993, the market share of Korean films was 15.9 %, that of foreign films was 84.1%; Hollywood films which had the largest portion of foreign films made inroad into the Korean domestic market (see Table 1).

However, the Korean film industry began to recover from 1999 when *Shiri* (Je-gyu Kang) was released. The market share of Korean films has rapidly grown 39.7% in 1999 to 50.1 % in 2001 to 53.5 % in 2003 to 59.3 % in 2004. The number of attendance in Korean films passed that of foreign films ahead from 2002. Starting from *Shiri*, the Korean film industry has been extremely growing very recently. In other words, the Korean film industry, which was placed under the one-sided influence of Hollywood, has begun to be independent through the success of Korean exhibitionist film called Korean blockbuster. *Shiri* was created from the combination of the Korean national story and the recent visual aesthetic of Hollywood using dazzling visual effects. *Shiri*'s commercial success stimulated the investment to blockbuster films, and at the same time, urged the industry to develop special effects technology. Of course, Korean national cinema has existed. IM Kwon-taek, LEE Jang-ho and others have represented

Korean national emotion and spirit with their own style. However, their films could not overcome Hollywood's domination of domestic market. Part of the reasons of *Shiri*'s success can be said that Korean audiences have been already familiar to the aesthetics of Hollywood exhibitionist films from 1985 when foreign films began to be imported freely. In this context, Korean exhibitionist films with the support of digital visual effects are providing new opportunities with economic independence of Hollywood. I will examine more theoretically this new relationship between Hollywood and the Korean film industry in the next section.

Digital Effects and the Korean Film Industry

Digital effects' compression of multi-layered time and space as a postmodern characteristic in the process of cultural production reflects the new form of globalization beyond the economic imperialism of the U.S. and the European Powers. Michael Hardt and Antonio Negri (2000) insist in *Empire* that Empire emerging in the post-colonial era is global economic-political power transcending national borderlines. According to them, Empire is the post-imperialist sovereignty that materials, commodities, and information are exchanged by global network, not nation-states. Overcoming the economically and culturally colonial status under Hollywood, Korean film industry began to enter the network of Empire through digital effects with the support of computer technology from the late 1990s.

In investigating this function of the digital technology and digital effects that provides the possibility of independent film industry beyond Hollywood's imperialism, the key texts are Toby Miller, Nitin Govil, John McMurria, and Richard Maxwell's *Global Hollywood* (2001) and its sequel/update *Global Hollywood 2* (2005). The authors' main argument is that Hollywood's globalization is a kind of cultural imperialism derived from what they call the New International

Division of Cultural Labour (NICL). The authors cite the line in *A Foreign Affair* (Billy Wilder, 1948): “If you give them food, it’s democracy. If you leave the labels on, it’s imperialism” (p. 28). Hollywood has increasingly made use of the NICL for keeping the status of a culturally imperial leader. These ideas of Empire and NICL will be addressed more fully in Chapter 5, which examines the relationship between Hollywood and the Korean special effects blockbuster.

I suggest three aspects of the recent South Korean film industry:

First, effects-oriented South Korean event films, such as *Shiri* (KANG Je-gyu, 1999), *2009: Lost Memories* (LEE Si-myung, 2002), *Tae Guk Gi: The Brotherhood of War* (KANG Je-gyu, 2004), and *Welcome to Dongmakgol* (PARK Kwang-hyun, 2005). These films have successfully competed against Hollywood films in the South Korean domestic market and the larger Pacific Rim market. The Korean film industry today is in the middle of attaining technological independence. The digital technology of the South Korean film industry treads close on Hollywood’s heel. The consideration of the use of digital effects becomes a routine step of drawing a blueprint. With the support of the use of digital effects, the Korean film industry is approaching toward the technological independence.

Second, despite the South Korean industrial peculiarity, their stylistic elements are becoming more and more like Hollywood’s. From the perspective of economically imperialist global Hollywood, the South Korean film industry is escaping from the influences of Hollywood. However, on the level of style, it is rapidly absorbing the Hollywood blockbuster that has dominated and has been already intimate with South Korean culture. Even though the aspect of film production in relation to digital technology is going to be independent from the influences of Hollywood, the stylistic preference of South Korean audience make the film industry intend to resemble Hollywood style. This kind of visual preference can be said as a result of cultural

imperialism of Hollywood. In this sense, South Korean effects-oriented blockbusters are taking a new position in cultural globalization by means of telling the very Korean historical story through the very global Hollywood spectacle with digital effects.

Third, the stories of the South Korean blockbusters present the unique nationalist theme related to the past historical traumas even though the recent evaluation from the world critic. I will term this South Korean blockbuster film dealing with nationalist theme based on the historical trauma “Korean nationalist blockbuster.” The Korean nationalist blockbusters, such as *Shiri*, *Tae Guk Gi: The Brotherhood of War*, *Welcome to Dongmakgol*, and *2009: Lost Memories*, do not hide the painful history of Korea, but cinematically expose it; they clearly present the narrative of the opposition between good and evil with the effects-oriented spectacles. As KIM Kyung-Hyun (2002) argues, “In any new national cinema that has long endured political terror, a “post-traumatic” identity often emerges whose mission is to help viewers remember what is too painful to recuperate (p. 96),” the above films’ emphasis on patriotism and democracy is a cultural stabilizer to maintain the present status and to heal the trauma of the dark past. Likewise, the intensive spectacle with special effects that Korean science fiction, action film, and fantasy spout emphasizes the narrative of Korean nationality, and at the same time, becomes the foundation for globalization of Korean films. The effects-driven filmmaking of the Korean film industry is a means of aiding the process of recovering from the trauma through exhibiting the painful history to the world stage, rather than hiding it.

2. VISUAL EFFECTS of EARLY HOLLYWOOD

Introduction

This chapter begins to trace the early history of special effects from the early cinema in the 1890s, such as *Train Arriving at a Station* (Louis and Auguste Lumières, 1895) and *A Trip to the Moon* (Georges Méliès, 1902), to the early studio era in the 1920s, such as *The Thief of Bagdad* (Raoul Walsh, 1924). The purpose of this chapter is to conceptualize the key terms that I will use throughout the chapters and to provide cultural implication of visual effects in the early period. I choose three early films, such as *Train Arriving at a Station*, *A Trip to the Moon*, and *The Thief of Bagdad*, as texts for close analysis. These films have been considered as the greatest masterpiece in the early period and have provided in particular the visual foundation for spectacular SF and fantasy films heavily relying on the use of special effects—even though *Train Arriving at a Station* was made up of a single short documentary shot. By means of close textual analysis, I will survey the history of early special effects, examine the techno-oriented spectacles of the effects aesthetics of early films, and discuss the historical condition of the development of the reality effect.

In a sense, filmed reality is already a visual effect, particularly for the audience in the late 1890s and the early 1900s. For audiences of the time, who were well acquainted with the two-dimensional realism of painting, the sense of three-dimension that moving image produced approached them as a visual effect. Just as the present visual effects, including CGI, give a marvelous impression to audiences today, film itself as a medium and the images that the film projected were dazzling visual effects to early audiences. The Lumière brothers' *Train Arriving at a Station* (1895) was the earliest model of a visual effect.

A few years later, experimental filmmakers, such as Georges Méliès, started to combine

the theatrical magic with film, by means of basic camera tricks, such as stop-motion and superimposition. To accomplish the transformation of magical imagination onto the screen, Méliès constructed an individual glass studio, “the world’s first special effects facility” (Rickitt, p. 13). It was the beginning of special effects. The technologically advanced special effects, under the special environment, focused on the stunning spectacle with tricks, rather than on the narrative. Méliès displayed magic through the use of eye-deceiving tricks that went beyond Lumière’s basic reality representation. In *Indian Rubber Head* (1902), Méliès tried superimposition; also termed double exposure, it is defined as, “the laying of two or more images so that they are transparently visible at the same time” (Rickitt, pp. 12-13, 312). In *The Dancing Midget* (1902), he set the dancer to stand “thirty or forty feet behind the set,” in order to pretend that the dwarf like female dancer was “placed on a platform that was lined up with the foreground table” (Finch, p. 19). It was the simplest eye-deceiving trick, showing the typical feature of Méliès’ aesthetics of the use of special effects. In *The Merry Frolics of Satan* (1906), Méliès presented the more sophisticated mechanical effects, controlling the movements of the wooden horse and the carriage (pp. 20-21). Out of his oeuvre, over a thousand from 1896 to 1912 (Hutchinson’s Biography Database), the film which can well represent the essence of the early tricks is *A Trip to the Moon* (1902), based on Jules Verne’s *De La Terre á la Lune* [From the Earth to the Moon] (1865) and H. G. Wells’ *The First Men in the Moon* (1901). Méliès’ films created the first generation of the reality effect, manipulated by visual effects. Its naturalism was too vague to make audiences become absorbed into the narrative because the purpose of the tricks was primarily for the exhibition of the spectacle.

The crude reality effect of the primitive films—in terms of the low level of naturalism that is explicitly different from live-action—was increased by the early Hollywood filmmakers in

the 1920s. They constructed large scale sets, used numerous props and extras, and produced and invented physical and visual effects, including wire-action and traveling matte, in order to produce a more sophisticated, fashionable, and complicated reality effect. They could tell more narrativized and complex stories by means of advanced special effects techniques.

In addition to the artistic desire for the presentation of the marvelous, there were two major driving forces associated with the creation of special effects: the studios' attempt to reduce production costs and the heavy influence of German films in the 1920s. They became the powerful catalyst for Hollywood's investment in special effects. Entering into the 1920s, the need for new spectacle and more fashionable narrative made the studio's production budget rise. The studios tried to find "money-saving models" (Rickitt, p. 18). The result was the development of effects techniques. On the other hand, as Bordwell, Staiger and Thompson write, "Hollywood in the 1920s was under the huge influence of German films to the degree that some Hollywood filmmakers imitated German Expressionist techniques of lighting, camerawork, and special effects" (p. 73). At the same time, some filmmakers confronted German films by making splendid effects-oriented films. The typical effects-oriented film, born from the dynamics between the economic principle of efficiency and the artistic resistance to German films, was *The Thief of Bagdad* (Raoul Walsh, 1924). Douglas Fairbanks was greatly inspired by Paul Leni and Leo Birinsky's German film *Waxworks* (1924), and produced *The Thief of Bagdad* to compete with the German influences (Special Features, DVD of *The Thief of Bagdad*).

As a result of D. W. Griffith's absorption of the early effects into the continuity-oriented language of film in the 1910s and the economic situation and international competition in the 1920s, the reality effect of special effects in early Hollywood became, in part, some functions in the narrative. The competition with Expressionist techniques made Hollywood filmmaking

maintain the presentationist mode of the tradition of the cinema of attractions, emphasizing the presentation of spectacle.

The reality effect of visual effects in cinema has developed in the direction of augmenting naturalism of representation, which is perceptually indistinguishable from live-action. From the birth of the film, as a visual effect itself, to the mere exhibition of some tricks to the application of the tricks to the narrative deployment, the traces of visual effects have followed the development of technology.

2.1 *Train Arriving at a Station* (Louis and Auguste Lumières, 1895)

The Power of Spectacle as a Visual Effect

The Lumières' invention of Cinématographe was the introduction of a new medium that delivered reality through the lens. As the painting imitates reality by means of a canvas and a brush, Cinématographe copies the reality by means of a camera. However, because Cinématographe's recording reality was taken from the human-eye-view, the degree of reality description that it created was much greater than that of the (realist) paintings. The film, as a medium, was a visual effect to the audiences in the early 1900s. Cinématographe provided the great power of the spectacle, produced from the visual-oriented feature of a new medium.

Cinématographe's filmed reality could be amplified by the use of the mise-en-scene strengthening the power of the spectacle. Among others, *Train Arriving at a Station*, presenting the arrival of a locomotive, was the film that set off the visual effect-like reality, supported by the spectacle and the mise-en-scene, including the composition of a frame. An article in *The Empire State Express* reported about two women who, upon seeing *Train Arriving at a Station*, were thrown into a panic, thinking the train would burst through the screen (Thanouser CD-ROM).

Stephen Bottomore suggests that the audience's uneasiness is related to the adaptation of new technology (pp. 15-16). Even though the article presented the audience's distrust and anxiety about the new technology during the early period of film, the fact that the women perceived the train as real emphasizes the splendid reality presentation of the early film's spectacle.

The stunning spectacle of the visual effect in *Train Arriving at a Station*, to the degree that "audiences would actually panic, thinking the locomotive was about to leave the screen and invade the auditorium" (Finch, 1984, p. 17), was achieved through various means: the clear/indexical representation of the reality, minimal narrative, and the effect of mise-en-scene.

First, there was a clear representation of the reality experienced by the audiences. They saw the train scene as a real event, indicating that the reality faithfully presented the reference—the locomotive—as the object in the station. Although the camera chose the reality of the moving locomotive into the rectangular frame out of the whole reality of the world, the reality chosen is faithful and clear, in comparison to the real reference. This indistinguishability between the reference and its representation contributes to the production of the audience's faith in the reality.

Second, there is a minimal narrativity; the narrative of *Train Arriving at a Station* is incomplete. It shows the arrival of the locomotive and the travelers' transfer. During the transfer, the film abruptly ends, without any mark or implication of ending. This kind of ending, of course, seemed to be brought about by the filming behavior of the early filmmakers: "They held a shot until they got bored or the film ran out" (The Cutting Edge, 2004). Even though there is no "completion of plot," such as 'the locomotive leaving the station,' the film has a minimum narrative structure. Its narrative shows "a development: travelers become new arrivals and passersby become travelers" (Gaudreault, 1990, p. 70), which is a minimal form of narrativity.

Because there was no 'cut' in the early filmmaking behavior, there was no fictional

narrative (*The Cutting Edge*). The film began to be a commercial medium, delivering more complex narrativity. This minimal narrativity of the early cinema, which was produced before the period of 'cut,' made the audience focus more on the spectacle of the film than the incomplete narrative. Moreover, because the storyline of the arrival of a locomotive is a very ordinary event that the audience could see for real in a station, the audience's interest naturally comes to the amazement that the spectacle provides. In this sense, the visual illusion of reality, wherein "the locomotive seemed about to steam out of the screen into the audience" (Rickitt, p. 10), is created by the spectacle, rather than the narrative. *Train Arriving at a Station* is a typical model of Gunning's "cinema of attractions."

Third is the effect of the *mise-en-scène*. The movement of the locomotive, which comes from the upper-right side of the frame to the left, is dynamic. The composition of the frame, represented by the path of its movement, follows the linear perspective that the composition best presents the depth of field in the *mise-en-scène*. Moreover, the direction of the movement from right to left amplifies the effect of the speedy moving spectacle. According to Rudolf Arnheim (1988), viewers have a tendency, "to perceive pictures as organized from left to right, so that the lower-left corner appears to be the composition's point of departure" (p. 47). If we follow Arnheim, the moving direction from left to right is much more natural, easier, and comfortable for the viewers to perceive. However, because the locomotive in the film follows the reverse direction, the audiences feel discomfort while viewing it. This discomfort relates to the recognition of the importance of the moving object. So, when the head of the locomotive completely enters into the left of the frame, the dynamic force of the spectacle marks the climax. The locomotive seems to rush out to the left front of the screen.

In this context, even though Louis Lumière did/could not use any camera trick, the power

of the spectacle in the mise-en-scene produced the visual effect and gave a shock to the audiences. The spectacle of the locomotive, coming forth to the audience, can be viewed as the illusion of reality, rushing to the contemporary people in the early twentieth century. The film is a visual effect itself. Although the term 'special effects' was only officially and originally inserted to the credit of Fox pictures *What Price Glory?* in 1926 (Rickitt, p. 18), special effects have existed from the birth of the film. The film is an effect in itself.

Due to the minimal narrativity, the meaning of the locomotive is reduced to a symbol of technology. The locomotive does not provide any clues to imply the splendid technology that is coming. However, if we consider that the medium, delivering the spectacle of the locomotive to the audiences, is an epoch-making new technology, we can view the locomotive as a symptom of the future technology, producing the fantastic illusion of reality, as well as having a potential to frighten people into panic. Despite the minimal theatricality, the film's visual image and the audiences' panic as a result imply the ambivalent vision of hope and fear of technology at that time.

Interestingly, the early audiences' panic provides a clue for the reality effect of virtual reality (VR). Because visual effects were not used in the film, I cannot say that the two women's panic is caused by the reality effect, from my definition of the term reality effect. However, that they were in a panic suggests that the environment surrounding them, such as the dark theater, the big and unseen screen, and the image of the locomotive seeming to rush out to them, conduced their experience of reality effect beyond the two dimensional perception of the flat screen. They were temporarily transformed into VR users in the 21st century, wearing goggles and gloves. Despite the time difference of a century, the sense of the reality effect that two women perceived seems to be common in the reality effect of the VR users. If the VR via the

goggles and the gloves provokes actual fear by means of practical fear factors, the VR users in the 21st century may cease to entertain its reality effect and experience panic as the women were a century ago.

In the next section, I will analyze, in more detail, the aesthetics of the reality effect and technofuturism through *A Trip to the Moon*, which is made up of a clear SF narrative and magical early tricks.

2.2 *A Trip to the Moon* (Georges Méliès, 1902)

The Early Tricks: The Cinema of Attractions and the Alienation-effect

If Louis Lumière's locomotive gave a visual shock, created by the powerful spectacle without any camera manipulation, Georges Méliès' space Shell, the spacecraft launched by the big gun, presented a visual illusion through cutting edge tricks in the early 1900s. As Gunning (1990) asserts, early films before 1907 delivered more spectacle than narrative; as a result, "theatrical display dominates over narrative absorption." "Psychological motivation" and the attempts to characterize the character could scarcely be found (p. 59). When magical attractions are presented, the audience naturally awoke from the narrative absorption to gain visual amazement.

Georges Méliès' films are not exceptions. As we can infer from Méliès' former profession as a magician, his films concentrated more on the filmic application of theatrical magic, by the use of the first generation of cutting edge visual effects, such as stop-motion, dissolve, substitution, superimposition, and so forth. For Méliès, the films were "magic items to enrich the programs of the Robert-Houdin" (Barnouw, 1981, pp. 47-48). In theatrical magic, the spectacle that a magician shows overwhelms and amuses the audience. This can be considered as the

theatrical moment of the cinema of attractions. The narrative in the magical performance functions as a pretext for the exhibition of the magic; accordingly, the audience is naturally distanced from its narrative at the moment that the magic is presented. Since Méliès' films, as "magic items," were the cinematic embodiment of theatrical magic, this alienation of the audience from the narrative is clearly presented in his films. *A Trip to the Moon* is a representative early trick film to which the theatrical magic is applied.

This alienation of the audience seems to be related to the theatrical tradition that Bertolt Brecht called "Verfremdungseffekt (V-effect/alienation effect)." Brecht (1992) said that the artist must compose a new form and content, in order to create a new art for the purpose of propagating social messages, because art follows reality (pp. 29-30). Brecht's notion of alienation indicates that audiences are distanced from the narrative; it rejects spectators' empathy. In this sense, the early films' presentation of tricks has the same result as the V-effect of Brecht's epic theatre. However, the two historical art forms do not correspond with the socio-historical meaning of alienation. The function of abrupt alienation of the early tricks is to "present technology itself," reifying the development of technology, accompanied with social changes. However, that of epic theatre serves as a barrier, keeping spectators at a distance from the narrative, so they can maintain coolheaded judgment and criticize social problems. While the early trick films' alienation implies the bright side of society, in particular, of technology, Brecht's alienation serves as a critique on dominant ideology. The repeated presentation of tricks in the early cinemas affirmatively supported the social change to the technology-oriented industrialized modern society by means of the visual shock as the cinematic representation of superiority and significance of technology.

In *A Trip to the Moon*, we can find two kinds of tricks of attractions and alienation effect:

one is brought about by Méliès' typical tricks of attractions, and the other is derived from the splices during the shots, irrelevant to any trick, regardless of Méliès' intention.

First, an example of the tricks of attractions is displayed in the scene where a scientist compares the size of his umbrella with the mushroom; the umbrella abruptly transforms itself into a mushroom and grows big. This is the moment of stop-motion trick that the umbrella momentarily substitutes for the mushroom. Then the Selenites appear. The stop-motion occurs when 'the astronomers arrive in the interior of a most curious grotto' to avoid Phoebes' punishment of the snowstorm. There is no reason that an astronomer's umbrella changes to a mushroom. It gives only optical amazement to the audience.

Stop-motion, which can also be called the trick of substitution, is frequently used throughout the film. In another example, in the scene wherein the President of the scientists flings the King of the Selenites to the ground to escape from being captured by the Selenites, two consecutive stop-motion tricks occur. The human character of the King is replaced by a human-like puppet. At the moment that the puppet is flung to the ground, it disappears with a burst. The puppet functions as a kind of stunt man to protect the actor playing the King of the Selenites. However, its abrupt and unreasonable replacement of the puppet and the burst with smoke break the narrative flow.

Triple exposure is found in the underwater scene where the space Shell falls into the sea from the moon to escape the chase of the Selenites. An aquarium, the background painting representing the underwater world including a wrecked ship and a number of jellyfish, and the figure of falling Shell are superimposed. The shadows of the fish and the Shell describe their appearances under water. We cannot see the actual shape of the fish and the Shell. The size of painting of the wrecked ship and the jellyfish is too unreal. Although it was a trial of new kind of

trick, it could not produce the trick's plausibility because the construction of the trick was too crude. Despite the simple presentation from the perspective of the present technology, these tricks of attractions provided the audiences of the early 1900s with amazement, and at the same time, distracted their attention from the unfolding narrative. When audiences perceived the trick and were surprised, they were distanced or alienated from the narrative absorption.

The above tricks of attractions relate to the narrative development, despite the somewhat exaggerated and light tone of the presentation. However, we can also find a number of cuts and splices completely unrelated to the needs of the narrative. They are only for the exhibition of the trick, stop-motion. For example, in the beginning of the film, a committee member strongly opposes the president's plan of a trip to the moon. The president throws his books and papers at his head. The committee member walks to the right and sits on the chair at the right corner of the frame. When he walks from left to right, there are cuts and a splice occurring in the middle of walking, without any causality. It produces the effect of presenting the trick of stop-motion even though they could be that the main print, or last surviving print, had been torn and repaired. Likewise, in the scene of Shell's launching, the camera takes the slow zoom-in of the human-faced moon. In the middle of the zoom-in, the camera takes two clear cuts and splices. In terms of narrativity, there is no specific meaning in these splices; they cannot provide any motive for the narrative development. Although the splices are similar to the technique of jump-cut, they cannot be defined as such because jump-cut is devoted to the production of specific meaning or to the effective editing. When the purpose of jump-cut belongs simultaneously to the realm of the narrative and spectacle, the splices simply exhibiting the stop-motion trick do so only to that of the spectacle. Because the splices are not essentially correlated to the narrative, they easily catch the audiences' attention, and place a visual barrier to their empathy; accordingly, the audiences'

alienation from the narrative occurs. In terms of these splices—which cannot be considered as a sort of editing—we cannot suggest any other reason for their existence, except that they form a part of the tradition of the cinema of attractions wherein the narrative is overwhelmed by the spectacle, continuously amusing audiences by the use of tricks.

For Méliès, the narrative was a tool for presenting the experimental spectacle. The audience's temporal empathy between trick scenes brings about an alienation from the film's whole narrative. *A Trip to the Moon* can be viewed as a typical spectacle-oriented cinema of attractions, distancing the audience from the narrative absorption.

Exhibitionist Tricks as the Vision of Technology

Although Méliès devalued the narrative importance of film, and the tradition of the cinema of attractions emphasized the spectacle beyond the narrative, Méliès managed to combine tricks presenting technology with an effective narrative of the space exploration in *A Trip to the Moon* (1902). The reason why *A Trip to the Moon* is frequently referred to as one of the most important films is that not only were the stage effects and tricks deftly presented, but also the synthesis between the first SF narrative and the tricks was superb, despite the fact that Méliès states, “the scenario constructed [in this manner] has no importance, since I use it merely as a pretext for the stage effects, the tricks” (Gunning, 1990, p. 57).

As André Gaudreault (1987) indicates, this scene is shown twice. The Shell runs into the eye of the moon. The camera takes again its landing, sliding from the upper-left to the right-below of the frame. Gaudreault's point is that Méliès' use of “temporal overlap to move the story along” means that Méliès showed a certain editing skill “to show everything” (p. 116). Another perspective is that the Shell's landing scene was so important as to make sure that the audiences

watched. In other words, the scene was too significant to make audiences miss it. The scene in which the scientists make a landing on the moon and set foot on the ground symbolizes the human lust for conquest of the moon. What Méliès wanted to express through the film was not only tricks themselves, but also “the imperial romance” David Sandner called. According to Sandner (1998), the classic SF of Verne, Wells, and Méliès served as “the imperial romance,” covertly spreading “the imperial project” under the pretense of scientific and technological method (p. 6). Not only does this scene show the human desire of space conquest, but also the high expectations of science and technology in the early twentieth century. In this sense, the landing tricks reflect the vision of technology that is the human’s tool for exploration and research of the unknown world. The narrative of *A Trip to the Moon* strongly supports the exhibition of the tricks, in spite of his own devaluation of the narrative.

Special effects dominate, while in part harmonizing with the narrative, as a synthesis of the external form and the internal narrative. It represents a confidence in, and a desire for, technology, by means of the contemporary cutting-edge of the stages effects and tricks; it is Méliès’ “appropriation of mechanical perception for the purpose of fantasy” (Cubitt, 1999, p. 119). This cinema of attractions, in which special effects dominate the narrative and also illuminate the “technology” of that period, can also be frequently seen in recent Hollywood SF films, such as the *Star Wars* series, particularly *Episode I: The Phantom Menace* (1999), *II: Attack of the Clones* (2002), and *III: Revenge of the Sith* (2005). The external form of the recent SF, with computer-mediated filmmaking, shows a strong confidence in technology, similar to Méliès’ film. As the newest technological properties in the films are realized in the near future, film’s imagination foresees and guides the development of technology. In this sense, a century ago, CGI technology-driven digital effects were already anticipated by the early tricks. The

spectacle of attraction, with the support of special effects, has continued from Georges Méliès to George Lucas.

The tradition of the cinema of attractions provides the affirmative clue for the present effects-oriented Hollywood filmmaking, including Lucas's spectacle-oriented approach to the recent *Star Wars* films which are the vivid presentation of technology. The narratives of recent SF and fantasy blockbusters are dominated by the spectacle; however, the audience of SF and fantasy wants to experience the visual amusement from the spectacle. The endeavor and development of new visual image is the essence of SF and fantasy genre film. Through seeing the effects-oriented cinema of attractions, the audience finds amusement and is filled with amazement. If Lucas produced the recent *Star Wars Episode I, II, and III* with no use of new visual effects, the audience might not be attracted by them. For the reason of being of the recent episodes seemed to be not the story but the spectacle in that the spectacle of the recent episodes gives much more visual pleasure than the older ones even though the recent ones tell the earlier story than that of the older ones. In this context, Méliès's cinema of attractions provides the prop for the production of effects-oriented exhibitionist films today.

“Trickality”: The Prototype of the Reality Effect

The reality effect that Lumière created was derived from the pure *mise-en-scène*, accompanied by the power of the spectacle. It was not supported by any camera trick or manipulation. Lumière set up the camera and chose the specific subject, the rushing locomotive. The reality effect of *Train Arriving at a Station* was not the cinematic illusion that special effects produced, but the illusion of reality produced by the medium, the film or the camera. In other words, the film was a visual effect, itself, at least for the contemporary audiences.

On the other hand, the reality effect that Méliès showed was thoroughly manipulated by the artificial tricks. As I discussed earlier, Méliès' tricks followed or contributed to the tradition of the cinema of attractions. The cinema of attractions led to the temporal alienation of the audience from the narrative absorption, with amazement of the spectacle. The notion of the alienation effect is very opposite of the concept of the reality effect, because the higher the reality effect, the deeper the narrative absorption. The occurrence of the audience's alienation indirectly proves the lowest level of the reality effect. Because the spectacle dominates the narrative, the narrative cannot absorb the visual shock that the tricks bring about. The visual shock transforms into a barrier between the audience and the narrative. The tricks of attractions, making the audience awake from the dream-like story, produced not only the prototype of visual effects, but also that of the reality effect.

Gaudreault sums up Méliès' approach in the term "trickality." "Trickality" means *trick for trick's sake*, considering "narrativity as pretext rather than text," and degrading theatricality and narrativity to secondary products (pp. 114-115). If we say Méliès' *A Trip to the Moon* was the first visual effects oriented SF film, the history of the reality effect started from the "trickality" of the cinema of attractions. The reality effect of the "trickality" provided the minimal naturalism of cinematic illusion, wherein the audience not only can distinguish the tricks from the real events, but also is alienated from the visual shock.

A Trip to the Moon is the earliest cinema of attractions. While amusing audiences, it also distanced them by means of the primitive visual effects, tricks, and at the same time, showed the proto-model of the reality effect. In the next section, I will analyze the upgraded reality effect that early Hollywood produced, with the support of technology and a large scale of production.

2.3 *The Thief of Bagdad* (Raoul Walsh, 1924)

The Evolution of Visual Effects: The 1910s as a Transitional Period

Passing through the early 1900s, wherein the cinema of attractions had been the central mode of filmmaking, the 1910s was a period of “standardization” of a number of early effects, such as the “fade-in/out” and the “iris-in/out” (Rickitt, p. 16). They were major narrative tools for D. W. Griffith. In *The Birth of a Nation* (1915), he made tricks participate in storytelling. Using the fade-in/out, he made the connection between shots and sequences smoother; by means of the iris-in/out, he made the audience focus on the specific spot on the screen (p. 16); the tricks supported the unfolding narrative. It was Griffith’s absorption of Méliès’ trickality that is the negotiation between the cinema of storytelling and that of attractions. In other words, through D. W. Griffith, the exhibitionist mode of the cinema of attractions became one of the primary elements of the narrative cinema.

The mode of the cinema of attractions went beyond a temporally historical mode of presentation and was hardened as a presentationist tradition, through its permeation into the narrativization process. In some genres, such as melodrama and comedy, the tradition has been concealed in order to emphasize the meaning of the story. In some genres, which have focused more on how the story is told than on the story itself, such as SF, horror, action, and adventure, the tradition has taken the lead. The tradition of the cinema of attractions, with the use of special effects, has become the major process of absorption of audiences into exhibitionist films. This was, as Gunning (1991) notes, “the move from a cinema of attractions to a cinema of narrative integration” (p. 6).

Griffith’s combination of the modern language of filmmaking, which he developed with the use of the photographic effects, means that visual effects today, unlike the early tricks, do not

alienate the audience, but absorb them into the diegesis, by means of their dazzling spectacle. Griffith's style of editing, cinematography, lighting, and composition of mise-en-scene sought narrative continuity. The effects being inserted into this process indicates that the effects were transformed from the tool of alienation that the early tricks produced to that of the audience absorption. Like this, the crude reality effect that the early tricks create began to evolve in the direction of naturalism with the support of Griffith, who standardized early tricks as a tool for storytelling.

The Beginning of the Naturalization of the Reality Effect: The 1920s

As Pinteau describes, "The 1920s was a period of phenomenal technical experimentation" (p. 29). It was an era of blockbusters, and the films marked a new epoch in the history of special effects in terms of the introduction of new techniques. The extreme development of special effects in the 1920s derived from two driving forces: the principle of efficiency and competition from German Expressionist films.

In the 1920s, the Hollywood film industry consolidated the studio system and expanded its scale to the international realm. By the mid-1920s, Wall Street was investing in the Hollywood studio's blockbuster films (Thompson & Bordwell, 1994, p. 169). The bigger the production budget grew, the more the filmmakers sought efficiency as an economic principle. The principle of efficiency brought about the introduction of special effects emphasis on curtailing location costs. The representative physical effect for seeking efficiency was the production of models and miniature objects. The typical visual effects of that time were glass shot and traveling matte process. Filmmakers created "small models of any object or location" for use when location shooting was economically impractical (Rickitt, p. 18). According to

Rickitt, the traveling matte process “allowed actors filmed in the studio to be isolated from their surroundings and placed within settings from a different time and place” (p. 18). Although the early use of traveling matte was inferior in quality, it saved the production budget for the location. It was the antecedent of rear projection.

Hollywood’s competition with and imitation of German films functioned as the catalyst for development of the naturalism of the reality effect and for maintenance of the tradition of a cinema of attractions. Visual effects began to develop, while holding on to the natural reality effect accompanied by the presentationist mode from the 1920s. Expressionism originated in “a style in painting and the theater,” centering around Germany around 1908 (Thompson & Bordwell, p. 109). The representative German Expressionist film *The Cabinet of Dr. Caligari* (Robert, Wiene, 1920) had a huge influence on the international film world, including Hollywood. The most unique was the style of mise-en-scene, such as the distorted presentation of buildings and sets and exaggerated acting of the characters. It was cinematic representation of the artistic movement of Expressionism, by means of “the various techniques of the medium—mise-en-scene, editing, and camerawork—in distinctive ways” (p. 110). It was a new visual attempt by means of the spectacular shock, and it greatly appealed to audiences. Hollywood’s response to this new visual approach of German films was realized as investment in special effects in order to show new spectacle, with the need for a cost-saving model of filmmaking.

The Thief of Bagdad released in 1924 was directed by Raoul Walsh, written by Douglas Fairbanks, and produced by Douglas Fairbanks Picture Corporation. Many critics have counted the 1924 production of *The Thief of Bagdad* as “a visual effects triumph of its day” (Vaz & Barron, 2002, p. 54). Ahmed who is the petty Thief on the street falls in love with the Princess. Ahmed becomes aware that the person who obtains the rarest treasure in the world can marry her

and starts on a journey to find out it. Overcoming adversity, Ahmed finds the Magic Chest, punishes the bad Mongol Prince, and gets married to the Princess.

With the reality effect of effects-oriented spectacle, Douglas Fairbanks responded to the German Expressionist film *Waxworks/Das Wachsfigurenkabinett* (1924). *Waxworks* was directed by Paul Leni trying the variety of visual techniques through the film and inspiring Douglas Fairbanks. A poet is hired to write tales about the wax figures, such as Haroun-al-Raschid, Ivan the Terrible, and Jack the Ripper, in the wax museum. The poet creates suitable stories for each wax figure. Out of three stories, the first episode of Haroun-al-Raschid is about the story of the Caliph of Bagdad, derived from the tale of *Arabian Nights*. Haroun-al-Raschid is the Caliph of Bagdad lascivious. He tempts the beautiful wife of the poor baker Assad, Zarah. By Zarah's wits, their conflict is solved and they live happily ever after.

Fairbanks was inspired the use of special effects in *Waxworks*, such as tinting and toning of the scenes, the use of matte painting, the construction of huge set.

First, *Waxworks* presented tinting and toning of the scenes referring to the change of space. While tinting and toning had been used since the beginning of the film, now it took on new uses and meanings. The camera takes the entertainment park that the wax museum is located in the beginning of the film with the tint of blue. The shot of the wax figures in the museum is tinted brown. The palace of the Caliph, Haroun-al-Raschid, is done green. The bedroom of the Caliph is presented with purple tint. According to space events are occurred, tinting and toning of the scenes change. *The Thief of Bagdad*, however, accepted the tinting with some modification that the change of tinting represents the atmosphere or dramatic tension of each scene. When Ahmed passes through The Valley of Fire, the tint of red supports the character of Ahmed in the imminent situation. In the scene that Ahmed gets the map for being guided to The Old Man of

the Midnight Sea from a tree in *The Cavern of the Enchanted Trees*, the tint of green is shown in accordance with the tone of the trees even though the film is produced in black-and-white. When Ahmed meets The Old Man of the Midnight Sea, the camera takes the blue tint for the atmosphere of the sea. The tinting and toning of *The Thief of Bagdad* more contributed to the reality effect than those of *Waxworks*.

Second, the crude representation of rear background of the palace produced by matte painting in *Waxworks* was transformed to the beautiful night sky in *The Thief of Bagdad*. The discussion of matte painting in *The Thief of Bagdad* will be followed below.

Third, the sets of the Caliph's palace and the baker's house in *Waxworks* were changed to the huge set of the royal palace in *The Thief of Bagdad*. In *Waxworks*, the sets we can enumerate were only about two or three and their scale was not big. However, Fairbanks constructed a number of enormous sets, such as the big palace of the Caliph, the well in the street of Bagdad, the hideaway of Ahmed, the marketplace of Bagdad shown the rope magic, the temple of the Holy Man, the room of the Princess, and so on. Of course, the episode of Haroun-al-Raschid is only one of three. I do not intend to compare directly the two films' different scale. What I want to suggest is Douglas Fairbanks' great and aggressive response to the German films. He constructed a number of huge sets and utilized the variety of visual effects to save the production costs. I will examine in detail the visual effects below.

However, the difference in spectacles between *Waxworks* and *The Thief of Bagdad* can be found through the degree of naturalism of the reality effect of the techniques. If the German film *Waxworks*' technique emphasized grotesque and abstract expression, Hollywood's *The Thief of Bagdad* focused on the concrete and natural representation of the spectacular techniques. The baker's jump scene, which could not be easily represented, transformed into the flying carpet

with wire, which was very plausible when the wire was invisible. The baker's fighting was replaced by the thief's use of The Cloak of Invisibility, by means of superimposition. *The Thief of Bagdad* concentrated on the natural reality effect—shown as live-action—with the support of both physical and visual effects. Like this, Fairbanks's confrontation with German expressionist visual produces the naturalism of the reality effect that special effects create.

The tradition of the cinema of attractions began to evolve from trickality to the reality effect seeking naturalism of representation through Griffith's standardization of photographic effect by the 1910s, and the pressure of the principle of efficiency of the film industry and Hollywood's response to German Expressionism in the 1920s. In the next section, I will provide the textual clue of the evolving natural reality effect of the early Hollywood's special effects, by examining *The Thief of Bagdad* in more detail.

Visual Effects for the Reality Effect

The visual effects in *The Thief of Bagdad* show the development of the reality effect in the direction of augmenting naturalism, wherein the presentation of effects becomes indistinguishable from live-action guaranteed by the invisibility of visual effects. The tendency to naturally represent effects in the 1920s served as the borderline describing the difference from Méliès' trickality. *The Thief of Bagdad* employs six kinds of visual effects: stop-motion, dissolve (with double exposure), iris, matte painting, glass shot, and double/triple exposure (superimposition). These visual effects are very early models, and their techniques are basic in comparison to those of the present. Dissolve and iris seem not to be "special" in the present filmmaking. They are frequently used as bridges between scenes or sequences. Stop-motion has maintained the position of "special" visual effects through its multi-purpose transformation into

jump-cut or clay animation. In particular, in clay animation, stop-motion functions as a main tool for the storytelling through the whole film. Matte painting, glass shot, and superimposition are being replaced by digital post-production. As Bolter and Grusin write, “new media comes from the particular ways in which they refashion older media” (2000, p. 15). Although computers today are “re-mediating” the old visual effects, visual effects’ pursuit of the reality effect and its naturalism continue.

Stop-motion is the visual effect with the purpose of invisibility, after the era of the early films. The audience is absorbed into the spectacle when invisibility is accomplished. Stop-motion technique is also called stop-action or the trick of substitution. Stop-motion not only amazes the audience, as in *A Trip to the Moon*, but also leads to the reality effect by showing a magic shot in flawless timing. In a scene in which a child disappears in the basket, the camera takes stop-motion at the moment when the magician takes a lid on the basket right after the child steps into it. However, the mark of cut and splice is hardly visible. Then, the magician stabs through the basket, but the child has already disappeared. Unlike in *A Trip to the Moon*, the audience’s amazement does not occur at the moment of stop-motion, but at the time when the magician stabs the basket. Stop-motion was operated right before, but the audience cannot recognize it. So, the degree of the reality effect depends on how much visual effects are operated without the audience’s notice, or how much the representation of the effects is close to live-action. If the splice between the shot of the child in the basket and the next shot of the empty basket is unnatural, the reality effect of the stop-motion is seriously reduced. In this context, the purpose of visual effects is to produce the naturalism of reality effect that is the invisibility of visual effects.

When the Thief, Ahmed, carries his evil associate wrapped in a kerchief on his head, the

camera takes the same kind of stop-motion again. After Ahmed wraps him in a kerchief, the kerchief is substituted for an empty one. Then, Ahmed puts it on his head; the audience might be surprised by Ahmed's strength to lift a human. This stop-motion also served as a magic effect. However, at this time, the presentation of stop-motion can be easily perceived; its reality effect is reduced.

The most impressive use of stop-motion is shown in the scene where Ahmed creates the horse, the gorgeous dress like a prince's, and a loaf of bread by means of the Magic Chest. The Magic Chest is a kind of a magic wand. When Ahmed scatters the powder in the Magic Chest, the objects that he wishes to have suddenly appear with a pop. This trick is produced by the exact match between Fairbanks' activity of scattering the powder and the position of the objects substituted. The exact timing match is the key point of embodying reality effect and determines the degree of the naturalism. This elaborate process of the object positioning and the minute cutting and splices indicated the technology at that time. Success of the reality effect depends on the capability to hide the artificiality at the moment of doing stop-motion that is invisibility of effects. The capability is a measure of technology.

On the other hand, a dissolve (with double exposure) announces the existence of a visual effect through slowly presenting two shots in turn. The phrase "dissolve with double exposure" indicates that the foreground image is dissolved in front of the background image. Dissolve with double exposure is premised on the visibility of the effect. In the film, we can perceive four scenes in which dissolve is used with double exposure: The child, who entered into the basket, gradually gets distinct from the physical transparency as taking hold of the magic rope; the moon slowly appears as time goes by; the enchanted tree transforms himself into a figure of a human being; and the mermaid seduces Ahmed at the bottom of the Midnight Sea. In these four scenes,

dissolve with double exposure is used.

Even if stop-motion replaced dissolve with double exposure in the above four scenes, there would be no problem in terms of storytelling. Stop-motion and dissolve with double exposure show differences only in terms of their appeal. Stop-motion appeals to the audience's capability to understand logical deployment of images. When the audience cannot perceive the existence of effects, or when the illogical deployment of images does not occur, in other words, when the audience logically believes that the child is in the basket, the reality effect of the stop-motion is maximized, and the audience is absorbed into the diegesis when the magician stabs through the basket. Because stop-motion represents the impossible event as live-action, its reality effect is natural.

In contrast, dissolve with double exposure explicitly presents what is an effect and asks the audience to emotionally accept that as the real event. Dissolve directly proves that it is an effect, not live-action. If stop-motion induces audiences' absorption into the narrative by means of the reality effect, dissolve temporarily distances audiences and forces them to regard the tree as a human figure and to think of the emerging moon as the passing of time from day to night. In *The Thief of Bagdad*, stop-motion shows the tendency of seeking naturalism as getting out of the tradition of a cinema of attractions, but dissolve is still under the influence of the tradition. The effects of stop-motion, mingled with dissolve, producing the common effect proves that the film was in the transitional period wherein the tradition of a cinema of attractions began to submerge into the realm of narrative. If Méliès' *A Trip to the Moon* was the film dominated by the mode of attractions from the beginning to the end, *The Thief of Bagdad* was the film presenting the process in which the mode was absorbed into the natural reality effect.

In terms of the premise of visibility and the production of temporal alienation effect, the

iris effect is comparable to the dissolve. However, iris does not ask the audience to perceive the effect, but leads the movement of the eye-focus to the specific spot in a frame. In the scene wherein a porter announces the arrival of the princes' gift for Caliph, the camera takes the iris-in to the porter and the iris-out after giving his lines, "We be porters bound for the Palace of the Caliph. We bear gifts and viands to feast the suitors who, on the morrow, come to woo our Princess." The iris informs the beginning of an important point, and at the same time, calls the audience's attention to the character's line. After D. W. Griffith standardized iris as a cinematic language, it became a routine grammar of filmmaking, rather than a magic effect in most cases. However, although some effects have been so familiar that they stop being seen as "special," some filmmakers, such as George Lucas, sometimes used irises and wipes in the original *Star Wars* in a self-consciously nostalgic way.

Invisibility, matte painting, glass shot, and superimposition also seek the reality effect. Matte paintings decorate the beginning and the end of *The Thief of Bagdad*. In the very beginning, a storyteller tells a story to a child in the starry night. The matte paintings of the subtitle, "Happiness must be earned," appear in the sky (Vaz & Barron, p. 54). The most impressive scene in which the zest of matte painting is clearly shown is the scene in which the Prince of Indies obtains the Magic Crystal. The party of the Prince takes the Magic Crystal from the left eye of the big Buddhist statue near Kandahar. The camera takes the statue and the characters by a long shot, and then full shot of the characters. In this long shot, we can find a matte painting. The camera takes the painted statue from the proper distance at once. Then, the figure of the actors taken by long shot is superimposed onto the painting. When the camera took the full shot of the actors, the partial model of the statue was used (Special Features). Even though the shot of the painted matte and the long shot of the party of the Prince of the Indies

were taken inside the studio, the displacement of time and space occurred.

We can clearly recognize this time-space displacement in the crystal ball sequence using superimposition. Mongol Prince, the Prince of Indies, and the Prince of Persia insist that their treasures are the rarest, and they each ask for marriage with the Princess to the Caliph. At that time, the Princess finds out the status of Ahmed by means of the Magic Crystal. The maid's left hand is grasping the Magic Crystal; Ahmed, holding the Magic Chest on horseback, is shown through the center of the Crystal. The Princess is aware that Ahmed is coming, so she delays the final decision of whom she will marry. The painting of the hand with crystal was superimposed with Ahmed in location. It is the prototype of time-space displacement shown in modernist visual effects, which will be examined in the next chapter. The mid-1920s was a period wherein the studio system was taking a firm stand, and simultaneously, was the transitional period during which special effects evolved from the early tricks, emphasizing on trickality, to the modernist visual effects, focusing on the economic efficiency. So, we can see the early model of modernist visual effects, such as matte painting and superimposition, in this film. In addition, superimposition is used in the representation of impossible events throughout the whole film, including the scenes of the winged horse, the flying carpet, and the invisible cloak.

The glass shot can be defined as “a method of integrating a painted image with live action by painting the desired additions to a scene directly on to a sheet of glass positioned in front of the camera” by Rickitt (p. 309). It is the effect of matte painting by means of glass that is a simple eye-deceiving effect. In this film, glass shot was used not only for representing the underwater palace, but also for deleting “the Bagdad sign mounted on scaffolding” of the huge exterior set (Finch, p. 38). In the scene wherein Ahmed makes a dive, the slow motion and glass shot were used for producing the underwater effect (“The Screen,” 1924, p. 19). In addition to

the major visual effects, the tinting and toning of the film represent the characteristics of action; “a roseate glow for the romantic moments; a garish green where the terrifying monsters appear” (Special Features). Although the film was made in black and white, the tinting and toning functioned as a kind of sound effects, supporting more concrete description of the mood of the scenes. From the beginning to the end, *The Thief of Bagdad* seeks the naturalism of the reality effect that the cutting edge visual effects at that time create.

As the storyline of 1910s and 1920s’ films was more sophisticated than those of the primitive era, the tradition of a cinema of attractions began to reform itself by means of the use of a number of visual effects. Spectacle was presented more elaborately and stronger. The reality effect of the effects was growing, as it was closing to the representation of live-action. This direction of developing the reality effect was continued into the era of modernist production of visual effects, based on the thorough operation of the Hollywood studio system, which will be discussed in the next chapter.

The French film industry, leading the early film world through the invention of Cinématographe of the Lumières and the earliest special effects films of Georges Méliès, was stagnant with the outbreak of World War I (1914~18). Méliès who was the most popular filmmaker of the early 1900s as producing over 400 films was wrecked with bankruptcy of his own studio, Star Film. As Thompson and Bordwell (1994) note, the French film history handed over even its domestic market to Hollywood films with the end of the war (pp. 62-63). Hollywood took the initiative in the world film market with the break down of the French film industry in WWI. As Douglas Gomery (1992) indicates, Hollywood film industry rapidly developed to a large scale business as a vaudeville company Loew’s, Inc. established Metro-Goldwyn-Mayer (MGM), which was the biggest Hollywood studio, in 1924 (p. 38), and as the

movie chain “Balaban & Katz merged with Hollywood’s largest studio, Famous Players-Lasky, the most powerful movie company in the world was formed” (p. 34).

In the 1920s and 30s, the U.S. was a sort of realizing growing power: the power of economical and the power as a world cultural leader. The powerful Hollywood system was an embodiment of the cultural power of the U.S. This relationship between the growth of Hollywood and the power of the U.S. has been continued through the relationship between the studio system and the Cold War politics, which will be discussed in parallel with the relationship between analog visual effects and modernity.

3. MODERNIST VISUAL EFFECTS

Introduction

This chapter begins to deal with the visual effects of the 1950s when the studio system settled down and matured in Hollywood. The analog visual effects at those times, consisting of matte painting and rear/front projection, truly accomplished the rationality of the studio system, such as efficiency and mass production via standardization. The production aesthetics of analog visual effects was modern in that this studio system was a reflection of the modern economic structure of the Ford system. The modernist visual effects represented the modernity of the period through the setting, periodical background, narrative implication, and so forth in SF films, until postmodernist visual effects appear in the early 1980s. In this context, this chapter deals with the modernity of the aesthetics of analog visual effects and the socio-cultural implications of the setup, scenes, sequences, and narrative that the effects produce. At the same time, this chapter functions as a theoretical and periodical bridge, presenting the process of how the early trickery developed into the postmodern reality effect that CGI creates.

In this chapter, I want to examine how SF films from the 1950s to the 1970s reflected the conditions of the Cold War and the modernist rational discourses after WWII: The representation of the Cold War, the grand discourse of space discovery, the monster characters in SF films as the paranoia of the Cold War era, the use of analog visual effects raising the production efficiency of the studio system, and the cityscape of urban modernity. I do not deal with the visual effects of 1930s to 40s in this study because although the use of rear projection and matte painting was the general trend of filmmaking in the decades, the visual effects in the films of the 1950s to 70s showed the qualitatively finer examples and suggested clearer characteristics of modernist visual effects than those of the 1930s to 40s.

The Representation of the Cold War

The Cold War was represented through the basic setting of space SF films. The space SF genre, which had a boom beginning with *Forbidden Planet* (Fred M. Wilcox, 1956), vividly showed the cultural aftermath of the Second World War. The spaceships in the films, such as *Forbidden Planet*, *The Angry Red Planet* (Ib Melchior, 1959), and *Star Trek* (Gene Roddenberry, 1966), were used as military aircraft, or to govern and conquer planets, rather than for civil aviation; accordingly, the human characters, not aliens, put on the uniforms, which showed a strict hierarchy following the military ranks. Their ordinary lives in diegesis seem to transfuse those of WW II. The uniformed soldiers' absolute obedience to the hierarchy and the dazzling dogfight scenes in space, as their setting in the space SF films, such as *Forbidden Planet* and the original *Star Wars*, represent modernity itself in the superficial periodical settings, whether it is in the remote far future or "a long time ago in a galaxy far, far away." The visual effects that produce these spectacles project the modernity of that time on the mirror of the future.

The Grand Discourse of Space Discovery

The leitmotif of space conquest in SF films between 1950s and 70s well portrays the grand discourse of space discovery from the mid 1950s to the 1980s when the Cold War between the United States and the Soviet Union was maintained. The history of space exploration was initiated in October 1957, when the Soviet Union launched the first artificial satellite Sputnik I. A month later, the Soviet Union sent up Sputnik II, taking a dog on board. The U.S., receiving the impetus from the Soviet's preemptive advance, launched Explorer I in 1958. In 1961, Russian cosmonaut Yuri Gagarin became the first human to orbit the Earth; he orbited for 108 minutes in

Vostok I. The vehement competition of space exploration between the U.S. and the Soviet Union had begun (Park, 2005).

President John F. Kennedy's promise to, "Fly man to the Moon in this decade" on May 25, 1961, formed the grand narrative of space exploration:

I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth. No single space project in this period will be more impressive to mankind, or more important in the long-range exploration of space; and none will be so difficult or expensive to accomplish
(Speaking to Congress and the Nation).

As Gilruth (1975) insists, because the term for the landing would end in 1970, that the U.S. in the 1960s devoted all its energy and technology to the success of the Apollo program; "a clear test of strength with the Soviets was implicit, if they chose to compete." The period of the 1960s to 70s, when the U.S. launched Apollo rockets, was the climax of the race for space. It was an age of grand narrative of space exploration, which was a key aspect of the Cold War policy.

The grand narrative of space exploration, beginning in 1957 during the Cold War period, influenced the boom of the genre of space SF film. *The Day the Earth Stood Still* (Robert Wise, 1951) represented the tension of the Cold War in the relationship between Klaatu, an ideal American character, and Gort, a monster figure. Beginning with MGM's *Forbidden Planet*, *Invasion of the Body Snatchers* (Don Siegel, 1956), *20 Million Miles to Earth* (Nathan Juran, 1957), and *The Angry Red Planet* (Ib Melchiro, 1959), SF films mirrored the growing interest in the outer world in the 1950s. The competition for space discovery, which was at its peak in the 1960s and 70s, was continuously updated through *Mutiny in Outer Space* (Hugo Grimaldi, 1964), *Queen of Blood* (Curtis Harrington, 1965), *2001: A Space Odyssey* (Stanley Kubrick, 1968),

Marooned (John Sturges, 1969) “released during the week the world waited for Apollo 13” (Sobchack, p. 71), and *Silent Running* (Douglas Trumbell, 1972).

The Monsters as the Paranoia of the Cold War

The monster characters depicted in SF films, such as Id in *Forbidden Planet*, Hal in *2001: A Space Odyssey*, and Darth Vader in *Star Wars*, reflect the paranoia of the Cold War era that maintains the self-awakening of potential/possible attack of the enemy. Those SF films can be viewed as modern because they value “a rationality which opposes everything that is strange, unknown and unreasonable” (Ahrens, 2006) in that human characters rectify the distorted effects of machinery civilization by means of humanity, such as Adams’s leadership, Bowman’s intelligence, and Luke’s Force. The explicit distinction between the good and bad makes the monsters, which are supported by analog visual effects, modern.

The Use of Analog Visual Effects

The analog visual effects, including matte painting and rear/front projection, used in space SF films, raised the production efficiency of the studio system. Matte painting was used to replace the set, which was impossible to produce, and to slash the cost of location shooting; it made the studio work more efficiently and economically. Rear and front projection projects the aesthetics of modernism under the Fordist economic system through displacement of time and space of pre-filmed background scenery and live-action footage inside the studio. These analog visual effects support the modern embodiment of the tradition of the cinema of attractions. The Zoptic system, an application of front projection, was introduced in *Superman*. It raised the sense of perspective in Superman’s long flight. In *Star Wars*, the camera, with the support of the

computerized motion control system, could freely take realistic dogfight scenes in the studio.

The Cityscape as Urban Modernity

The city-oriented SF films utilize the contemporary cityscape as the symbol of urban modernity and as the main stage of the hero's action. In *Superman*, Clark Kent moves from Smallville to Metropolis and practices his purpose of serving mankind. As Nitin Govil (2002) states, SF narrative derives from "urban experience of modernity" (pp. 80-81). The story of a country boy coming to a metropolis and to make a success provides the film with the leitmotif of urban modernization, through a narrative of upward mobility. Flying through the skyscrapers of Metropolis, Superman becomes the icon of urban modernization/modernity.

In order to best understand how SF films using analog visual effects reflect the Cold War and the modern era, I chose four films commercially and critically successful: *Forbidden Planet*, *2001: A Space Odyssey*, *Star Wars*, and *Superman*. These are representative SF films of the modern period, reflecting the fever of space exploration and the efficiency of the studio system. *Forbidden Planet* is the representative blockbuster film of the 1950s, and makes us recognize the worth of matte painting. *2001: A Space Odyssey* is a revolutionary film in terms of visual effects. It delicately describes the beauty of space by means of front projection. The exquisite accordance between the visual image and audio score with the philosophical depth places the film on the stage of the arts. *Star Wars Episode IV: A New Hope* marks a new epoch of spectacle, as it uses the computer in filmmaking. *Superman* shows how analog visual effects, including Zoptic, represent the reality effect of urban modernity.

3.1 *Forbidden Planet* (Fred M. Wilcox, 1956)

Forbidden Planet is well known as being Fred M. Wilcox's filmed version of William Shakespeare's *Tempest*, and is still considered as one of the best effects-oriented SF films. It was nominated for Oscar in the category of Best Effects in 1957. I will examine the Cold War atmosphere of the film's setting, the cel animation and its Freudian implication, and the aesthetics of matte painting in relation to the efficiency of the studio system.

Forbidden Planet is a rescue story set in space. The crews of United Planets Cruiser C-57D look for the trace of the crews of the spaceship Bellerophon, missing on its duty on the planet Altair IV twenty years ago. Among the crew of Bellerophon, only Dr. Morbius and his daughter, Altaira, survive, living in their own empire with Robby, the ship's robot. Adams, the commander of C-57D, falls in love with Altaira. The subconscious of Dr. Morbius, enraged by the disloyalty of his daughter, sends the monster Id to punish them. Dr. Morbius uses the hologram, the advanced technology of the Krell, the original inhabitant of Altair IV. The hologram projects or transforms his subconsciousness to the invisible monster. Finally, Dr. Morbius sacrifices himself to save her from the monster he created. Seeing the destruction of Altair IV, Adams and Altaira return to the Earth.

Modern Setting: The Aftermath of World War II

Forbidden Planet has been considered as a landmark, improving the quality of modern space films dealing with the interaction between humans and aliens within space and/or spacecraft. Most of the interaction involved the human conquest of aliens, and eventually of space. This colonial attitude toward space reflected the Cold War atmosphere of the 1950s. Thus, the setting of *Forbidden Planet* followed the conventions of the war films, in terms of the

costumes of the crews of the United Planets Cruiser C-57D spaceship, the rigid hierarchy, the military way of speaking, and the crews' behavior on Altair IV, representing the typical behavior of soldiers during vacation.

First, as we are aware of the name of the spaceship "Cruiser," the crews of C-57D are represented as the Navy of the United Planets. Their costume closely resembles the U.S. Navy uniform during WW II. The color of the uniform, the futuristic laser blast, and the command mikes in their waists are the only differences. The combat boots are very similar.

Second, the film shows that the typical military hierarchy is applied in the spaceship. A great portion of the dialogue among the crew is made up of orders and responses. Interestingly, the unique dialogue style of *Forbidden Planet* differs from other space SF films, in that the crew answers with the Naval style "Aye, aye, sir!" whenever they respond to the senior rank soldiers.

Adams (Commander): Chief, we'll drop back below light speed in about three minutes.

Got your breakable gear stowed?

Chief: Aye, aye, sir.

Adams: All right. Good.

Of course, this kind of military dialogue in spaceships has been a tradition in the space SF genre in films, such as *Star Trek* and *Starship Troopers* (Paul Verhoeven, 1997). However, the dialogue and acting of the characters in *Forbidden Planet* are more moderate and stick more closely to the military style than others. The film more realistically presents the atmosphere of WW II in the spatial background of the planet Altair IV.

This rigid hierarchy is well shown in the scene where Commander Adams prohibits Lieutenant Farnen's romance with Altaira. Not concerned with Farnen's explanation, Adams orders Farnen to dismiss and warns Altaira to dress in proper costume. The description of this

strict rank system seems unrelated to the battle against the monster Id, which is the major event of the film. However, the military setting induces the audience to regard the invisible monster Id as the invisible enemy of the U.S.

Third, the crews' behavior mirrored that of WWII soldiers on vacation. When Altaira first appears, the three crews, Adams, Dr. Ostrow, and Farnen, are charmed by her. Farnen immediately tries to flirt with her, as he suggests a cup of coffee. Moreover, when Adams gets a view monitoring checkup from the spaceship, Chief Quinn makes a wolf call to Altaira.

Adams: (the command mike beeps.) Just a routine checkup from the ship. (to Dr.

Morbius) What Chief?

Quinn: Everything okay, Commander?

Adams: No Problem.

Quinn: Would you mind activating the viewer?

Adams: Oh, yeah. As you can see, we're under no restraint whatsoever.

Quinn: (when Quinn finds Altaira, he gives a whistle to her.)

Adams: Knock that off, Quinn.

This scene brings up the image of soldiers on vacation during WWII. In addition, a crew member who seems to cook wears an apron and a white chef-hat. Adams and other officers make fun of him, and the whole crew laughs. It is a typical moment in war films, such as *From Here to Eternity* (Fred Zinnemann, 1953).

Fourth, as Lerer (2000) indicates, the set of Dr. Morbius's house is "a Southern Californian-style high modernist household, complete with landscape [and] furnishings" (p. 84). The only difference is that it is not a beach, but the desert is seen through the glass-wall surrounding the living room. However, the desert-like-landscape is the cinematic application of

“Southern Californian wilderness” (p. 84). In this sense, a Californian modernist house in the 1950s made a transition to the stage set of Dr. Morbius’s house in the twenty-third century.

In this sense, the similarity of the film’s setting to states of the time suggests that despite the futuristic backdrop, *Forbidden Planet* is still describing the social atmosphere of its era. Although the film pretends to deal with the future, as Bourne (2001) indicates, all settings “draw our attention to the past rather than to the future.”

Cel Animation and the Id Monster

Cel animation technique supported the film’s application of Freudian psychoanalysis. The explicit use of this quintessentially modern theory of subjectivity grants the label of modernity to the film. Cel animation is also called “cartoon animation.” It is a hand-drawing of some movements in each frame on the cel made from cellulose acetate. This cel is added “on top of a painted background before being photographed” (Rickitt, p. 308). Thus, to produce a second of cel animated action requires twenty-four animated cels. It is a very traditional way of creating 2-D animation. Despite the difference of materials, the method of the effect production is the same as that of the glass shot used in *The Thief of Bagdad*.

Cel animations appear in the moments of greatest dramatic tension in the film: the appearances of the monster. The monster is invisible, and the audience can only perceive its movement by means of its footprints. The monster itself can only be seen when it crashes into the electric fence or is hit by beams from the crews’ ray guns. The monster’s contour is drawn by cel animation. Cel animation visualizes the rising tension produced by the movement of the invisible monster.

The lines between Commander Adams and Dr. Morbius explicitly offer Freudian

psychoanalysis as the solution for the question of the monster's identity. The characters conclude that the monster derives from Dr. Morbius's Id, made physical by alien technology.

Adams: At least when we approached from space, you remembered enough to warn us off. But when you thought we were a threat to your little egomaniac empire your subconscious sent its Id monster out again! More death, Morbius. More murder!

Morbius: And now this too? Harm my own daughter?

Adams: But now she's defying you, Morbius, and even in you, the loving father, there still exists the mindless primitive more enraged and more inflamed with each new frustration. So now you're whistling up your monster again to punish her for disloyalty and disobedience!

Dr. Morbius's subconscious functions as not only a self-defense mechanism, but also a self-respect mechanism. When Dr. Morbius feels that his own empire is in danger, his Id, the origin of instinctual needs and drives, transforms to the monster, kills the crew, and tries to protect his own/Dr. Morbius's realm. His daughter, Altaira, falls in love with Adams and wants to go to Earth with him. Dr. Morbius is enraged, and his subconsciousness makes Id transform into the monster, attacking even his daughter Altaira. The transformation of Id to punish his daughter for his sense of honor and self-respect is the substance of the invisible and materialized monster.

Cinematic presentation of the clue for the Id is in the scene in which the headset projects Altaira's 3-D hologram latent in Dr. Morbius's consciousness. The subconsciousness of Dr. Morbius is projected through the hologram. It is only a cinematic storytelling of Freudian theme. As we can be aware from the above lines, between Adams and Dr. Morbius, the film unfolds Freudian psychoanalysis, which remained the most influential psychotherapy until at least the 1970s. The level of technology that the Krell achieved is incomparable to that of humans. Dr.

Morbius finding the Krell technology kills the crew of Bellerophon to possess it exclusively by means of the monster Id. For Dr. Morbius, the approach of C-57D to Altair IV is the threat for his appropriation of the Krell technology, too. The Id monster's murders of the crew of C-57D derive from Dr. Morbius's desire of the advanced technology. In this sense, Dr. Morbius's excessive obsession with the future technology can be viewed as the U.S.'s desire of technology in the Cold War period. The scene that Dr. Morbius tries to hide the Krell technology to the crew of C-57D makes us remind of the information war about a new technology in the Cold War period. The total destruction of Altair IV with his self-sacrifice in the end portrays both desire and fear of technology in the Cold War period. In this context, the cel animation supports the representation of modernity through creating Dr. Morbius's monster Id, which is the cinematic embodiment of Freudian psychoanalysis of the extreme obsession about the advanced technology in the Cold War.

Matte Painting: Efficiency of Studio System

C-57D lands on a desolate plain, full of rocks and yellow soil, of Altair IV. After the landing of the miniature of C-57D, hung by wires, the camera takes the crew members stepping down from the spaceship, using a low-angle. The bottom half of the spaceship that the crews enter in and out was actually produced. However, the background of C-57D and the top half of C-57D is painted on the matte. Matte painting allowed *Forbidden Planet* to enjoy the efficiency of the studio system. Vice versa, most of the scenes were shot inside the studio, requiring the location effect and low cost, simultaneously. The solution was matte painting.

The drawing on matte is done through line connections between the painting and the real objects, using precise measurements. The important point of this visual effect is that the

connection between the painted matte and the real object should be invisible through the camera. The upper half of the spaceship does not need to be produced as a set; neither do the crews touch it, nor does any action occur on it. So, matte painting helps to save the production budget; serving as a merit for studio production. The desolate plain around the spaceship of the planet Altair IV is described by delicately connecting several matte paintings (Vaz & Barron, p. 133).

The long shot of Dr. Morbius's house, surrounded by woods, rocks, and the pond, is made up of matte painting itself. There is only the painted matte, without any real objects. In other words, in the moment, the moving image is temporally replaced by the still image under the name of studio efficiency. The outside of Dr. Morbius's house, which is the trees, rocks, and desert, seen through the glasses of the living room, is the combination of a set and matte painting. Although almost all location scenes used matte painting, the connection line between the set and the matte is hardly visible. Because of the invisibility of this visual effect, the reality effect of matte painting is accomplished. The invisibility of the connection is what matte painting serves to the studio system, making the effect aesthetics modern. Cel animation and matte painting with the basic settings embody the modernity of analog visual effects.

3.2 *2001: A Space Odyssey* (Stanley Kubrick, 1968)

2001 was directed by Stanley Kubrick. The script was written by Kubrick and Arthur C. Clarke who was the author of *The Sentinel* that was the original work of the film. It has been considered by many critics as the best SF film of the 1960s. It was awarded Best Effects in Oscar in 1969. *2001* was a blockbuster at that time to the degree that it was produced over a period of four years, and the production cost was about \$10,500,000 (Agel, 1970, p. 10). Here, I will discuss *2001*'s scientific verisimilitude of the aesthetics of visual effects, the grand discourse of

space exploration, the cinema of attractions of the visual effects' reality effect, and its socio-cultural implication of criticism on the Vietnam War.

The narrative of *2001* can be divided into four sections. The first section is "The Dawn of Man." Two groups of anthropoids are struggling each other to rule the pond at the time when the earth is only a planet of anthropoids. After a huge black monolith suddenly appears, an anthropoid gains supremacy over the other group by using the first weapon, a bone of an animal. It is the birth of modern mankind.

In the second section, the bone thrown to the sky transforms into the spaceship. In 2001, in diegesis, the black monolith buried four million years ago is found on the moon. Dr. Floyd goes to the moon to investigate the monolith. When the black monolith is exposed to the first sunlight, it sends out the electronic signal to Jupiter.

The third section is labeled "Jupiter Mission: 18 Months Later." David Bowman and Frank Poole, who follows the signal toward Jupiter, are under attack of the brain and the central nervous system of Discovery I, HAL. Poole is killed, and Bowman survives with difficulty and turns off the main memory system of HAL.

The last section is "Jupiter and Beyond the Infinite." Bowman finds the monolith near the moons of Jupiter and approaches it using the space pod. In the moment, the stargate is open; his space pod is transferred to another dimension of the world, while simultaneously creating a time warp. Bowman's pod lands in a hotel room. He looks at himself being dead. He dies and is born as an embryo star-child. He is seeing the earth in the beginning.

Rationality of Visual Aesthetics: Scientific Representation of Space Environment

2001: A Space Odyssey reflects the actual physics of space more accurately than any other science fiction film. The activities and movements of the characters, the spaceship, and the space pod all remain within the realm of scientific plausibility. In the scene where Dr. Floyd, a NASA scientist, travels to the moon to investigate the giant black monolith, the female crew of the spaceship walks the passageway as if she is under the status of low-gravity, minutely wavering between the seats. The left arm and the pen of Dr. Floyd, who is asleep, bob in the air. In addition, the movement of the spaceships, including Discovery I and the space pod, is very slow and inactive, but it is very plausible. In terms of sound effects, *2001* presents the thorough silence in space sequences. As Ted Friedman (2005) indicates, *2001* is one of the rare SF films seeking “scientific verisimilitude” (p. 72).

Moreover, the extravehicular activity of Bowman and Frank, the astronauts of Discovery I, closely represents that of real astronauts, like Neil Armstrong. Their performance with wires is sluggish; however, because of the sluggish movement, the visual representation of the extravehicular activity can produce the reality effect. This is the difference between *Forbidden Planet* and *2001: A Space Odyssey*. In *Forbidden Planet*, the crews of C-57D wear naval uniforms without space suits. Their ability to walk is totally free, as if they are under the earth’s gravity. They have no difficulty breathing in the planet’s atmosphere without assistance. Of course, in the beginning of *Forbidden Planet*, we are told that Altair IV’s atmosphere is similar to that of the earth, providing narrative justification for the absence of space suits. However, it is clear that the visual image itself cannot credibly represent the reality of a space environment. On this point, the special effects in *2001: A Space Odyssey* show more scientific and rational/reasonable representation than those in CG-oriented SF films.

Robert Poole (2001) notes that this scientifically truthful representation derives from the author of the original work, *The Sentinel* (1951), Arthur C. Clarke. Clarke is famous for a writing style that values “technological realism” (p. 44). The latter half of the film, which is based most directly on the original work, seems to reflect more concretely Arthur C. Clarke’s style of scientific representation, due to Clarke and Kubrick collaboration on the script.

The combination of front projection of the visual effect and wire action of the physical effect supports the representation of extravehicular activity. The representative of the characters in space is closer to scientific reality than that of characters in contemporary SF films using CGI. Even though Neo’s penetration into the body of Agent Smith in *The Matrix* and T-1000’s free transformation into anything that it touches in *Terminator 2: Judgment Day* represent the technofuturist view, they present an image far beyond scientific logic. So to speak, the reality effect of the visual images is superb, but the contents of the actions represented by CGI are fantastical. Thus, CGI’s rational persuasiveness is weak, compared to the credibility of *2001*. The visual effects in *2001: A Space Odyssey* show the reality effect founded on scientific rationale to the degree that “Apollo 8 crew prepared for their mission by watching *2001*” (p. 45). The reason that even though the reality effect of the visual effects of *2001* is more scientifically credible, the direction of development of visual effects faces to digitization is the efficiency of creation of CGI effects. From the features of computers as new media, digital visual effects can be produced without reference to given conditions of the studio; accordingly, digital effects can expand human imagination to infinity with comparatively lower costs than analog visual effects. With the breakdown of the studio system and the advance of digital era, visual effects has transformed from the analog form to the digital.

The Story of Space: The Grand Discourse of the 1960s

The Soviet Union's launching of Sputnik I in 1957 started the space race between the U.S. and the Soviets. *2001: A Space Odyssey* was released in 1968 at the peak of the race. From 1957 to 1966, the Soviet Union succeeded in a series of space explorations: "the first man in orbit, the first multi-man mission, the first space walk, the first lunar soft landing" (p. 44). The U.S. had no special "first" yet. The year of 1968 was the time that national tension was high, as there was less than two years left "before this decade is out"—Kennedy's time limit of human conquest of the moon. Moreover, it was taken for granted that the Soviet Union's next goal was the first lunar walk. Putting the first man on the moon was eagerly desired by U.S. politicians, who wished to prove that the future was under the leadership of the U.S. This national fever about space exploration was a perfect subject for filmmaking. The story of space was *Zeitgeist* in the late 1960s.

As Poole indicates, the mid-1960s was a suitable time for creating space SF films (p. 45). The atmosphere of the Cold War space race is well represented in the scene wherein Dr. Floyd has a short chat with his old friend and a few Russian scientists returning from the moon. Dr. Floyd is introduced by Elena to the Russian scientists, Dr. Kalinan, Dr. Stretyneva, and Dr. Andrei Smyslov. After short greetings, Dr. Smyslov asks Dr. Floyd. "Dr. Floyd, I hope you don't think I'm being too inquisitive, but perhaps you can clear up the great big mystery about what is going on up there." After a slight hesitation, Dr. Floyd answers, "I'm afraid I don't know what you mean." Dr. Smyslov inquisitively asks him again.

Dr. Smyslov: At the risk of pressing you on a point you seem reticent to discuss, may I ask you a straightforward question?

Dr. Floyd: Well, certainly.

Dr. Smyslov: (after being wary of a passerby) Quite frankly, we have had some very reliable intelligence reports that quite a serious epidemic has broken out on Clavius.

Something, apparently, of an unknown origin. Is this, in fact, what has happened?

Dr. Floyd: I'm sorry, Dr. Smyslov, but... (silence) I'm really not at liberty to discuss this.

Dr. Smyslov: I understand. But this epidemic could quite easily spread to our base. We should be given all the facts, Dr. Floyd.

Dr. Floyd: Yes, I know. (silence) As I said, I'm not at liberty to discuss it.

Dr. Smyslov tries to discover the secret matter from Dr. Floyd; however, Dr. Floyd keeps silent, though he is on the way to the moon to address the matter. Dr. Floyd's stubborn attitude against the Russian scientists implies not only that the matters of space exploration are confidential, but also that the U.S. scientist Dr. Floyd tacitly regards the Russian as the opponent. In addition, Dr. Smyslov's line of "very reliable intelligence reports" brings up the image of the undercover intelligence in the Cold War period.

Interestingly, the characters of Dr. Floyd and Dr. Smyslov represent the nations of the U.S. and the Soviet Union, from the perspective of the U.S. Dr. Smyslov is presented as a slick, untrustworthy character. Gathering his hands and limb, and taking off his back from the chair, Dr. Smyslov continuously hangs on Dr. Floyd's smile. He is excessively polite. He persistently tries to dig up the information about strange events on the moon from Dr. Floyd. The scraggy body, the hunched back, his facial expression leery of surroundings, and his manner of speaking suggest the figure of a swindler to us. On the contrary, the appearance of Dr. Floyd imparts confidence. Dr. Floyd, with his robust body, leans on the back of the chair, crosses his legs, and puts a hand on his knee; he takes a somewhat arrogant and comfortable posture. His voice is low and deep, but vigorous. He has good looks, of course. Dr. Floyd has an important key to the

information, but he does not give it to Dr. Smyslov. In diegesis, the U.S. represented by Dr. Floyd leads the technology and information war with the Soviets. The U.S. manages the base of the moon. HAL is a super-computer the U.S. created. In other words, the U.S. is a symbol of the space exploration and the future technology in diegesis. So, HAL's subversion of human beings directly indicates the cinematic criticism of the U.S. The comparative representation of Dr. Smyslov and Dr. Floyd's characters portrays the atmosphere of the Cold War, and at the same time, provides the clue for the responsibility of the aliens' punishment on human beings—the rebirth of Man and the Earth.

After Dr. Floyd leaves, Dr. Smyslov speaks ill of him. “Наверное, ему очень трудно./Definetly, he has the greatest difficulty.” Dr. Stretyneva responds, “По видимости./Obviously.” Dr. Kalinan does, too, “Да, очень трудно./Yes, the greatest difficulty” (Forum of LearningRussian.com, 2003). The Russian scientists are represented as those who make a frantic attempt to dig up information and rip up the back after failure. This characterization can be viewed as a typical representation of the good and the evil in the era of Cold War. Though English subtitles are not provided, the Russian lines comprehend the political status of the time that the U.S. had to be “ему очень трудно/the greatest difficulty” to the Soviets.

The Cinema of Attractions and the Reality Effect of VFX

The beautiful spectacle of *2001*, using the cutting edge visual effects, dominates the film's simple storyline, which compares the anthropoid's use of the bone tool to the modern science technology of space, for a hundred-forty-eight minutes. The tradition of the cinema of attractions appears again through *2001: A Space Odyssey*.

“The Dawn of Man” section embodies the modern cinema of attraction. In the beginning of the section, the camera takes darkness only with the sound effect for three minutes. The sound effect is heard whenever the black monolith is shown. Then, the MGM logo is presented, and the actual part of the film begins. The sun slowly rises above the horizon with Richard Strauss’s *Also Sprach Zarathustra (Thus Spoke Zarathustra)*. Over the background of the desolate plain tinted with a rosy flush, the subtitle of “THE DAWN OF MAN” suggests the subject of the first section, the origin of mankind: the beautiful dawning sky, which is continuously presented; the daily life of the anthropoids, and their discovery of a tool. After the black monolith appears, the anthropoids start to use the tool. As Strauss’s solemn music is heard again, an anthropoid announces the birth of mankind by hammering the ground with an animal’s bone. The slow-motion of the anthropoid’s bodily movement of hammering with the bone and the grand music is in accord; it provides an attractive image. The dazzling visual image, with the support of music, dominates the simple narrative of evolution of mankind for the long duration, sixteen minutes and forty-three seconds. It is the re-embodiment of the cinema of attractions.

In comparison to the tradition of the cinema of attractions in Méliès’ *A Trip to the Moon*, that of *2001* presents the development of visual effects from trickality to the reality effect, and as a result, the transformation of the audience response from alienation to absorption. The trickality of the cinema of attraction that *A Trip to the Moon* showed produced the visual shock by means of the stop motion. Trickality distanced the audience from the narrativity. However, the reality effect of the cinema of attraction that *2001* created absorbs the audience with the support of the rear projection. What their narratives are dominated by the spectacles is common, but their different aesthetics of visual effects produce different features of cinema of attractions; that is trickality and reality effect.

This moment of attraction is produced by means of front projection. Front projection is a studio-oriented visual effect that combines pre-filmed background scenery with live action footage in the studio. When rear projection projects pre-filmed scenery from behind the scotchlite screen, front projection does so from the front of the screen through a beam-splitting mirror (Rickitt, p. 309). The quality of the combined image of front projection is superior to that of rear projection; so, the reality effect is higher. Front projection was developed for *2001: A Space Odyssey* by Stanley Kubrick who was dissatisfied with the quality rear projection; the film was the first feature wherein front projection was used. The scenery of an African plain is projected from the front of the anthropoid, acting inside the studio, to the scotchlite screen via the beam-splitting mirror. The visual quality of the final composited image is excellent enough to make the use of the visual effect imperceptible.

In the next section, the bone the anthropoid throws to the sky transforms into the spaceship by a jump cut, and the brilliant visual image is continued. The spaceship navigating with the background of the earth, the space station rotating, and the Pan American spacecraft Dr. Floyd is riding are well harmonized with Johann Strauss's *An der schönen blauen Donau* (*The Blue Danube*). However, the new attempt of joining symphonies and space produces little in the way of story. As Pauline Kael (2005) insists, "Kubrick's storyline—which accounts for evolution by an extraterrestrial intelligence—is the most gloriously redundant plot of all time" (p. 25). The film's epoch-making characteristic relies on the way of expression, rather than the narrative, despite the philosophical approach in the film's end. What absorbs the audience is spectacle created by the audiovisual combination, rather than the story deployed.

The third section, titled "Jupiter Mission: 18 Months Later" draws a confrontation between the humans and the artificial intelligence HAL. Out of four sections, the storyline is

clearest, and simultaneously provides the most beautiful spectacle. The huge centrifuge self-rotating in the spaceship was created by “a huge mechanical treadmill, thirty-four feet in diameter” (Finch, p. 120). The digitized representation of the modern computer, the monitor-phone, the modernized and fashionable interior of Discovery I, the interior of the space pod surrounded by the digital instruments, and the figure of space seen through the window of the pod provide an upgraded visual image much more vivid and detailed than those of past space SF films. First of all, Discovery I, the space pod, and the crew’s floating in space scene provide the most impressive spectacle and absorb the audience. According to Rickitt, thousands of hand-drawn mattes were produced in order to show the effect of flying in space; these mattes are combined with the spaceship footage (p. 72). These hand-drawn mattes are the analog version of the digital background added on the blue screen. The use of mattes strongly supported the invisibility of the effect and created the powerful reality effect. In addition to this visual effect, the physical effect of hanging models and actors by wires works convincingly to represent the “weightlessness” of the spaceships and crews in space (Rickitt, p. 307). The manipulation of the physical effect supports the reality effect of visual effects. The spectacular visual creates the attraction by overwhelming the narrative of human dependence on A.I. and A.I.’s subversion of human beings that is “a cross section of often simultaneously held fears and hopes about computers” (Friedman, p. 72).

The last section is the upgraded representation of the cinema of attraction itself. Bowman repels the attack of HAL, approaches Jupiter, and meets the black monolith. At that moment, the stargate is opened. As if a ray of light is passing through a prism, the space pod of Bowman goes through the stargate. This scene is taken by slit scan technique. While passing through the stargate, time-warp occurs. Bowman lands in a hotel room and finds himself dead. The monolith

changes Bowman to a star-child; the earth comes back to the beginning of the world. In the last section, there is no dialogue at all. Various shapes of objects and colors overlay space, burst into sight, and disappear. The strange sound and Bowman's breathing are the only audible sounds. The last section is considered by many critics as the masterpiece of spectacle in the history of SF films. As Tim Hunter, Stephen Kaplan, and Peter Tazsi (2000) suggest, the spectacle of the stargate sequence is Kubrick and Clarke's statement "When man journeys far enough into time and space, man will find things he has no right to see" (p. 157).

The stargate sequence was produced by slit scan: a long exposure of a streaking rush of color and light in a single frame through a slit in a screen (p. 311). The direction of streaking light is determined by whether the slit is vertical or horizontal. The shape of streaking depends upon the shape of the slit. The visual effect of the slit scan functions very differently from that of most of the visual effects, both analog and digital. Front projection, wires, mattes, and CGI all produce the reality effect by seeking the invisibility of visual effects. Slit scan, on the other hand, represents spatial and temporal warp through explicitly visible expression. Slit scan abandons the reality effect to produce a new kind of image. The visibility of slit scan can be viewed as the revival of Méliès's trickality, valuing spectacle over narrative and realism.

Reboot HAL: Rebirth of Man

The cutting edge computer HAL-9000 symbolizes human desire, error, and disorder. Bowman disconnects HAL; the black monolith reboots mankind. It is Kubrick's cinematic warning against excessive American confidence in the midst of the Vietnam War. HAL, the tool of humans, tries to subvert humans. The setting in which the news channel interviews with the computer means that the computer humans made is no longer only a machine, but something

new having personal rights. HAL regards himself as a perfect conscious entity. HAL considers itself as the most reliable computer ever made, unable to commit an error. HAL has disoriented pride to the degree that HAL considers that if HAL makes a mistake, it is not his error, but that of the program humans created. Eventually, HAL illustrates the danger of this arrogant bureaucratic rationality by systematically killing all of Bowman's crewmates.

The tool produces violence. HAL is full of arrogance. By means of HAL's character, the film shows human arrogance in the form of overconfidence in their tool. HAL and the humans lose their self-control and violently act for their survival, due to the overconfidence in their capability. In the end, they pay dearly. This narrative closely resembles the U.S. politics in the late 1960s, seeking the expansionist policy with the overconfidence in national strength. In particular, the U.S.'s participation in the Vietnam War induced major violence, resulting in many dead and wounded Americans. Just as the first behavior that the anthropoid performs with the animal bone is to kill the same race in another group, the tool of humans has been accompanied by violence. The tool has produced violence in the name of civilization; the rulers of the world were those who have committed violence with the tools.

HAL challenging to reach the level of God, beyond Man, portrays "the best, and worst, of all humanity" (Williams, 1984, p. 320). Bowman punishes the evil monster HAL by turning it off. HAL has to be rebooted in order to be fixed. However, Kubrick's camera follows the scene of the rebirth of Man, instead of the reboot of HAL. The black monolith put Bowman out to the stargate and sends him to the future. It does not kill him violently, but makes him die a natural death, by means of growing old at an accelerated rate. It puts the earth back to the state of a star-child; the earth goes back to the beginning. The monolith chooses a natural death as a way of punishment, rather than a violent death. As Williams argue, the monolith's choice of the rebirth of Man

implies Kubrick's message against the violence in the Vietnam War and the riots and protests in the U.S. at that time (p. 321). HAL refers to the both faces of hope and fear of technology. At the same time, as Michael Bérubé (1994) indicates, *2001* represents "the tensions between America's gleaming white space program and burning black inner cities" spouted by 1967 (p. 196).

When *2001* cinematically criticizes the Vietnam War by means of the aliens' making Man reborn, *Forbidden Planet* shows the criticism of the Cold War through Dr. Morbius's self-destruction of Altair IV. Their cinematic criticisms through the destructions, such as the fall of Mankind and extinction of the planet, are in common; however, the subjects of the destructions are different. The aliens who made the black monolith put back the Earth to the beginning in *2001*. Man himself (Dr. Morbius) is repentant for the misled desire of technology and blasts Altair IV as its symbol. *Forbidden Planet* shows the faith in human nature of self-purification while *2001* presents the passive liquidation by the aliens' hand. In this sense, *Forbidden Planet* and *2001* represents that the belief in humanity has been rarefied through the continuous experiences of the world wars, the Cold War, and the Vietnam War.

3.3 *Star Wars* (George Lucas, 1977)

The original *Star Wars* was written and directed by George Lucas. The film has been considered by many critics as the most important effects-oriented film bringing about "the special effects revolution of the 80s and 90s" (Rickitt, p. 305). Its domestic box-office profit was \$460,935,665 that is the second in all-time U.S. box-office rank following *Titanic* (James Cameron, 1997) (IMDB.com). I will examine, here, the aesthetics of computerized motion-control, the film's socio-political implications, and its ambivalent vision of technology.

Star Wars Episode is an SF film, placing the old fantasy into the futurist image and the

space setting. However, it was first released in 1977. Princess Leia is a member of the Rebellion, which opposes to the Galactic Empire, suppressed by Darth Vader's tyranny. Leia locates the fatal weak point of the Death Star, the space headquarters of the Empire, and is pursued by Darth Vader. Just before being captured, Leia saves the information to the memory of R2-D2, and orders him to find Obi-Wan Kenobi. R2D2 meets Luke Skywalker, a descendent of a Jedi knight. Luke delivers the message to Obi-Wan Kenobi, the old secluded Jedi. They rescue Leia with the help of Han Solo, a captain of the freighter, Millennium Falcon. Luke, joining the Rebels explodes the Death Star and gives a new hope to the Empire. However, Darth Vader luckily survives.

Computerized Motion-Control: The Reality Effect and Modernity

George Lucas's *Star Wars* revolutionized special effects and catalyzed the advanced use of effects in films in 1980s and 90s (Rickitt, p. 305). Lucas established his own special effects company, Industrial Light and Magic (ILM), to ensure the visual quality of the film. The representative visual effect used in the film was computerized motion-control, also called Dykstraflex after John Dykstra, the first visual effects supervisor of ILM during the production of *Star Wars* (Finch, p. 245).

Though motion-control was an analog visual effect, it produced an early kind of time-space compression, which would become the postmodern aesthetic of digital effects. It greatly improved the reality effect of space battle scenes, in particular. With the support of the computer, the camera could automatically move in the exact same direction, over and over again. In a space battle scene, because the camera could film a single fighter at a time, the number of shots depended upon the number of fighters and the other objects in a frame. For example, the motion-

controlled camera moved by and simultaneously filmed the model of a rebel X-wing fighter, placed on “a metal stick” in front of the blue screen (Weinberg, 1980, p. 25). Then, the camera, under the control of the computer, follows exactly the same movement while filming the model of a chasing Twin Ion Engine (TIE) fighter in front of the blue screen. If the Death Star had to appear in the same frame, the camera took a third pass, filming the model of the Death Star as it followed the same moving line. A star field and a laser blast were also filmed in turn. Then, these five shots were combined into one frame. This computer-assisted layering is the analog version of time-space compression.

The process of producing the motion-control was complicated and time-consuming; however, its reality effect was stunning at the time of *Star Wars*. The audience perceived the fighters as flying very fast, though in fact the camera shot the scene slowly and repeatedly. The camera could show a realistic dogfight among a number of fighters. The laser blasts and explosion of fighters could be seen. The motion-control took the process of time-space compression beyond the time-space displacement shown through rear/front projection. Computers became an essential tool for raising the reality effect of visual effects.

It is no coincidence that the motion-control system’s performance of repeated automatic movement recalls the tightly controlled automatic flow of the conveyor belt in a computerized factory. As Thomas G. Smith (1986), a production supervisor of ILM, writes, “the use of the computer in special effects of *Star Wars* production in 1976 was the result of the imaginative benchmarking of other industry’s application of the computer” (p. 199). Just as factories were upgrading traditional Fordist assembly lines with more efficient computer-controlled precision, Hollywood began looking for ways to further rationalize special effects production through computers.

The space battle created by the motion-control was a futuristic version of a dogfight. The visual image is futuristic, but the plot stands facing the past. According to Lucas (2004), dogfight documentaries of WWI and WWII became his textbooks for the space battle scenes (Audio Commentary). Closely resemble the air-to-air and ground-to-air battle in WWII, the battle between the space-fighters in the last scene and the Falcon-to-space blasts scene in the middle of the film were produced. The presentation of the futurist spectacle of the past events is mediated by the computer inducing the effects aesthetic of time-space compression. The computer is a medium from the modern to postmodern.

The Past and the Future: Escape from the Present

There is no present in *Star Wars*. There exists only confrontation between the past and the future. The first subtitle of the film, “A long time ago in a galaxy far, far away,” implies that *Star Wars* is a kind of fairy tale. As Andrew Gordon (1978) insists, the movie’s success beyond age is due to “its deliberately old-fashioned plot” (p. 314). The characters are archetypal: the young hero Luke Skywalker, the wizard or supporter Obi-Wan Kenobi, the beautiful princess Leia, and the villain Darth Vader. The storyline that Luke the young prince-like hero rescues the universe by helping the beautiful princess Leia with the support of the warrior-wizard Kenobi is cliché. However, it provides a fundamental frame to stories and becomes the origin of new ones.

Settings show the past-oriented feature of the film. Jedi costume refers to that of Japanese Samurai. The Jedi’s unique characteristic, taking a serious view of the spirit of Force, corresponds to a tracing of Samurai spirit that would not hesitate to commit suicide by disembowelment for a just cause and honor. A Jedi does not shoot laser blasts, but defeats an enemy with the electronic sword of light saber; a Jedi defends laser blasts coming by means of

the Force. However, the way of sword fighting is *King Arthur* style, rather than Samurai. A typical samurai film attaches great importance to static sword fighting. For example, Akira Kurosawa's *Sanjuro* in 1962 presents the power of one single brandish in the very last scene of the duel between the villain Hanbei and the protagonist Sanjuro. Sanjuro and Hanbei stare fiercely at each other for a long time; then, they simultaneously brandish the swords only once. A few seconds later, spouting blood, Hanbei bites the dust. In a large sense, samurai sword fighting can be said to be not made up of a huge number of blows, but a single brandish with spirit extremely concentrated. So, the way of sword fighting was motivated by the duel between the knights in *King Arthur* style. Two knights continuously wield by the time when one of them misses his sword and falls down. The duel of the Jedi, represented by that of Vader and Kenobi does resemble that of knights.

In addition to the setting relating to the Jedi character, the representation of hierarchy in diegesis is very feudal. The social structure of the dark side is the Galactic Empire. The governors and military commanders of the Death Star call Darth Vader Lord Vader. Despite the complex hierarchy between the commanders and governors, all organizations submit to the emperor. Hierarchy of the Galactic Empire surpasses that of army; so, a boss has power over subordinates' lives. It is a feudal organization. Interestingly, the Rebel organization shows even more extreme feudal sacrifice for the Lord. In the last battle scene, the figure of a prince, Luke, leads a formation of fighters to blast the Death Star. All X-wing fighters are shot down except three, Luke and his friends, Bigg and Wedge.

Bigg: We'll stay back far enough to cover you.

Wedge: What about that tower?

Luke: You worry about those fighters! I'll worry about the tower!

In the situation wherein they are chased by T.I.E. fighters, Luke orders Bigg and Wedge to “worry about those fighters.” The X-wings of Bigg and Wedge form a convoy flight for Luke. So to speak, Luke orders force them to sacrifice, instead of Luke himself. Eventually, a X-wing returns to the base after getting a blast, and the other is brought down. They sacrifice themselves for the goal of the organization and for their boss. As Peter Lev (1998) states, not only the Empire, but also the Rebel Alliance maintains an extreme hierarchy, and they are “perhaps even authoritarian” (pp. 32-33). The existence of Princess as a class also suggests that the social structure has been established under feudalism. The period background of the narrative of *Star Wars* is the Middle Ages of the East and/or the West.

However, the spectacle is very futurist. First of all, the spatial background is the universe. The characters’ vehicles are spaceships, including fighters and pods. The laser blast is the main weapon of the Empire. In the desert area, Luke rides in the cutting edge vehicle, the land speeder. Han Solo’s Millennium Falcon is a logy freighter; however, it can reach hyperspace. Robots accomplish duty with a perfect communication with humans. The visualization of these imaginative plots created by visual effects places the film somewhere in the future. The characters of the past deploy the story of fantasy in the space of SF.

The story looks at the past; the spectacle stands facing the future; however, there is no state of the present, representing the cultural atmosphere of the U.S. in the mid-1970s: the desire for an escape from the present. A series of crises, including the extreme deflation in 1973 to 1975, the aftermath of the Vietnam War ending in 1975, and the scandal of Watergate in 1972 to 1974, put the U.S. into a period of economic and political stagnation. The Vietnam War as an extension of the Cold War even brought the self-consciousness of a defeated nation. The U.S. tried to block China and the Soviets’ advance to the Pacific through establishing an anti-communist

government in South Vietnam. The U.S. military devastated the Viet Cong in North and South Vietnam in the cause of protecting the South democratic government and of preventing from the expansion of the power of the North communist. South and North Vietnam were acting for the U.S. and the Soviets. The U.S. was finally defeated. Americans had to stand up to the guilty conscience about the U.S.'s violence in Vietnam and to a sense of shame as the defeated nation. In this historical moment, *Star Wars* was “an attempt to bring back hope to a nation” (Geraghty, 2005, pp. 196-197), and at the same time, to be a cultural refuge from national economic and political hardships. *Star Wars* is the cultural exit between the nostalgia for the past and the expectation for the future. At the same time, it is “A New Hope” for America facing up to adversity.

Ambivalence about the Machines/Technology

Star Wars represents the anxiety and expectation of technology for the future through opposing representations of machines. The characters of the robots, R2-D2 and C-3PO, portray a technotopian perspective. In contrast, Darth Vader is a cyborg monster, an illegitimate son of technology.

C-3PO is the figure of friendship. It seems to be a male robot in terms of voice, but to be androgynous, due to its loquaciousness and the unsteady gait of walking with short steps. Sometimes C-3PO teases R2-D2, but it is faithful and protects R2-D2. Its character is closer to a spiritual creature than a lifeless robot. R2-D2 cannot use the human language, but only makes the electric sound like a transistor tuning sound. So, C-3PO translates R2-D2's language for the audience. R2-D2's appearance is not human. However, R2-D2 is smarter than C-3PO and more submissive to the order of humans. R2-D2 continuously does its best to accomplish what

Princess Leia and Luke order him to do. When the pod in which R2-D2 and C-3PO ride is forced down in the planet where Luke lives, C-3PO takes the flat road; however, R2-D2 chooses a less direct route to minimize possibility of a surprise attack. On meeting Luke, R2-D2 fulfills its orders by projecting Leia's hologram.

R2-D2 and C-3PO are far from being threatening; rather, they are ignored and even discriminated against. In the scene in which C-3PO gets a cold reception in the creature bar, C-3PO is treated as a monster by the human bartender and the alien customers. The aliens themselves look like the monster characters of past SF films. But as a robot, C-3PO is shunned by even the monsters. In the bar, C-3PO becomes totally *The Other*. The aliens, monstrous figures themselves, are outrageous characters; however, they are not presented as *The Other*. The robot, as a symbol of technology, is ignored and alienated. The robot is only a servant; so, it thoroughly obeys the creatures, including both aliens and humans. This scene shows the technofuturist view that technology exists to serve humans. This view is in opposition to that of *2001: A Space Odyssey*. *2001: A Space Odyssey* describes the computer as a monster, an object of fear. Although *Star Wars* represents the robot as a monster, the robot is not an object of fear, but that of fun or a friend. The robot character is closer to Robby, the Robot in *Forbidden Planet*. The characters of R2-D2 and C-3PO suggest a fantasy of humans' perfect control of technology and confidence in human power, which is technotopianism.

On the other hand, Darth Vader, a cyborg combining the human body and computer technology, is a monster figure. He cannot maintain his life without technological support. He has to wear an oxygen mask and to rely on machinery. Vader is an object of fear; he indulges in violence and is the embodiment of evil, seeking to annihilate the fellow Jedi. He explodes the planet Alderaan to uncover the Rebel headquarters. Moreover, he tries to kill his mentor as well

as master, Obi-Wan Kenobi. Darth Vader is a cinematic representation of technophobia, in that he shows how the future of the world will be if the development of technology errs from the right path. In the last scene, the Death Star is exploded; however, Vader has a narrow escape. George Lucas saves his life for the next episode. Evil of the machine is not thoroughly removed. The world is not made up of only good machines, such as C-3PO and R2-D2, but also produces a bad machine, like Vader. The ending scene of *Star Wars* implies ambivalence toward technology, a tension between the technofuturist and technophobic views the future.

3.4 *Superman* (Richard Donner, 1978)

Superman is Richard Donner's filmed version of Jerry Siegel and Joe Shuster's *Superman* comics which have been published since the 1930s. It has been considered as an initiative standard film for the superhero SF genre. *Superman* presented the flying figure through the use of visual effects maximizing the efficiency of studio production. Here, I will discuss the character of Superman as a national character and as a symbol of the urban modernity, and examine the implication of the use of visual effects in relation to the industrial modernization.

The scientist Jor-El sends his son Kal-El to the earth to save him from the destruction of Krypton. Kal-El is raised by Mr. and Mrs. Jonathan Kent. Kal-El grows up, learns of his identity of Superman, and goes to Metropolis. He uses a new name, Clark Kent, and works for the *Daily Planet* as a journalist. Superman helps people with his superpowers. The evil Lex Luthor attempts to kill innocent people in order to take over California. Superman protects America from Luthor's threat and becomes a hero.

Superman, the National Character

As Superman rescues the citizens of Metropolis whenever they are in danger, *Superman* appears/returns to save America whenever she is in hardship. Superman is the national character chosen by American culture when she is in danger (Lang & Trimble, 1988, p. 159). *Superman* returns in response to the national call.

The first story of Superman was born in 1933 by the high school students, Jerry Siegel and Joe Shuster, in the middle of the Great Depression (Petrou, 1978, pp. 10-12), which was the longest and hardest economic recession in the West from 1929 to 1939. Moreover, the period was the time that the injury of WWI was not yet healed (Bukatman, 2003, p53). Jerry Siegel, who first wrote the Superman story, was immersed in fantasy and fiction, as a means to escape from the impoverished life that surrounded him. As a result, the Superman character was born. Siegel united efforts with his friend Shuster who had a natural aptitude for illustrating. In 1933, they published the amateurist comic “Reign of the Superman”; they had the first official publication in 1938 through *Action Comics* (pp. 12-13). From the view of Siegel and Shuster, America in adversity needed strength and justice. They needed a hero who could rescue them from the severe reality. The Superman character was their hope and their persona on which their needs were projected. Superman is the transformation of the ideal status of the U.S. and the masses themselves, which have the invincible power, the righteous indignation, and the x-ray vision that makes the world clear. At the same time, Superman became a cultural tonic and a refuge to the masses living in obscurity. In this sense, the birth of *Superman* in this hardship period makes Superman the national character, answering to the cultural needs and national calls.

In the early and mid-1970s, the U.S. experienced economic and political hardship, as discussed in the *Star Wars* section. With the disappointment of Watergate and the tension of the

Cold War, the U.S.'s participation in the Vietnam War and defeat put the U.S.'s morality in question. The U.S.'s political status that the distinction between a friend and an enemy was obscure made American desire the past that the difference between the good and the bad was clear. The clear contrast of the pure good versus the pure evil in *Star Wars* and *Superman* might be the product of this longing for the past. At the same time, they are the hope and will of America searching for a new hero.

In addition, America struggled again with the difficulty of life. To make Superman fly to the screen in 1978 is the evidence of the depressed reality at those times that a superhero is needed again. Lex Luthor's attack on Hoover Dam, by means of one of the two missiles, cinematically criticizes the misgovernment of the economic hardship. For Hoover Dam was named after the 31st president Herbert Hoover, office from 1928 to 1933, and could not prevent the U.S. economy from the Great Depression. Hoover Dam is symbolically destroyed. Superman saves the residents from the collapse of *Hoover* (Dam); Superman becomes the new hope of America. *Superman* returned to the masses as a form of a movie to save the earth. In the next section, I will discuss how Superman became *the new hope*.

Superman, the New Hope of the Urban Modernity

Superman becomes the new hope of decaying urban modernity through the storyline of Clark Kent's movement from a rural area to the urban center, the setting of Metropolis as the main stage of Superman, and the appearance of the Fortress of Solitude as Kryptonian application of urban skyscrapers.

First, the storyline of *Superman* presents Clark Kent's growth and his movement from the small village, Smallville, to the urban city, Metropolis. Growing up in Smallville, Clark is told by

his father Jonathan to keep superpower secret. He cannot enjoy ordinary teenage life, due to the power; rather, he becomes the laughingstock of his companions. After Jonathan is dead, Clark leaves for the North, transforms to Superman, and comes to Metropolis for the purpose of serving mankind. The storyline that a youth who was the ridicule of public goes forth into a city and succeeds in life is a typical tale of urban modernization. At the same time, Kent/Superman represents the all-American dream of immigrants in that “immigrant Kryptonian orphan” becomes the journalist/superhuman in the metropolis. As Lang and Trimble state, Superman’s action derives from “one of vertical mobility” from “humble beginnings” to “a successful individual” (p. 159).

Second, the identity of Superman exists in Metropolis. The first scene, wherein Clark reveals his identity of Superman to the world, is when Superman rescues Lois Lane falling down from a helicopter, suspended on the roof of the *Daily Planet* building. It is the signature scene of *Superman*. Clark changes his clothes to the unique costume at the revolving door, flies to the building, and saves her. Immediately, Superman grabs the helicopter dropping down and brings them down safely on the roof. In front of the *Daily Planet* building, which was actually filmed on forty-second street in Manhattan, Superman reveals his identity to the masses. According to Bukatman, this scene represents the moment that “[T]he little baby becomes something of a skyscraper himself” (p. 197). Superman apprehends the burglar, climbing the building with an absorber, and turns him over to the police. When a gang of robbers counts the stolen money in a boat, Superman is looking at them with the background of the Metropolis night view. He takes the boat down boldly in front of the police office in the middle of an urban center; he then flies into the sky again. Superman brings the cat on the tree to the girl and rescues Airforce One from crashing. His activity usually revolves around saving the citizens of Metropolis. In Metropolis, in

front of masses, he is Superman.

Third, Superman's secret Fortress of Solitude closely resembles the skyscrapers of Metropolis as the symbol of urban modernity. The Fortress of Solitude is made up of a huge number of thin and long white colored rectangular parallelepipeds. Its structure, wherein the big parallelepipeds are diagonally interlocked with each other, can be viewed as the tangled skyscrapers bursting into the sky. In particular, when Jor-El preaches at Superman about his revealing his identity, the control platform produced by mini-parallelepipeds seems to confine Superman into the skyscrapers and the skyline of Metropolis. Jor-El's lines inscribe the Superman character as a symbol of the urban modernity.

Jor-El: You enjoyed it.

Superman: I don't know what to say, Father. I am afraid I just got carried away.

Jor-El: How good it felt? You are revealed to the world. Very well. So be it. ... do not punish yourself for your feelings of vanity. Simply learn to control them. It is an affliction common to all, even on Krypton. Our destruction could have been avoided, but for the vanity of some who consider us indestructible.

Jor-El warns about Superman's vanity. The vanity Jor-El indicates stems from the flight through skyscrapers and the masses' applause as a result. It is warning against the vanity addicted to the attraction of the urban modernity, represented as the masses and skyscrapers. Superman stands in the center of the controls. The lights shining through the transparent pieces look like a miniature of the lighted Empire State Building. The next shot is the long shot of Superman in front of the controls, which is surrounded by the huge Fortress of Solitude. It represents Superman being encapsulated by Metropolis. In the next section, I will examine how Superman is created as urban modernity, in terms of the use of visual effects.

The Visual Effects Buildup and Metropolis

As Superman is growing up, and as he moves from Smallville to Metropolis, the use of visual effects increase in frequency; effects themselves are complicated and delicate. This build-up of visual effects suggests that Superman absorbs and/or sends forth Metropolis's technological and industrial power. At the same time, the aesthetics of the analog visual effects in Metropolis sequences reflects the typical cityscape in the middle of industrial modernization.

As Petrou indicates, Superman's powers increase as he gradually matures (p. 16). In Smallville, the baby Kal-El lifts up Jonathan's car. Young Clark Kent runs faster than a train, but he cannot yet fly. After he moves to Metropolis, he shows the ability to fly. Then, Superman shows his special capability of x-ray vision and of extremely keen hearing, and so on. This storyline explicitly suggests the development of his super powers, as a function of his growing up. At the same time, it implies that Superman absorbs the power of the industrial and technological modernization, as he moves from the small village of the mid-west of America to the metropolis, the center of industrialization.

I believe that in the scene in which the baby Kal-El lifts up the car, the most basic physical effect, using a crane, was used. According to the director, Richard Donner, in the scene wherein young Kent runs with the train, the actor Jeff East runs with two small wires connected to the crane. His legs never touch the ground. Later, fast-motion effect was added to present his extremely fast running (Special Features in DVD of *Superman*). In Smallville sequences, there are no heavily used visual effects.

From the sequences of Metropolis, visual effects were actively used. According to Roy Field, the optical visual effects supervisor of the film, the upper thirty percent of the *Daily Planet* building was replaced by matte painting in the scene where Superman rescues Lois falling down.

In the scene in which Clark changes his clothes to the Superman costume at the revolving door, optical composition, which is a mechanic composite by means of the optical printer, was employed. Wire-action was mobilized when Superman flies to Lois. When Superman gets Lois, the front projection of the building was projected onto the scotchlite screen. The miniature of the helicopter was taken when it was falling in the very next shot. At the moment when Clark reveals his identity of Superman in the center of Metropolis, a huge number of special effects were used; they were seamlessly combined to improve the reality effect. Metropolis is inscribed as the symbol of the urban modernity through the analog visual effects produced under the environment of the industrialized studio system.

In the scene in which Superman meets Lois on the terrace in the center of Metropolis, the visual effects clearly represent modernity. When Superman comes from the sky and lands on the terrace, the night sky, the moon, and the skyscrapers surrounding the terrace are represented by matte paintings. Superman flies into the night sky with Lois with the background of the urban skyscrapers, which was drawn by matte paintings, modernist visual effects. The night view of Metropolis is replaced from matte painting to front projection, which was the best visual effect using the principle of time-space displacement, before the advance of digital technology. They fly to the statue of liberty and come back to the side of the screen. They seem to fly away and to come back. In other words, their size on the screen grows smaller and larger, without change of the background. The reality effect that Superman actually flies is produced at this moment. This effect was possible by the Zoptic system, created by the visual effects engineer of *Superman*, Zoran Perisic. Zoptic is a refinement of the front projection technique pioneered in 2001. Zoom lenses are attached in front of the camera and projector. The size of the actors on the screen is manipulated by means of the operation of the zoom lenses' focal length. Using Zoptic, the

camera was able to take Superman's "long flights" in the small studio (Rickitt, pp. 70-71). Revolving the camera created the effect that Superman seemed to revolve himself in the middle of flying. It is a visual effect maximizing the studio system. After the flight, Superman parts with Lois on the terrace.

This parting-at-the-terrace scene, wherein front projection is used, is very self-reflexive. Superman flies into the sky after saying goodbye. Lois stands with a vacant stare at Superman soaring. At the moment, a knock on the door is heard; Lois slowly walks to the door and opens it. Clark stands there, but there is no cut in the shot. This situation is logically impossible because Christopher Reeve cannot change his costume and hair style within a few seconds; the key is front projection. According to Donner, the moving image of Superman soaring in front of Lois was taken six months previously at the same set. In the actual shooting, the image was projected to the scotchlite screen in front of Lois (Special Features). Thus, Christopher Reeve could appear twice within a few seconds, without any editing. This scene reveals to the audience the existence of the visual effect of front projection, trading in the reality effect for the pleasures of trickality. Donner announces the effect of the scene through presenting a logically impossible situation, without any editing. The aesthetics of this front projection is modern, in that it is an expression of confidence in industrialized technology of the studio system.

Much of the visual effects techniques to make Superman fly have been replaced by CGI effects since the beginning of digital era. In the very end of *The Matrix* and through *The Matrix: Reloaded*, Neo soars up to the sky. In comparison to Superman flying, Neo's acting to fly shows the culmination of the reality effect. Even though *Superman* presented the maximum of the reality effect that the analog visual effects, such as matte painting, front projection, and Zoptic, could provide, the time-space displacement between the background scenery and live-action

footage revealed minutely the qualitative difference of visual image between the front actor and background image. However, accomplishing the time-space compression of multi-layered CGI through CG matte, digital composition, and digital character, *The Matrix* produces the reality effect much more refined than that of *Superman*. Even a digital character substitutes for Keanu Reeves in part. The wide spread of PC, the efficiency of computerized production of visual effects, and the advanced reality effect of CGI have placed the visual effects history to the realm of digital effects.

The 1950s to 70s was a period of Ford system in economy and of the Cold War in political mechanism. *Forbidden Planet* in 1956 represented the Cold War atmosphere after WWII through the setting of the war films, including the war props, the costume of the military uniform, and the typical military hierarchy. The visual effect of cel animation presented both hope and fear of technology in the Cold War period by means of drawing the invisible Id monster. When *Forbidden Planet* criticizes the Cold War politics through the destruction of the planet Altair IV, *2001: A Space Odyssey* in 1968 shows the criticism of the Cold War via Man's rebirth, warning the overheating of space race and purifying the violence in Vietnam. A series of political disorder including Watergate and the defeat in the Vietnam War as an extension of the Cold War drove American in the 1970s into a total mess. The confusion of the good and the evil in reality was compensated by nostalgia for the past longing for the certain distinction between the good and the evil in SF films, such as *Star Wars* and *Superman* in 1977 and 1978. Luke Skywalker and Superman defeating the pure evils, Darth Vader and Lex Luthor, allowed the people's temporal oblivescence of the internal and external econo-political mess. In this context, the visual effects could be said as a tool for searching for a hero in the Cold War period

4. POSTMODERNIST VISUAL EFFECTS

Introduction

Since the 1980s, effects-oriented SF films, such as *Tron*, *Terminator 2: Judgment Day*, *Jurassic Park*, *The Matrix* and others, have established digital visual effects as the essential technological tool in the SF and fantasy genres. The desire of film industries, as well as audiences, regarding the reality effect, has pressed computer programmers to develop the new software needed for operating digital effects. The development of computer technology and effects software has augmented not only the reality effect, but also the desire for the marvelous.

As I noted earlier, if rear projection makes it possible for Superman to fly to the sky in *Superman*, CGI effects make Neo fly in *The Matrix*. Superman flying through the modern metropolis, by means of modern effects, has evolved into Neo's flying into the virtual sky of the postmodern simulacra. The somewhat unnatural bodily movements of Superman, due to the wires, have been improved and made more real by digital effects. CGI raising the plausibility of flying is inherently postmodern in terms of its synthesization or hybridization of the film and computer, the characteristic of the time-space compression, the hyperreality, and its postmodern implication in the films. I am going to suggest these are four fundamental categories of the postmodernity of digital effects, and will textually analyze the four films within those categories.

First, digital effects blur the boundary between the digital computer and film through the synthesis of the two modern media. Digital effects are a typical model of new media; as Manovich (2001) states, "New media represents a convergence of two separate historical trajectories: computing and media technologies" (p. 20). Digital effects are postmodern as a result of the characteristics of synthetic hybridization. Thus, digital effects tend to blur the boundaries between the computer and film. In terms of the process of producing CGI, digital

effects blur the boundaries between computing and filming, because computing becomes one of the processes of making a film. In terms of the scene that CGI is used, digital effects also blur those between animation and film, the implausible and plausible, and hyperreal and real. In terms of characters, the distinction between human and non-human is obscured. I will analyze the tendency of blurring boundaries as part of the postmodernity of effects-oriented SF films.

Second, the compression of multiple layers of time and space is an indispensable condition of digital effects. Digital effects can be produced anywhere there is a computer, due to their feature as new media made up of the binary code of 0 and 1. While analog visual effects are produced by a special effects team in a single studio, digital effects make it possible for the effects to be created at different places and put together, later, to form a single effect. Since digital effects are produced only when they are needed in specific scenes and specific times, the Fordist concept of inventory disappears. The characteristics of digital effects, which are produced, consumed, and stored as a computer file, make possible the postmodern, late capitalist logic of production-on-demand and just-in-time delivery. The synthesis of CGIs, created at various locations, and live-action footage can be viewed as a typical model of postmodern time-space compression. I will suggest concrete textual analysis of time-space compression of multiple CGIs and live-action footage.

Third, digital effects aesthetics, as reality effect, produce hyperreality created through the simulation of a binary code of 0 and 1. The qualitative advancement of reality effect directly relates to the development of aesthetic style with the support of technology. In contrast, the reality effect produced by analog visual effects has the stylistic limit as the analog although it is founded on the reality. In the case of rear projection, since pre-filmed background scenery and live-action footages had to be recorded at the same time by the camera, the final resolution was

low, compared to the resolution of only live-action footages. The depth of field in the synthetic frame was unnatural, due to the resolution difference between foreground live-action and background pre-filmed scenery; accordingly, the degree of the reality effect was low. In the period of analog visual effects, the 360-degree circulation shot, such as the bullet-time sequence seen in *The Matrix*, was technologically impossible. However, as digital effects were introduced with the development of computer technology, various filmic styles, including the embodiment of impossible scenes, could be operated. As a result, the reality effect comes close to the natural movement of reality events. CGI's representation of dinosaurs in *Jurassic Park* and the figure of the cyberspace in *The Matrix* dominate the live-action shots. In this sense, the reality effect of digital effects is postmodern, as hyperreality of CGI dominates over reality.

The aesthetics of the reality effect created by digital effects can be divided into two categories, as Michele Pierson notes, “technofuturist” and “simulationist” (pp. 96-96). The visual effects dealing with the future, with highly developed science and technology, present a technofuturist effects aesthetic, while simulationist effects realize the imaginative creatures represented as the beings of the past or the extinct animal, such as the dinosaur, by means of digital simulation. Thus, the visual effects used in *Tron*, *Terminator 2: Judgment Day*, and *The Matrix* are technofuturist, while those in *Jurassic Park* are simulationist.

The reality effect of digital effects depends upon the aesthetic style of CGI rendering. The goal of computer graphics is “high quality rendering of complex animated scenes.” “High quality means virtually indistinguishable from live action motion picture photography; and complex means as visually rich as real scenes” (Manovich, 1997, p. 10). Thus, the reality effect of digital effects is measured by the stylistic aesthetics of CGI, in relation to hyperreal events and environment. Digital effects can be applied to all stylistic elements, including mise-en-scene,

cinematography, sound, and editing. Mise-en-scene relates to the depth of field, composition of background settings, and the use of colors in CG frames. Cinematography includes long takes, high and low angles, and so forth. Editing concerns causality of storytelling, as well as fast and slow motion. Sound is closely connected to the reality effect of the event in the CGI. I will examine the postmodernity of reality effect that digital effects create, in terms of hyperreality overwhelming reality.

Fourth, digital effects function as the postmodern narrativity in a film. The reality effect of digital effects overwhelms not only the aesthetics, such as stylistic elements and color, but also the narrative; accordingly, it influences, in part, the meaning of a film. As digital effects are partially added on the live-action footage, they exaggerate or distort the physical performance that is delivered by live-action. In this process, the digital effects can influence the features of characters; as a result, they can manipulate the meaning of a film. For example, the cyber world composited with green digital codes, which Neo recognizes in the end of *The Matrix*, represents the moment of the postmodern that the digital effects showing the scene are, in fact, the computer world. When Neo recognizes the hyperreal world, the audience views the hyperreal spectacle. The digital effects, which are full of hyperreality made up of time-space compression, describe the hyperreal computer world of the story. Thus, a discussion of postmodernist visual effects includes both the postmodernity of digital effects themselves, and also the postmodern themes of the films, which are supported by the digital effects.

In addition, as we can see the digital character of Gollum in *Lord of the Rings*, digital effects can lead the narrative flow and contribute to the implication of the film. One may say that digital effects' influence on the narrative interpretation is secondary because meaning or socio-cultural implication of a film depends upon the narrative based on the script. In a large sense,

most action comes from drama. However, from the perspective of contemporary filmmaking processes, which consider a digital character as one of main characters in the planning phase, the significance of the digital effects cannot be ignored. As a human actor performs acting, a digital character exhibits skills of its own through an engineer's hands in collaboration with motion-capture/voice actors such as Andy Serkis. As the abilities of a director and an actor affect the artistic value of a film, the programmer's delicate techniques determine the performance of the digital character—the reality effect of the digital character—and influence the quality of the film. In addition, digital effects set the historical period of a film. For example, we can see Forrest Gump shake hands with President Kennedy. In this sense, digital effects are no longer effects, but function as narrative elements.

Many effects-oriented SF films represent the narrative implication of technophobia, although their effects aesthetics may be technofuturist. The cutting edge technology of the future that digital effects represent, by means of dazzling spectacle, depict a future society that is dominated by technology; however, the narrative that the digital effects support reveals the anxiety about the distorted and/or excessive development of technology. In this sense, SF films function as the rudder leading the continuous development of technology and civilization, by means of the narratives' warning against excessively advanced scientific technology.

In relation to this technophobic narrative implication about postindustrial non-humanity, effects-oriented SF films frequently represent nostalgia for the industrial modern period. Describing the postmodernity of the dilapidated and anarchistic cityscape and the future technological society in which the subjects become alienated, SF films frequently show the scenes of the modern civilization representing the humanity of affluence and well-arranged cityscape. This is the strategy of SF illuminating the right direction of technological progression

by means of the contrast between the modern and postmodern cityscapes. On this aspect, *Tron*, *Terminator 2*, *Jurassic Park*, and *The Matrix* are not exceptions. I will focus on characters and narrative analysis in relation to technophobic implication under the discussion of postmodernity in order to extract the functions of digital effects as, or within, narrative elements.

In the next section, I will discuss digital effects as synthesis of the computer and film, digital effects' characteristics of time-space compression and the uses of new computer programs in each film, developing the reality effect as the aspects of DFX aesthetics, and the function of DFX as narrative elements in the films' implication, through the textual analysis of *Tron*, *Terminator 2: Judgment Day*, *Jurassic Park*, and *The Matrix*, under the discussion of digital effects' postmodernity and reality effect. In addition to the discussion of digital effects, I will deal with the postmodernity of the films.

4.1 *Tron* (Steven Lisberger, 1982)

Tron (1982) was directed by Steven Lisberger. The film was not commercially satisfactory. Compared to \$17,000,000 of production budget, its "total lifetime domestic grosses" are \$33,000,000 (Box Office Mojo). However, it has been considered by many critics as the first feature SF film inserting CGI footage and dealing with a story within cyberspace. The software company ENCOM is practically run by the Master Control Program (MCP) controlling the evil executive Dillinger. Dillinger stole the programs of video games that the creative computer programmer Flynn created, offered them to the MCP, and become the executive of ENCOM. Dillinger let out Flynn from ENCOM. Flynn enters into the cyberspace of ENCOM in order to regain the stolen video games from the MCP. Flynn defeats the MCP and becomes the chief executive of ENCOM with the help of Tron, his companion Alan's security program.

Synthesis of the computer and film: Blurring Boundaries toward Digital Characters

Tron was the first attempt by feature film to approach the realm of digital animation. Inserting CGI into film footage was still a technique in a transitional period. The level of digital effects technology was insufficient for the perception of the reality effect. Thus, the aesthetics of the effects scenes was inferior in quality of composition, although the insertion of CGI into a film was a new advance in filmmaking at that time. In *Tron*, the distinction between the computer world's characters (computer programs) and the real world's characters is discernable only by their costumes with backlight. All five main characters—Flynn, Alan, Lora, Dr. Gibbs, and Dillinger—enact double roles in the film. They are all computer programmers in the real world, but in the computer world they are the computer programs that they create. Thus, the tool for distinction between the characters as humans and those as non-humans, the computer programs, is needed. Christopher Finch (1984) writes,

The actors are dressed in white costumes overlaid with a pattern of black lines, representing computer circuits, and filmed in black limbo. Each frame is blown up into a large black-and-white transparency that can be reshot on an animation stand. The faces remain human but the figures are reduced to an almost cartoon-like web of lines. Lit from behind they can be made to glow as if illuminated from within (pp. 224-225).

Their glittering costumes were not created by digital effects, but by complex analog light effects. Later, these visual effects were synthesized with the computer-generated background. In the transitional period from analog visual effects to digital visual effects, the distinction between human and non-human characters still depends upon the analog effects, despite the fact that Sark's carrier, Solar Sailer, The Bit, and Light Cycles were created by computer graphics. This

awkwardness demonstrates the difficulty of CG presentation of human characters. At the same time, at the moment that human characters can be perfectly represented with CG, the boundary between human actors and digital characters disappears. It implies the reality subversion of digital effects beyond their reality effect.

However, *Tron* went beyond the limit of expression of HAL in *2001: A Space Odyssey*, through digitizing the MCP as a non-human character. While the description of HAL's charisma heavily relied on its mechanical sound, MCP in *Tron* had the facial expression of its own created by CGI. The MCP has eyes and a mouth, and its voice is well matched with a digital facial expression. The communication between the digitally animated MCP and Sark, and later the MCP's action and reaction to Tron in the final scene, set the film on the borderline between a film and a computer animation. *Tron* is the initiative of synthetically hybrid SF films.

The Beginning of Time-Space Compression: CGI

Tron provides the first model of feature film in terms of time-space compression, as a condition of postmodernity, in the realm of visual effects. In producing *Tron*, four CGI companies made different CGIs with different programs for different uses, and those CGIs were composited with live-action footages. Since the capabilities and specialties of the companies were varied, "each of the four companies was therefore given work that most suited its production capabilities" (Rickitt, p. 126). Light cycles, Recognizers, and Tanks were made by MAGI. Sark's Carrier, Solar Sailer, and MCP were created by Triple-I. Transition sequence was produced by Robert Abel and Associates. In front and in the rear of Tron and Flynn, the CGIs created by different computers at different places are compressed to a single frame. Both the film itself and its own production process are examples of time-space compression.

In the scene where Flynn hangs on to the Solar Sailer that Yori and Tron operate, the computer-generated Solar Sailer, the landscape inside the computer produced by CG, and Flynn's live-action footage are synthesized. The scene is the compressed projection of different times and spaces, and the virtual camera captures this compression. This digital compression reflects the time-space compression of cultural perception. The CGIs produced at different places in different times are compressed into a single time and space.

In terms of the quality of the synthesis of CGI and live-action footage, *Tron* reflects the scene in the video games in the 1980s' video game arcade. The live-action footages of the characters were looking shaky in front of the CG background. In the scene where Ram and Flynn fall down due to Tank's attack, Ram's body excessively shakes because of instability of composition between the background CGI and the foreground character. Most scenes in which background CGI and foreground characters are synthesized fail to produce a convincing reality effect. On the other hand, the scenes composited only with CGI, such as the scene of Tank's running after Light Cycles, provide stable images and a more convincing reality effect. *Tron* showed the limits of visual effects technology, in terms of naturalism of synthesis between CGI and live-action footage, in this early stage of experimentation. The reality effect of *Star Wars*, which uses optical effects rather than CGI, is more convincing.

Technofuturist Effects Aesthetics: The Reality Effect

The reality effect of digital effects aesthetics in *Tron* is postmodern, due to the fact that most stylistic elements are comprised of bricolage, extracted from space SF films. Stylistic elements, such as mise-en-scene, cinematography, sound, and editing, are largely appropriated from those of *Star Wars*, *2001: A Space Odyssey* or *Star Trek*. As there are no earlier models of

cyberspace, *Tron* finds its reference from the representation of space in the earlier space SF films. The moving in the air of Sark's Carrier resembles the mothership's flying in space in SF films. In particular, the spectacular scene wherein Flynn dizzily drives Recognizer through the jungle of digital constructions reminds us of Darth Vader's chasing Luke's X-Wing fighter through the concrete jungle of the artificial planet at the end of *Star Wars*. In the scene wherein Flynn and Sark fight with Identity Disk, CGI creates the disk's flying traces; the disk fighting is very similar to that with Lightsabers. In addition, Flynn, Tron, and Ram's digital transfer to the Light Cycle game grid is exactly like the teleportation—the instant body transfer by means of particle-beam—in the *Star Trek* series. The style is collage of space SF films, though the film is about the computer world.

The reality effect of digital effects, made up of a postmodern collage, represents technofuturism. The instant body transfer and Flynn's power within the computer world present technofuturist effects aesthetics. When Captain Kirk says, "Spock! Beam me up!" Kirk's body disappears and reappears inside Enterprise. This moment of teleportation can be found as the digital transfer in *Tron*, as noted earlier. The technology in *Tron* instantly transferring the character's body from one place to the other indicates that the character exists as a form of digital file. In the status of a computer file, in other words with the use of computers, the character becomes all-mighty, symbolized by the use of teleportation. The aesthetics of digital effects represent utopian technofuturism, as a computerized environment can provide humans with infinite possibility and expand the limited capability of the real world. In particular, Flynn, possessing the unique status of a user, is all-powerful inside the computer world. Ignoring Flynn's authority as a user, MCP tries to kill Flynn by means of the game. However, Flynn demonstrates the supernatural power, possessed only by the user, whenever he is at the crucial

moment. Flynn revives Recognizer by chance and learns how it works by himself. Flynn recalls bringing Yori to life only by a touch. Flynn, who is a human being, becomes a god in cyberspace. We can also find the technofuturism with computers in *The Matrix*. Neo, who flies to the sky, dodges bullets, and raises Trinity from the dead in cyberspace, resembles the figure of God. This omnipotent figure is supported by digital effects and portrays technofuturism.

Postmodern Narrative Settings

The figure of ENCOM, dominated by the evil Senior Executive, Ed Dillinger, and the night view of the surrounding of its building in the real world, are similar to the figure of the game grid in the computer world. All of the shots in the real world are night shots, except for the very last scene. However, even the last scene ends with a night shot. The lighted circuit was installed on ENCOM's helicopter when Dillinger rides at night time. The pattern of the light on the contours of the helicopter provides a similar image to Recognizer in the game grid. The image of night is well matched with the background color of black in the computer world. The camera does not take people in the ENCOM building, which is made up of cold hardware of computers. The background of Dillinger's office was set as black. There is no humanity in the ENCOM building. As such, ENCOM is represented as the realm of computers. As divided with a number of partitions, the office of computer programmers shows the typical model of a fragmented working environment, as the figure of the late capitalist office. In this sense, the mise-en-scene taking Dillinger's ENCOM Corporation portrays the postindustrial logic of production.

On the other hand, Flynn's video game arcade is swarmed with people making a fuss about enjoying the games. The arcade is the place where they blow off the stress built up by the

day or week. When Flynn plays a game, people continuously surround and cheer for him. When he makes a new record, all the people loudly acclaim and embrace him. Flynn's arcade seems to represent the place of unification for humanity, and simultaneously the space of modernity wherein economic development is progressing within the fever of industrialization. In this respect, ENCOM, which is the place of computers' alienation of people, and Flynn's arcade, which is the place for the people's unification, stand opposite of each other; this contraposition can be translated as cinematic contrast between postmodernism of fragmentation of humanity and modernism of its unification.

Digital Effects as Narrative Elements: The Balance between Technophobic Implication & Technofuturist Symptom

Tron shows the balance between technophobic implication and technofuturist symptom by means of the digital effects aesthetics. Ignoring the authority of the language of the program that the users create, the world of computer digital effects consists of the postmodern world. As Ihab Hassan (1987) indicates, we “deconstruct the language of power” in the contemporary postmodern world from “a desuetude of metanarratives” to “death of the author” (p. 169). The narrative imperils the user as the program author. Dr. Gibbs' lines in the beginning of the film show humans' idle belief in the users' authority.

Dr. Gibbs: You gotta expect some static. After all, computers are just machines.

They can't think.

Alan: Some programs will be thinking soon.

Dr. Gibbs: Won't that be grand? Computers and programs will start thinking, and the people will stop.

Gibbs is optimistic about the control over computers; he thinks that if computers think and cause a problem, people turn off their power. Gibbs emphasizes the authority of the author who has the language of computers, which seems to refer to the last scene of *2001: A Space Odyssey*.

However, the solution of *Tron* goes beyond that of *2001: A Space Odyssey* removing HAL by means of “turning it off.” *Tron* suggests the new way of defeating MCP through the battle between the computer programs able to think by themselves. The language of programs can be viewed as a grand narrative in the computer world. The user who controls the language is alienated by MCP. The authority as the author disappears, the user’s power is decentralized. MCP effectively dominates its user, Dillinger, and makes him its subordinate.

Dillinger: Wait a minute. I wrote you! I’ve gotten 2,415 times smarter since then. What

do you want with the Pentagon? The same thing I want with the Kremlin. I’m

bored with corporations. With the information I can access, I can run things 900 to

1,200 times better than any human. If you think you’re superior to us...

MCP: You wouldn’t want me to dig up Flynn’s file and read it up on a V.D.T. at the

times, would you?

Dillinger: You wouldn’t dare!

MCP controls Dillinger by taking advantage of his weakness, and tries to attack Pentagon. This narrative of computers’ domination over the human world implies the technophobia of the future computerized information society. Sark’s lines to the user, Flynn, present the user’s alienation, which is the representation of the death of the author.

Dumont: Who’s that?

Yori: That is a User, Dumont. He came here to help us. Tron believed in him.

Dumont: If the Users can no longer help us, we’re lost.

Sark: So, we have erased that program... No. You were de-rezzed. I saw you.

Flynn: Not me, Sark.

Sark: There is nothing special about you. You're just an ordinary program.

Flynn: So are you, one that should have been erased.

Sark: You're nothing.

The users who lost their authority oppose MCP by means of their agents, which are the programs that were created by the users, themselves. Alan tries to destroy MCP through his best program, Tron. Tron destructs destroys MCP with the support of Yori, Lora's program, Flynn who is the user entered into the cyberspace, and Dumont, Dr. Gibbs' program. The villain character, which puts the world in fear, is the digital computer, and at the same time, the protagonists saving the world are digital programs. Here, we can find the dual narrative structure of the technophobic implication and technofuturist symptom. Dr. Gibbs' lines exemplify human belief in the computer program.

Dr. Gibbs: That was uncalled for. You can remove men like Alan and me from the system, but we helped create it. And our spirit remains in every program we designed for this computer.

The last two scenes clearly show the technofuturist symptom. To distract MCP, Flynn jumps into its beam. Then, Tron demolishes MCP by throwing the disk. Despite the support of the human character, Flynn, what eventually destroys MCP is the computer program, Tron. Despite the technophobic implication of MCP's domination over the human world, *Tron* presents the technofuturist symptom that the digital program saves the world as the title of the film is not Flynn but "Tron." All of the Input/Output Towers of the cyberspace light up as the world lights up after villain characters are dead in most SF films. Flynn comes back to the real world. In the

very last scene, the only one daytime scene out of the whole film, the camera takes in the cityscape from the rooftop of ENCOM building. The daytime light gradually shades to the dark in the night. The headlights of cars change to the glitter of the bit circulating the computer circuit. The night view of the city becomes similar to the game grid in cyberspace. These last scenes represent the symptom of technofuturism. The fear about computers can be removed by digital technology; as the peaceful night view of the cityscape portraying the happy end shows in the end of the film, the film symptomatically represents that digital technology is the essence of our ordinary life.

4.2 *Terminator 2: Judgment Day* (James Cameron, 1991)

Terminator 2 (1991) was directed by James Cameron. It was very successful sequel of *The Terminator* (1984). *Terminator 2*'s worldwide box office was "\$519,843,345 (\$204,843,345 domestic and \$315,000,000 foreign)" (Box Office Mojo). The film won four Oscars including visual effects and makeup. The main computer of Skynet sends T-1000 to the present in order to remove John Conner, who is the future leader of the human resistance. John Conner in the future sends T-101, whose appearance is same as that of the terminator in the past, to the present in order to protect himself and his mother Sarah Conner. John and Sarah survive with the support of T-101 defeating T-1000. T-101 sacrifices himself to terminate the micro-processor which comes from the future.

Postmodern Setups and Subjectivity

Terminator 2 is a typical model of the technophobic SF genre films. The man-made military computer system, Skynet, obtains artificial intelligence superior to the human's. When

humans try to unplug Skynet, it fights back by launching missiles. The immediate aftermath of the nuclear bombing is described, in detail, in the scene wherein Sarah screams in front of the wired-in park. The blast of nuclear weapons sweeps the earth. The urban center and the playground fall into ruins. The very first shot of the film presents the playground ruined in the near future, Los Angeles in 2029. Skynet's fighters are flying over the burned swings and rocking horses. The film begins with this dystopian state of the future.

In the post-apocalyptic scene, which is represented as Sarah's vision, the skyscrapers of the modern urban cityscape abruptly changes to the postmodern dust from the nuclear bombing. Right before the bombing, the camera captures the long take of the skyscrapers as the symbol of modern urbanization at the background of the frame. At the same time, it takes in Sarah, who is "a traditional bourgeois mother playing with a toddler," at the foreground (Byers, 1995, p. 7). The shot depicts a happy and modern spring day. In contrast, due to the bombing, the buildings collapse and the trees are uprooted. The nuclear storm rolls over the buses, burning everything, including the children. Los Angeles becomes a handful of dirt. It is a terrible sight of the future, caused by highly developed technology, the postmodern world.

The contrast between T-101 and T-1000 "embodies the opposition between classical and late capitalism, and between modern and postmodern culture" (Byers, p. 8). As we can see from the very first scene, when a few T-101s having the same shape of endoskeleton search the human rebels, the T-101 model is a "production-based industrial" cyborg produced by the standardized factory automation system (p. 8). In addition to this production aesthetic, the subjectivity of T-101 as Terminator is modern in terms of its heroic performance. The action it shows resembles that of superheroes. When John and Sarah are in danger, Terminator defeats T-1000, saves them, and leaves/dies alone. The Terminator character is the figure of the protagonist in *Superman*

disappearing into the sky after rescuing people and/or that of *Shane* (George Stevens, 1953) leaving alone after defeating the villains. In addition, the way he fights is modern. T-101 uses only the modern style weapons such as guns, rifles, and M-60 machine gun. T-101 can be viewed as a cyborg Rambo. Although its body is “a cybernetic organism, living tissue over metal endoskeleton that is postmodern hybridization” (p. 8), the figure of T-101 is full of humanity to the degree that John Conner feels paternal affection for it.

On the other hand, T-1000 is liquid metal, able to change into anything that it touches; its identity is instable. It shows the uncertainty of the postmodern subject, as we can see in *The Matrix* that Agents can transform into anybody in the Matrix. T-1000 does not use a specific firearm; its body is a weapon itself. Its arms transforms to the gimlet, the axe, and the lever. Its liquid body heals up automatically when it is shot. Its fragmented body is combined together at the liquid status. The only purpose for which it exists is to terminate John Conner. It does not show any humanity. T-1000 is a killing machine, which is specially produced for the user’s needs. In this sense, T-1000 embodies the product of “consumption-based informational economy” (p. 8). Though T-1000 is an advanced cyborg, it is inferior to the old one in terms of humanity, the lack of humanity as a byproduct of highly developed technology. As such, T-1000 portrays postmodern subjectivity which is ambiguous and unstable due to the repetition of its body’s fragmentation and unification.

The Breakthrough of Visual Effects: Morphing

3-D morphing technology served as a landmark of special effects through the presentation of the liquid-performance of T-1000 in *Terminator 2*. As T-1000 is an implication of a future technology in diegesis, the morphing is an advanced model of visual effects. The level of

visual effects moves out of the early stage of CGI insertion in *Tron*, and enters into the advanced realm in order to “map 2-D images on to the surface of 3-D animated objects” (Rickitt, p. 305). The first movie that tried the morphing technique was *Willow* (Ron Howard, 1988); however, the film could not obtain favorable reception due to its low quality (Knoll, Special Features). Then, Industrial Light and Magic (ILM) experimented with morphing in CG scenes of *The Abyss* (James Cameron, 1989). *Terminator 2* realized the breakthrough of visual effects, the morphing. The reality effect of the impossible events of T-1000, such as the seamless transformation from the shape of liquid metal to that of the Police Officer, was made possible by the development of computer technology, which made it possible to transfer film images to a digital form. From the early 1990s, the technology permitted films to be converted into digital media (Rickitt, p. 35). CGIs began to be added onto the digitized live-action footages. Thus, by the support of the digitization of films, digital effects, such as the morphing, began to emerge.

The morphing technique can be viewed as the first digital effect to produce a reality effect approaching the verisimilitude of actual events. The morphing is also called “texture mapping.” It allows the surface of an object to digitally transform that of the other by means of a new software program, “Make Sticky,” produced for *Terminator 2* (Vaz and Duignan, 1996, p. 97). The digital shape-changing process makes some distortions on the surface. However, any distortions on the CG object “could be digitally painted to completion using Photoshop on Macintosh computers” (Vaz and Barron, 2002, p. 221). Thus, we can be aware that the scene wherein T-1000 steps from the flame in the status of liquid metal and transforms into the Police Officer is made up of the digitized live-action footage, CGI of 3-D morphing of the shape-changing cyborg, and a number of manipulations of the CG figure with Photoshop. It is the basic form of the compressed projection of multi-layered CGIs. The different time and space in which

each effect is produced is compressed into a single time and space to create the reality effect. In this context, the hyperreal presentation of the morphing is able to have its reality effect through the time-space compression of multiple CGI, although it is only cinematic illusion.

The Effects of Attractions

Dominating over the narrative, the spectacle of *Terminator 2* makes the film part of the cinema of attractions. The reason that *Terminator 2* commercially succeeded was not the novelty of its narrative structure or well-made story, but the new appearance of the incredible sight of T-1000. For the narrative structure of 'time travel' and the leitmotif of the 'nuclear war' were not only repetitious of those of *The Terminator* (1984), but had already become a cliché of SF. The basic setups were also not unique; the only twist was that the villain character of the first part, T-101, played the protagonist in the sequel. Accordingly, the central aim of the film moves to the spectacle. The question was not what the story would tell, but how they would show it. The solution for 'how' was the morphing technique. The development of the computer program and the resulting emergence of the digital effects support the power of spectacle to lead the narrative by means of reinforcing the power of attractions. Thus, the tradition of the cinema of attractions is transforming into the effects of attractions in the digital age.

Digital effects overwhelm and lead the narrative. The structure of time travel from the future emphasizes the performance of the future robot technology of T-1000. T-1000's transformation, presented by morphing, not only catalyzes the narrative progression, but also ends the narrative flow. When T-1000's truck is turned over and wrapped in flames, it survives by means of its feature of liquid metal. It transforms into a metal state, and revives as a shape of the police officer. The morphing supports the continuity of the storyline. In the scene wherein T-

1000 intrudes into the mental hospital, in which Sarah is confined, the camera takes T-1000's rising out from the checkerboard floor. The digital effects lead the narrative progression of T-1000's obtaining the key to Sarah's room. In the very last scene, T-1000 falls into the smelting furnace because of T-101's final gunshot. T-1000 transforms its shape into the various figures in order to survive; however, it fails, and the narrative ends. T-1000 revives through the morphing, and is also terminated by it. At the same time, the narrative is controlled and ended by the digital effects. The diegesis of *Terminator 2* is overwhelmed by the digital effects of attractions. Digital effects are the tools for the audience's absorption and for its empathy into the diegesis. In this sense, the effects of attractions in *Terminator 2* dominate the narrative, motivate the narrative progression, and induce the audience's empathy into the diegesis by means of the reality effect. Whereas the trickality of Méliès makes the audience a gawker by visibility of tricks, the reality effect of morphing in *Terminator 2* provides "technological verisimilitude" to the audience.

The Tension between Technophobia and Technofuturism

The theme of technophobia versus technofuturism, of the computer versus human beings, is clearly presented in the dialogue between Miles Bennett Dyson, the director of the Skynet project at Cyberdyne Systems Corporation, and his wife, Tarissa Dyson. Tarissa asks Miles, working all day at home on Sunday, to play with their children.

Miles: Baby, I am this close. Come here. Imagine a jet liner with a pilot that never gets tired, never makes mistakes, never shows up to work with a hangover. Meet the pilot.

Tarissa: Why did we get married, Miles? Why did we have these children? You don't need us. Your heart and your mind are in here (She indicates the computer). But it

doesn't love you like we do.

Miles' line clearly shows a technofuturist vision about the computer. However, Tarissa's line implies the dystopian aspects of the distorted development of technology. Finally, he turns off the computer and chooses his family. When Sarah draws a bead on the back of Miles' head, Miles is able to dodge the bullet because his son touches him with the toy car. When Miles hangs down his head to grasp the toy car, Sarah fires toward him. The bullet lodges in the computer monitor, not him. It is the cinematic criticism of the computer technology.

However, there is a moment wherein technofuturism appears. When the camera takes John's merry laughter with Terminator, Sarah's voice-over is heard.

Sarah: Watching John with the machine, it was suddenly so clear. The Terminator would never stop. It would never leave him, never hurt him, never shout at him or get drunk and hit him, or say it was too busy to spend time with him. It would always be there, and it would die to protect him. Of all the would-be fathers who came and went over the years, this thing, this machine was the only one who measured up. In an insane world, it was the sanest choice.

Looking at John, who is viewing the Terminator as a father figure, Sarah considers the cyborg as an alternative of the actual father. The implication that humanity's last hope is in the hands of the cyborg, created by Skynet, portrays James Cameron's technofuturist belief. As Cameron mentions, "Don't let the real world dictate to you" (Special Features). Sarah's voice-over implies to us that we should actively access the digital world to minimize the evil influence of the computer or to stand against its subversion.

Sarah's very last voice-over describes the tension between technofuturism and technophobia. "The unknown future rolls toward us. I face it for the first time with a sense of

hope. Because if a machine, a Terminator, can learn the value of human life, maybe we can too.” When Terminator enters into the smelting furnace by itself, Sarah grants the value of humanity to the cyborg. She suggests a precaution against “the unknown future” that is the regression to human nature. It is the implication that the original sin does not belong to the computer, but to the humans who created it. In this sense, the film shows the tension between the hope, which is discovered from the cyborg, and the latent despair, caused by the destruction and avarice of the human.

4.3 *Jurassic Park* (Steven Spielberg, 1993)

Jurassic Park (1993) was directed by Steven Spielberg. It was a mega hit of the time and critically successful. *Jurassic Park*'s worldwide box-office was “\$914,691,118 (\$357,067,947 domestic and \$557,623,171 foreign)” (Box Office Mojo). The film won three Oscars including visual effects. Dr. Hammond, who extracted the DNA of dinosaurs from the fossils of the mosquitoes, constructs Jurassic Park on an island off Costa Rica. To show the park, he invites his grandchildren and dinosaur experts including Drs. Grant, Sattler, and Malcolm. Due to the computer engineer Nedry's betrayal, the park's safety is threatened. They fight desperately with dinosaurs to survive.

Postmodern Subjectivity

The narrative setup of the confrontation between human beings, who are presented as imperfect and weak characters, and the dinosaurs, which are described as perfect and strong creatures, represents postmodern subjectivity: the human beings are alienated from their own creatures and lose their authority as a result. The subjects in *Jurassic Park* are unstable, in that

they are located between the position of a conqueror and the prey of T-Rex. While *Tron*, *The Terminator 2: Judgment Day*, and *The Matrix* ask the questions, “Will machines rule the human world?” and “Can machines replace human beings?” *Jurassic Park* suggests the answer to the question, “Can human beings break the rule of the nature and take the God’s position?” *Jurassic Park* does not deal with the familiar story of the above three films, wherein the computers that humans create develop intelligence by themselves and attack the humans. However, the human beings once again destroy themselves by misusing science and technology. Thus, computers, as the symbol of technology, change to dinosaurs in this film.

The human characters in *Jurassic Park* lose their free will, due to the power of dinosaurs. To make a profit from the entertainment park, human beings oppose God’s choice of the extinction of dinosaurs. However, they fail in opening the park because of the distorted development of technology, symbolized by the dinosaurs. The artificial facilities, including the tour cars and computerized security system that human beings create, are full of errors; they always need human support. Above all, the human characters themselves make mistakes. Dr. Hammond is represented as an imperfect and weak figure. From the beginning to the end, he cannot control the dinosaurs, the computer system, and even his employee, Dennis Nedry, who sells the dinosaurs’ embryos, leading to chaos in the park. Nedry’s betrayal acts as a serious error of the modern vertical command system, which is made up of the relationship between orders and obedience. Discipline and orders are derailed, and in a moment, *Jurassic Park* changes to the postmodern mishmash of dinosaurs and human beings mixed together.

In *Jurassic Park*, we cannot find the active and aggressive characters who fight and beat off the atrocious dinosaurs. Such characters cannot actually exist in the diegesis. Flynn in *Tron*, Sarah in *Terminator 2*, and Neo in *The Matrix* valiantly encounter the computers’ rebellion and

eventually gain ascendancy over the AIs. However, *Jurassic Park* suggests a single weak figure who is always hunted and chased. Even Dr. Grant, who is set as a protagonist, can only protect Tim and Lex, the grandchildren of Dr. Hammond, from the attack of T-Rex. On an island off Costa Rica, human beings lose the subjectivity as conquerors, and are degraded to the positions of prey for the T-Rex. In this sense, the digital effects representing the dinosaurs portray human beings as the unstable subjects who lose their self-respect, authority and power.

Time-Space Compression

Digital composition techniques in *Jurassic Park*, combined with the narrative structure coexisting the Jurassic Period and the present, reflect the time-space compression as the condition of postmodernity. First, a great portion of the performance of the dinosaurs is rendered by elaborate CGI. The main characters of the film are not the human characters, but the dinosaurs. Even though the film's story is about the human daredevil challenge to the realm of the God, the dramatic tension and amusement are brought about by the spectacle of the dinosaurs. The dinosaurs' movements and acting are the essence of the film's spectacular pleasure. Thus, their natural movement and the accordance between the CGI and live-action background determine the degree of the reality effect and govern the success or failure of the effects of attraction. For example, if T-Rex is animated by computer graphics at once, it is composited on the live-action background. In the scene in which the two tour cars stop in front of the T-Rex's paddock on the stormy night, the CGI character T-Rex is synthesized with the live-action footage in front of the paddock. The splashes of water caused by T-Rex's steps are also added to describe its natural footstep. After recording the actual water splashes, they are synthesized with the CGI of T-Rex on the live-action background (Special Features in DVD of *Jurassic Park*). As Rickitt

states about the CGI in detail, in the scene where a flock of Gallimimus is fleeing from T-Rex, “small clouds of dust and dirt were added beneath its feet” (p. 172). The computer-generated time and space of T-Rex and the real action time and space of the water splashes and live-action background of the paddock are compressed into a single frame and projected onto the screen. This is the compression of three different spaces and times—the computer, the location for the water splashes, and the T-Rex paddock.

This time-space compression in compositing CGI is also found in the scene in which the lawyer, Gennaro, is eaten by T-Rex as he remains seated on the porcelain train. T-Rex’s movement line is set at first. Then, Gennaro acts as though he is being taken in its mouth in the toilet. The real actor replaces the digital character when T-Rex snatches and shakes him. This scene represents the exquisite and minute compression of time and space of CGI and live-action footage.

Second, in diegesis, the Jurassic Park in the island, Isla Nublar, 120 miles west of Costa Rica is the embodiment of time-space compression between the past (the Jurassic period) to the present.

Grant: The world had just changed so radically, and we’re all running to catch up. I don’t want to jump to any conclusions, but look, dinosaurs and man, two species separated by sixty-five million years of evolution, have just been suddenly thrown back into the mix together. How can we possibly have the slightest idea of what to expect?

As we are made aware from Dr. Grant’s line, time and space of the present and those of the past, sixty-five million years ago, are compressed into the island. The dinosaurs and human beings come to coexist beyond the time difference of sixty-five million years. As the cultural sense of

time-space compression sets off the condition of postmodernity, the technology of DNA cloning, as one of the results of the late capitalist economic structure, shows the direct and physical compression of time and space beyond the level of cultural sense. Like this, *Jurassic Park* reflects the time-space compression not only in the aspects of the production aesthetics of digital effects, but also in the narrative structure.

The Postmodernist Reality Effect: Simulation & Bricolage

The reason that “*Jurassic Park* marked a transition from Machine Age tools to computers and software” (Vaz & Barron, p. 226) is the maximized reality effect that the shapes and movements of dinosaurs produce. The reality effect of the dinosaurs’ movement is postmodern, which has the feature of hyperreality and bricolage. The CGIs, which are extracted from the Dinosaur Input Device (DID), produce hyperreality through digital simulation. The miniatures and robotics of full size models support the simulation. The CGI dinosaurs are bricolage themselves because DID creates the movements of the dinosaurs by referring to those of actual animals, such as an elephant and the reptiles. Their sound is also the mix of roars of beasts.

The reality effect DID creates is hyperreal, due to the digital simulation. According to Craig Hayes, the computer interface engineer of *Jurassic Park*, the reality effect of the dinosaurs’ movements passes through the following five phases (Special Features): 1) DID resembling joints of a dinosaur is produced at first. 2) The joints of DID is connected to the computer. The movements of joints of DID is automatically translated to CGI through digital encoding. 3) The movements of a dinosaur needed in the film are grasped. 4) The movements of a dinosaur needed are digitally encoded by naturally moving the joints of DID. 5) The making of CGI is completed as its facial expression and flesh are added on the skeleton of a dinosaur which is encoded

through DID. Thus, the reality effect that the movements of a dinosaur create is not one hundred percent imagination, but the mimetic reality, in part, making reference to the movements of a hardware puppet.

In addition to CGI, the movable miniatures and actual full size model support the representation of the dinosaurs in the film. In the scene wherein Dr. Grant and his party meet the triceratops taken ill and laying on its side, the figure of triceratops was a full size puppet. The triceratops performs blinking, breathing, and foot moving by means of robotics, which Stan Winston, the director of live-action dinosaurs, defines as “the perfect combination of art and technology” (Special Features). When the triceratops is breathing, Dr. Grant feels her bulging belly, and Dr. Sattler examines her tongue. In another scene wherein Dr. Grant, Tim, and Lex sleep on the big bough of a tree to evade T-Rex’s attack, they physically touch the brachiosaurus, the tall herbivorous dinosaur. Thus, depending on the needs of the story, the dinosaurs were eclectically represented with miniatures and full size models, or CGI.

The reality effect the CG dinosaurs create is theoretically hyperreal, in itself, because the dinosaurs do not actually exist. On the other hand, since computer graphic movements of the dinosaurs are generated by the referent encoding tool called DID, it can be viewed as a technical reality mimetic or semi-hyperreal. This technical mimesis of the dinosaurs’ movements is an eclectic copy of the real animals’ behavior; it is bricolage. In the scene in which T-Rex chases a car in which the security manager Muldoon, Sattler, and Malcolm are riding, T-Rex gives a head butt to the right side of the car. This scene is supported by DID encoding of a rhino performing the same behavior. The brachiosaurus standing up with two feet to browse on leaves refers to the same behavior of an elephant (Special Features). By doing so, the dinosaurs were produced by digital encoding, which is based on DID. Like this, *Jurassic Park* shows a typical form of

bricolage through synthesizing CG movements of the dinosaurs by means of a combination of behaviors of irrelevant animals; sound is not an exception. According to Gary Rydstrom, the sound designer of *Jurassic Park*, the sound of the small flesh-eating raptor killing Nedry was created by mixing the sounds of swans, hawks, a rattlesnake, and a howler monkey (Special Features). It is also bricolage as the aesthetic strategy of postmodernism creates a new sound by means of sampling and mixing familiar ones taken from everywhere.

Hyperreality and bricolage DID provide the postmodern characteristics for the reality effect of the CG dinosaurs. Interestingly, the method of making CGI by using DID is very similar to the process of creating dinosaurs by cloning DNA in diegetic world. DID converts the movements of the artificial joints to CGI by means of simulation of digital code. In other words, the present cutting edge technology called DID makes it possible to project the movement of the past creature to the present screen. In diegesis, the scientists extract the DNA of dinosaurs from the mosquitoes who bit dinosaurs sixty-five million years ago. They artificially breed dinosaurs after reproducing the DNA. By the use of the present medium, such as the fossilized tree sap called amber, they re-create the past creature in the present. Thus, the encoding, which makes digital simulation possible, can be compared to the DNA cloning; digital code can be viewed as DNA breeding the dinosaurs. The narrative of the film is already presenting the technological essence of the CG representation of the dinosaurs.

The Tension between Technofuturism and Technophobia: CGI-saurus vs. Computers

In the film's diegesis, the dinosaurs represent the results of high technology produced by Dr. Hammond's team of scientists. The aesthetics of the digital effects presents technofuturism, in that the effects make the dinosaurs in the Jurassic Period reborn in the present. The technology

of DNA cloning, which recalls the past T-Rex to the present as it was, declares that there is no longer extinction of a species. The CG-Rex, the T-Rex that CGI creates, implies technofuturism, in that it cinematically embodies the immortality in the meaning of no extinction. From the aspect of filmmaking, the reality effect shown by the CGI is precisely accorded with foreground and background scenery; so, it is hard to distinguish between the real event and CGI. Not only the film, but also the CGI technology, are technofuturist themselves. The CG-Rex represents technofuturism in this context.

On the other hand, the CG-Rex reveals technophobia, as it makes human characters helpless and dominates the island. The CG-Rex's takeover of the island symbolizes the extinction of human beings. The high intelligence creates the CG-Rex, compared to the CPUs in *Tron*, *Terminator 2*, and *The Matrix*. The CG-Rex and the CPUs are also common, in that they are man-made artificial creatures. The storylines are also common, in that they have a somewhat banal narrative structure, wherein the distorted development of science and technology brings about the fall of mankind. In this respect, *Jurassic Park* is a typical SF genre film. The fall of mankind caused by the distorted scientific development is implied by Malcolm's line in the beginning of the film.

Hammond: Now, the most advanced amusement park in the entire world, incorporating all the latest technologies. And I'm not talking just about rides, you know.

Everybody has rides. No, we've made living biological attractions so astounding that they'll capture the imagination of the entire planet.

Sattler: (looking at Dr. Grant) So, what are you thinking?

Grant: We're out of job.

Malcolm: Don't you mean "extinct"?

The above lines are comical, because the cloning of dinosaurs means the loss of employment of some archaeologists and biologists. However, at the same time, if it is allegorized to animals, Malcolm's line "extinct" includes the symbolism of the extinction of mankind. It is the unique technophobic setting of the narrative of SF genre films that the development of science and technology, without scholarly conscience, may cause the extinction of mankind. From the viewpoint of the high technology of DNA cloning, saving us from the fear of extinction, the CG-Rex is an embodiment of technophobia.

4.4 *The Matrix* (Andy & Larry Wachowski, 1999)

The Matrix (1999) was directed by Andy and Larry Wachowski brothers. It was commercially and critically successful. The worldwide box-office profit was "\$460,379,930 (\$171,479,930 domestic and \$288,900,000 foreign)" (Box Office Mojo). In 1999, the film won four Oscars including visual effects. *The Matrix* represents a manipulated virtual reality that is thought to be the real world; in the future, Artificial Intelligence (AI) takes human beings' bodies and souls hostage, controlling what takes place in the virtual world. With the assistance of Morpheus and Trinity, the protagonist (Keanu Reeves), who lives in the two worlds under the names of Thomas Anderson and Neo, escapes from the virtual reality that AI has constructed, and becomes "the One" who saves the real world.

Technofuturist Effects Aesthetics

The digital effects in *The Matrix* follow technofuturist effects aesthetics in that the film represents infinite human capabilities in cyberspace, supported by digital effects. Neo presents a human paradigm in the contemporary digital age. He downloads programs, learns instantly, and

temporarily consumes them. Further, he utilizes this power of the virtual-self in simulation of the Matrix to save people in the real world. He achieves perfection of the self via the digital simulation. He downloads Kung Fu programs in order to learn jujitsu and lots of guns for rescuing Morpheus; he opposes the digital Matrix. Morpheus' line clearly manifests technofuturism of digital effects.

Morpheus: This is the Construct. It is our loading program. We can load anything from clothing to equipment, to weapons, and to training simulations, anything we need.

Neo: Right now we're inside a computer program?

Morpheus: Is it really so hard to believe? Your clothes are different. The plugs in your arms and head are gone. Your hair has changed. Your appearance now is what we call "residual self-image." It is the mental projection of your digital self.

In the diegesis, the digital program makes what Neo wants realized. In the digital world, we can do whatever we want. In one click, we can change our clothes and hairstyle, move to some places, and transform ourselves into totally different people in a moment within cyberspace. We can ideally conduct our digital selves. Outside the diegesis, what makes the digital program's performance possible, what makes Neo an omnipotent human, are digital special effects. In the real world, we can improve the quality of our lives by means of cyberspace. We can purchase books and cars, and order foods at home through the Internet. In cyberspace and/or by using cyberspace, we can maintain and refine the real life. In this sense, the digital effects shown in *The Matrix* present technofuturist aesthetics.

The New Advance: Bullet-Time Shot

The scene producing the highest reality effect in *The Matrix* is that of Neo dodging bullets. The scene is a typical model of the cinematic condition of postmodernity. The technique called “time slice photography” makes it possible for Neo’s action to be shown in extreme slow-motion with a 360 degree view. The technique is also frequently called the “bullet-time shot.” According to Pascal Pinteau (2003), in an entirely painted green studio, this scene was filmed by preparing “124 still cameras around Keanu Reeves and then triggering one after another at intervals of one-thirtieth of a second.” As a result, “the more the interval was reduced, the more the action slowed down” (p. 206). If the surrounding cameras take an actor suspended in place at the same time, the actor can be visually frozen in the air. The diegetic time of the moment is expanded to the infinity. The moment becomes the infinity. This is the distortion of the perception of time that brings about the reality effect. The plausible and detailed description of impossible events increases the reality effect as it causes the cinematic illusion.

The addition of digital effects to the bullet-time shot maximizes the reality effect of the effects aesthetic. The bullet-time shot is a result of the compression of three different kinds of times and spaces. One is time and space in the studio which consist of circular bricks painted green, a hundred and twenty-four still cameras, the actor Keanu Reeves, wires, lights, and two motion picture cameras. This is the first layer of time and space. Another is still photographs of real cityscape functioning as “virtual backgrounds.” In the diegesis, the place where Neo dodges bullets is the rooftop of a building. The skyscrapers tower round the building. In order to composite the studio-shot to the rooftop location-shot, some background images are needed. Those are still images of the urban center of actual Sydney. “Still photographs of real environment were taken from carefully measured positions” (Rickitt, pp. 303-304). The second

layer of time and space indicates the skyscrapers in Sydney in the historical time that the photographs employ. The third layer is time and space produced by CGI rendering of the roof where Neo stands. The CGI would be produced by an effects technician with certain computers in a certain time period. The CGI is composed of somewhat ambiguous time and space though it supports time and space that Neo dodges bullets in the diegesis because the CGI is constructed by the binary code of 0 and 1. The digital code is only able to construct a layer of image; it cannot have its own time and space. The virtual camera compresses these different kinds of times and spaces and projects them onto the screen. This is cinematic version of time-space compression.

The compressed projection of different images by means of the computer-operated virtual camera reflects the condition of postmodernity that is the characteristic feature of flexible accumulation in the late capitalism. Digital computer technology speeding up time-space compression of the present world makes the effects aesthetic of the film postmodern through the digital compression of multiple time and space including live-action, CGI, and digitally manipulated still images.

Postmodern Setups and Narrative

The term “matrix” refers both to the womb and the regular formation of elements into columns and rows in mathematics. In relation to this, on the one hand, the terminology symbolizes a closed space, which is pregnant with the virtual reality in the film; on the other hand, it lends meaning to the heartless digital world symbolized by the combination of the binary code of 0 and 1. Thus, the film’s title, “The Matrix,” implies the plot and story of the film, and guides the spectator through the world of simulation.

It is 2199, but, in fact, nobody knows exactly what time it is. It is the time when AI cultivates human beings in incubators and takes sole possession of their bodies to use them as its energy sources. AI restricts human beings' mental world in the virtual reality of the Matrix. The setup of the film, in which computers rule human beings, is not a new dystopian narrative. Already, there had been several films about the dystopian future concerning the distorted development of the future scientific technology, such as Ridley Scott's *Blade Runner* (1982), *Tron* (1982) and *Terminators I* (1984) and *II* (1991). As *The Matrix* followed an example of the 'computer-dominated world,' and borrowed the tension between simulation of the digital world and identity of the real world as a dramatic motif, it became a new prototype of postmodern science fiction.

The Matrix is a pastiche of *Dark City* (Alex Proyas, 1998), *Men in Black* (Barry Sonnenfeld, 1997), and *Ghost in the Shell* (Mamoru Oshii, 1995). In *Dark City*, aliens manipulate human memory to obtain the clues for their rescue from the human brain. Andy and Larry Wachowski borrow this theme in their own story. AI electronically manipulates human memory in order to dominate the human bodies. In the Japanese animation *Ghost in the Shell*, the cyborg character Motoko Kusanagi dresses in a tight uniform and displays difficult martial arts that exceed physical laws and include kicking in the air. Kusanagi has the four holes on the rear of his neck for connecting to the computer system. In addition to the mechanical holes on the body which are in common with the other human resistants, Trinity's tight uniform and her martial performance, such as walking on the wall and kicking in the midair, are imitations of Kusanagi's character. In *Men in Black*, Tommy Lee Jones and Will Smith wear black. The three agents of Smith, Jones, and Brown, are in black, too.

In addition to these sources, the duel between Neo and Smith is a parody of the Western.

And the famous dodging bullets scene is a remake of the Western duel. Other fighting scenes recall Hong Kong noir and Japanese sword films. Neo shows Bruce Lee's gesture of touching his nose and Jackie Chan's drunken fighting in the Kung Fu learning scene. In this respect, *The Matrix* enters into the realm of the postmodern cinema as succeeding SF tradition, representing a dystopian future, and presenting synthesization from other film genres.

Postmodern Subjectivity

As Dongjin Lee (1999) points out, the identifications (IDs), the actual names in diegesis, imply the characters' unique attributes to the subjects in the film: First, Neo is a prefix derived from Greek 'neos;' accordingly, the name symbolizes that Neo is 'the One' bringing in the new epoch. Second, Morpheus, the leader's name, is the name of the god of dreams in Greek myths. His name symbolizes that Anderson's world is AI's virtual image and Neo's world, like Anderson's dream, is the real world. Third, the heroine's name, Trinity, refers to the three sacred warriors of Neo, Morpheus, and Trinity herself; assuming the Holy Trinity implies that they will not die through the narrative despite the fact that Trinity is dead in the last film. Fourthly, the three Agents' very ordinary and banal names, Smith, Brown, and Jones, represent that ordinary people are buried under the Matrix, and implies the ubiquity of the virtual realities. Finally, the turncoat's name, Cypher, has an etymology of a numerical representation; thereby, the name symbolizes that now he is pretending to fight with the virtual system; in the end, he will come back to the digital world. Like this, the way of naming characters forms the foundation of the subjectivity in the narrative.

The subjectivity of Neo represents the uncertainty of the postmodern subject. At first, the protagonist has two names, contrary to the others. Specifying Neo as a cyborg character who is a

being caught between the virtual reality and the real world, it implies that he is going to rise to the surface of the new history, born from the tension between the two worlds. There are three layers of the world in the diegesis of the film: the real world, the virtual reality in the Matrix, and that of the cyberspace within the virtual reality. The film begins with the green blinking cursor and dialing tone. Cypher and Trinity's dialogue is heard. Cutting to the green cipher on the monitor, the camera signals that the story begins from the last layer, the cyberspace within the virtual reality of the Matrix. The names of characters are, thus, set up in the last layer through their networking on-line user-identifications. Since they were not born to the real world, they have no real name. Their real names are substituted for the cyber IDs. Thomas Anderson, who has the other name Neo, which is originally his user ID of cyberspace in the Matrix, becomes reborn to Neo in the real world. His cyber identification becomes his name of the real. Neo's subjectivity changes from that of cyber world to that of real world.

The uncertainty of Neo's subjectivity is clearly described in the scene in which Neo swallows the liquefied mirror. In the beginning of the film, when Neo draws out floppy diskettes from the inside of a book, we can find Jean Baudrillard's *Simulacra and Simulation*. Baudrillard argues in the chapter of "Clone Story" that the Father and the Mother are removed in cloning, and the functions of the parent figures are substituted with matrices (pp. 96-97). As a result, the mirror stage, during which the subject begins to recognize and seek out his/her identity, is removed. In the film, human beings are raised by AI. They are no longer born, but replicated and cultivated. They have no father and mother, only the Matrix. Thus, they have no experience in the mirror stage, forming their identities. The mirror stage, termed by Jacques Lacan, refers to the phase of the child's perceiving himself as a unified being, the ego-ideal. In identifying with the reflection of the mirror, the child is in fact identifying with the other, which is there in the

mirror and in so doing misrecognizes himself. For Lacan, the child's misrecognition of the other in the mirror as himself is the origin of his subjectivity. In the diegesis of the film, throughout their whole lives, human beings only have a dream about the virtual reality, via the electronic mental projection. However, Neo is reborn as a real being with the help of the Father figure Morpheus and the Mother figure Trinity, and he experiences the mirror stage after his escape from the dream of the Matrix (Kimball, 2002). Since Neo could not breathe in and see the real world and he has existed as a simulacrum given by AI, he does not have an identity. Thus, in his birth, namely in the moment of unplugging, he experiences the mirror stage.

When Neo swallows a red pill and touches the broken mirror, the mirror becomes liquefied. The liquefied mirror travels along his body, and he wakes from the long dream. The scene cannot provide the exact causality between the liquefied mirror and his awakening. However, as Neo wakes, he retrieves the new self, which is his original identity, and which is his new subject. As a result of this delayed mirror stage, Neo recognizes that the world of the 1990s, which he believes to be real, is a simulation of the Matrix, and that the world in 2199, like a desert, is the real world. It is the Wachowski brothers' cinematic representation of the uncertainty of the postmodern subject by means of portraying Lacan's mirror stage.

Digital Effects & Narrative: Dystopian Implication & Technofuturist Symptom

The last sequence of *The Matrix* portrays technophobic dystopian implication and technofuturist symptoms in that human beings are still captured within the Matrix although Neo embodies the hope for their rescue by means of the computers. Neo, saved by Morpheus' sacrifice, reenters the Matrix to rescue Morpheus. Though Neo is shot by Smith, he is revived with perfect understanding of the Matrix. Neo then is able to completely digitally decode the

virtual reality of cyberspace. Recognizing the Matrix as the result of numerical representation, Neo thoroughly assimilates into the digital world, and has complete power over the Agents. He does not dodge bullets but just stops bullets and penetrates Smith's body. Neo ultimately presents the Superman action, flying into the sky in the very last shot. Neo digitally flying not only symbolizes the premonition of humans' ruling over the digital world, but also signifies human superiority over technology.

Neo's last voice-over obviously shows utopian belief in the techno-future beyond the anxiety about the distorted progression of technology.

Neo: I know you're out there. I can feel you now. I know that you're afraid. You're afraid of us. You're afraid of change. I don't know the future. I didn't come here to tell you how this is going to end. I came here to tell you how it's going to begin. I'll hang up this phone. And then I'll show these people what you don't want them to see. I'm going to show them a world without you. A world without rules and controls, without borders or boundaries. A world where anything is possible. Where we go from there is a choice I leave to you.

Neo challenges AI by the phone in the Matrix world. His line in the code-governed world emphasizes a perfect decoding of the code, and also exhibits the desire for human governance over technology. In contrast to previous scenes, where Neo's life is dependent upon the phone line (online), the film concludes in opposition to Baudrillard's "liquidation of all referentials." Neo, who can perfectly decode digital simulation, hangs up the phone and cuts the line. The Matrix shows "liquidation of the code" rather than that of the real world. Neo's line that he will show "beginning" rather than "end" places himself as the new origin or the new referent, not as the object of liquidation. At the same time, the shot of Neo flying in the Matrix world produces

the technofuturist symptom of new media technology. The utopian symptom is supported by the lines, “A world without rules and controls, without borders or boundaries. A world where anything is possible.” The world Neo is saying is an ideally perfect world is Shangri-La and/or Utopia. Likewise, *The Matrix* as a cultural mirror of contemporary technology presents, with the dazzling digital effects, the transcendental attitude to the anxiety of the technologically exhausted future.

By means of textual analyses of recent SF films, I have examined postmodernity of digital visual effects: the synthesization of the film and camera, time-space compression of multi-layered CGI, hyperreality of digital simulation, and postmodern implications of the effects and films. *Tron* founded the generalization of the use of digital effects in feature films. Although the reality effect of CGI in *Tron* was crude, the use of CGI had much sense in representing postmodernity through portraying time-space compression of multi-layered CGI. *Terminator 2* marked a new epoch of the reality effect by introducing the new visual effect of morphing. *Jurassic Park* produced technological verisimilitude with digital simulation of dinosaur by means of Dinosaur Input Device. *The Matrix* developed the unique visual effect of bullet-time shot creating slow-motion moving image by means of continuous taking 124 still images.

Likewise, the principle of composition of the new visual effects with the support of digital technology represents postmodernity of the age of digital. The advance of digital effects reflects the transition of not only the social formation from Fordist production system to the worldwide network system embodied by the development of transportation and digital technology, but also visual effects themselves from the studio-oriented analog visual effects to the computer-networking digital visual effects.

5. DIGITAL EFFECTS as CULTURAL JIJITSU: FUNCTIONS of DIGITAL VISUAL EFFECTS in KOREAN NATIONALIST BLOCKBUSTER FILMS

I have examined the birth and development of visual effects, relative to the change of social formation from early Hollywood to modernism to postmodernism. In this chapter, I will turn from American film to the movies of South Korea. The growth of Hollywood films has been stagnant lately as Brian Anderson (2005) has noticed that Hollywood is in decline. According to Anderson, the box-office tickets of 2005 were reduced 12% from 2004, and “a May *USA Today*/CNN/Gallup poll found that nearly half of American adults go to movies less often than they did in 2000.” With the recent stagnation of Hollywood, the resistance of local film industries, such as Asian film industries including Korean, Japanese, Chinese, Hong Kong, and Bollywood, to Hollywood films has been rising. With the development of digital technology and the use of international labor, these local film industries have entered the phase of network-oriented filmmaking and resist to Hollywood’s hegemony. This chapter can be a case study of this local resistance or alternative of Hollywood today. I want to identify, by means of the examination of Korean blockbuster films and their dependence upon visual effects, how digital effects can be a strategic weapon of the local film industries, in their domestic markets, against the dominance of Hollywood, under the flow of globalization, termed “Empire of network.”

In this chapter, I argue that digital effects have become the most essential element of Korean blockbuster films, particularly those that have been competitive with Hollywood films in the Korean domestic film market. Korean blockbuster films have sought large-scale filmmaking and presentation of spectacular scenes, including heavy dependence on the use of special effects, which is frequently considered a Hollywood style. In contrast, the subjects of the films have been nationalist subjects, such as the Japanese occupation from 1910 to 1945, the Korean War from

1950 to 1953, and the resulting partitioning of the territory. The Americanized or globalized expression of the unique Korean narrative has proved a very successful combination in the domestic market. The domestic market share in the Korean film industry today is running in 60%. This paradoxical combination of peculiar Korean subjects and Hollywood style can be viewed as a form of *cultural jujitsu*, borrowed from the term of Ella Shohat and Robert Stam (1994), “media jujitsu,” in their work *Unthinking Eurocentrism: Multiculturalism and the Media*, taking advantage of the force of the dominant culture in order to resist and subvert it (p. 328).

I will examine the aesthetic, industrial, and technological status of the present Korean film industry and discuss Korean blockbusters as cultural jujitsu. Then, I will show how Korean nationalist subject matter and Hollywood style is mixed, reveals the past trauma, and functions as a tonic for the nation, by means of the textual application. I choose four Korean blockbusters that dealt with two major national traumas. The four films are *Shiri* (KANG Je-gyu, 1999), *2009: Lost Memories* (LEE Si-myung, 2002), *Tae Guk Gi: The Brotherhood of War* (KANG Je-gyu, 2004), and *Welcome to Dongmakgol* (PARK Kwang-hyun, 2005). They will be categorized and analyzed by trauma: The Japanese occupation (*2009: Lost Memories*) and the Korean War (*Shiri*, *Tae Guk Gi: The Brotherhood of War*, and *Welcome to Dongmakgol*).

Before close analysis of these films, though, I will first place them in context by discussing the new form of Korean blockbuster films, the new order in the Korean film market since 1999, and the development of digital effects technology, which supported the Korean blockbuster films.

5.1 New Relationship between Hollywood and the Korean Film Industry in the Digital Empire

The Korean blockbuster films discussed in this chapter possess the elements that makeup the contemporary Korean cinema. Roughly speaking, their net production costs are in excess of \$10,000,000. The total production costs, including the marketing costs, are between \$15,000,000 and \$20,000,000. Even though the amount is about 10% of that of Hollywood blockbusters, they are considered blockbusters within the Korean film industry. They are works of large size that target 10,000,000 admissions, which is approximately 21% of the present population of Korea 48,000,000. They use star casting and a huge amount of special effects. Their release time is also adjusted to coincide with the national holidays, such as Chuseok (the Korean version of Thanksgiving Day), Christmas, and New Year's Day. Out of these Korean blockbusters, the objects of my research are the Korean blockbusters representing nationalist subject matter, national identity, and traumas.

If Hollywood blockbuster films have sought the universal and global ticket sales by means of the typical theme of rewarding the good and punishing the evil and of happy ending, Korean blockbuster films appeal to Korean people's nationalist sentiment, present the national identity, deal with historical moments, and attempt to heal emotional wounds from national traumas. In other words, Hollywood blockbusters have set global audiences as the target, regardless of their nationality, but Korean blockbusters have done Korean audiences with the purpose of countering against Hollywood blockbusters. So, although Korean blockbusters resemble Hollywood blockbusters in the aspects of the scale of production and spectacle-centered storytelling, they can be considered Korean national cinema seeking Korean national peculiarity and resisting Hollywood films.

With the appearance of the Korean Wave/*Hallyu* from the late 1990s, the Korean

entertainment and film industry has stood at the center of East Asian pop culture. The rise of the Korean nationalist blockbuster at the same time has located the Korean film industry as the leading power within the regional film industry. The Korean cinema has grown rapidly from the late 1990s and this extreme development is a rare phenomenon in the world film industry. The international cultural flow, which was stagnant for a long time, in East Asia, such as Taiwan, Japan, Hong Kong, South Korea, China, and other countries, has been active with the support of the Korean entertainment and films (Shim, "Globalization," p. 234). Taking the initiative in the regional cinema of East Asia, the Korean film industry is functioning as a regional media hub, stimulating cultural exchange throughout the area (Shim, "Globalization"). As the director of *Made in Hong Kong* (1997), Fruit Chan (2005) states, the Korean film industry has experienced revolutionary development over the last decade and is leading the Asian film industry in various aspects including technology and narrative. One of the major propulsions of this regional leadership of the Korean film industry is certainly the Korean nationalist blockbuster. I will examine deeper substantial features of Korean nationalist blockbuster below.

Hollywood Style and Hollywood Imperialism

Before proceeding to the substance of Korean nationalist blockbuster, I am going to investigate first what Hollywood means from the viewpoint of local film industries in order to clarify the relationship between Hollywood cinema and its style and the economically cultural imperialism of the U.S. I will define Hollywood film and examine Hollywood's imperialist expansion to the global market.

Hollywood cinema can be defined as the synthesis of the following characteristics of the Hollywood film industry: the consumer-targeting of a global audience beyond the American

domestic audience through the use of universally understandable stylistic and narrative techniques; the concentration on the action and SF genres which result from this approach, and the implicit or inherent infusion of U.S. and/or European culture into the narrative.

First, Hollywood film is no longer a purely American phenomenon, as the Hollywood film industry has increasingly sought a global audience in the wake of the global economic and cultural economic integration that has occurred since the 1970s. Frederic Wasser (1995) suggests that Dino DeLaurentis, who became the global distributor for in from 1974, initiated the transnationalization of global financing and marketing accompanied with “pre-selling unproduced films” into the American film industry (p. 423). Hollywood had to follow the rules of the most predictably successful films to ensure presales. This has raised the industry’s dependency on violent action genres and the star system. As a result of transnational financing and marketing, Hollywood film style has transformed from the realist classical to a “universal style” that international audiences could understand easily without cultural barriers. So, the universal style tends to focus on sights-centered action over dialogue-centered drama explicitly depicting American culture. It seeks to use simple dialogue that can be easily dubbed on for the convenience of global audience/marketing. In terms of editing, the universal style seems to maintain the invisible style of classical Hollywood cinema also called continuity editing. The goal of continuity editing is that audiences should not be conscious of the existence of camerawork and editing. The more editing is invisible, the deeper the audience focuses on spectacle.

Wasser’s notion of a “universal style” is echoed by Charles Acland, who describes Hollywood films as operating at a “cultural discount” (p. 33) compared to local productions that remained commercially constrained by their cultural specificity. Acland argues that Hollywood

films use a “universal popular language” (p. 33) that transcends any national cultural contexts. This language is rooted in what Scott Olson calls the “transparency” (p. 33) of Hollywood films. Transparency is achieved by removing American cultural peculiarities from media, so that global audiences can project their own domestic beliefs and values. So, American cultural products are easily absorbed to the domestic cultures.

Wasser, Acland, and Olson all argue that Hollywood’s global success comes from its ability to develop a “universal” sensibility that transcends cultural specificity. But this sensibility is perhaps not as universal as these critics imagine. Critics of Hollywood’s global influence suggest that “universalism” is in reality simply the latest form of cultural imperialism.

Georgette Wang and Emilie Yueh-yu Yeh (2005) describe the development of Hollywood’s global style as a process of “deculturalization, acculturalization, and reculturalization” that is the process of ‘transparentization.’ Wang and Yeh show that the demand of films and television programs rapidly increased in the 1990s because of the development of cable and satellite television program. They argue that the hybridization of global culture has satisfied the demand by means of “the localization of global products and the globalization of local products” (p. 177). According to them, in order to follow the global audience’s preference, producers of films and television programs deculturalize the products by removing “ethnic, historical or religious” cultural particularities, and “adapt, repackage or transform” the existing story model for the global audience’s understanding. As a result, a new form of the ‘acculturalized’ products is born (pp. 177-178).

Despite the efforts of deculturalization of Hollywood derived from economically imperial globalization/transnationalization strategy, Hollywood films reveal inherently American culture, beliefs, and values through reculturalization of the films’ narrative. Through a comparison

between Disney's *Mulan* (Tony Bancroft and Barry Cook, 1998) and Ang Lee's *Crouching Tiger, Hidden Dragon* (2000), Wang and Yeh argue that Hollywood implicitly and inherently infuses Americanism. Both the films show a typical model of transnationalization; the films were globally financed, marketed, and distributed. However, they argue that while the Chinese-made-and-owned *Crouching Tiger, Hidden Dragon* shows an artistic globalization of Chinese aesthetics, the Hollywood-made-and-owned *Mulan* shows infusion of "American-style individualism in the context of ethnic and gender assertion" (p. 180).

Crouching Tiger, Hidden Dragon adhered to Chineseness by "a synthesis of Peking opera, kung fu and the Taoist worldview"; however, it deculturalized the issue of social class and hierarchy through the Jen and Lo's love scene, which did not exist in Wang Dulu's original novel (p. 184). In addition, it was reculturalized by the possibility of various interpretation derived from acculturation transforming the end to Jen's suicide (p. 184). However, Hollywood's effort to globalize a Chinese local product, *Mulan*, implicitly infused Americanism while removing Chineseness. According to Wang and Yeh, the original Chinese fairy tale describes Mulan as a patriot and dutiful as well as chaste and prudent girl. However, Disney's *Mulan* is a hussy who fails her bridal test, agonizes over her identity, and participates in a war to resolve the doubt (p. 181). *Mulan* deculturalizes traditional Chinese values of loyalty and filial piety and acculturates it into the narrative of American or Western individualism. Despite the period setting of the ancient China, *Mulan* reculturalizes the fairy tale through infusion of the "celebration of the triumph of will" that is a typical "modern and American" value of Hollywood blockbuster. There is no true Chineseness in Hollywood-made *Mulan* because there is no "cultural mission" in Disney's purpose (p. 189). Thus, *Mulan* is not about the Chinese but about the transnational-American.

Wang and Yeh point out the deceitful aspect of the universal narrativity of Hollywood films.

Although deculturalization may be the key to entering the global market, its ‘acultural’ outlook may in fact be deceptive, as storytelling cannot be accomplished without touching on beliefs, attitudes, values and behavioral patterns. When characters are pushed into action and decisions are made, the underlying beliefs and values emerge. ...

Reculturalization, therefore, is often as symbiotic with deculturalization as it is with acculturalization (pp. 178-179).

According to Wang and Yeh, Hollywood sells deculturalized products in pursuit of a universal formula; however, this search for universality is impossible. For storytelling cannot be accomplished outside of the implicitly American perspective of the Hollywood-based directors, screenwriters, staffs, actors, and producers. When the characters’ action occurs, their culture, belief, and value are latently infused into the narrative. Disney deculturalizes the tradition of loyalty and filial piety from the original work, acculturalizes it with the emphasis on Mulan’s selfhood, and by doing so, produced *Mulan* reculturalized with modernism and Americanism. In this context, Hollywood film and its global style is economically and ‘reculturally’ imperial.

Addressing this deceptive reculturalization of Hollywood narrativity, Wasser introduces his interesting conversation with American film executives:

In my conversations with American film executives, it was obvious that they perceive the world wide market as desiring a certain image of America to be featured in the movies. Each executive may have differing and changing notions of the desired image—one season it may be hedonist consumers on the open road with fast cars—the next season it may be the American ethic of an individual hero struggling against all corrupt collectives.

The point is not whether international viewers are actually seduced by such images but that film producers set for themselves the task of portraying an “America” that is a dreamscape for “universal” desires rather than a historical reality (p. 435).

Wasser insists that Hollywood films, already globalized, no longer represent the historical reality of the U.S. For Wasser, the Hollywood film industry and films are economically imperial, but culturally just global and not imperial in that Hollywood style is not American style representing the U.S. but a global style targeting the global audience. However, Hollywood style cannot be simply said as global style because, from the viewpoint of local film industries, markets, and audiences around the world, Hollywood style is clearly different from their national styles. A style that the global audience can easily understand can be said to be Hollywood or universal style; nevertheless the universal style is only the space of emotional sympathy for easy-to-understand. It cannot replace local films’ style and their own narratives. In other words, even if Hollywood style no longer represents America, or even if the term, universal style, thoroughly replaces the term, Hollywood style, the universal style is, for local film industry, merely another form of economically and culturally imperialist power onto which the label of *Made in U.S.A.* is peeled. Whether Hollywood is American or not, it certainly is the foreign imperialist force threatening local film industries.

In particular, South Korea has been exposed to American value and models of heroism accompanied with the memory of Korean War in which the U.S. Army participated. The U.S. prevented Korea’s transformation to communism by the intervention to the war; as a result, the U.S. has been a political ally of South Korea. The U.S. materially supported the socio-economic reconstruction of South Korea after the war. This situation has made Korea more open and receptive to American cultural influence than many other Third World countries. In this context,

American values and heroism, presented through Hollywood's so-called "universal" style, have influenced Korean culture in many ways.

For example, in *Star Wars Episode VI: Return of the Jedi (1983)*, as KIM Kyoung Wook (2002) indicates, there is a symbolically imperialist scene revealing the U.S. viewpoint of the Third World including Korea. Luke, Princess Leia, and Han Solo get inside Endor's forests to remove Emperor and Darth Vader. They give chase to the Vader's scouts with the speeder bikes in the forests. Leia falls off her bike and goes off in a faint. An Ewok, Endor's native in a state of nature, wakes up Leia with a wary eye. He resembles a teddy bear. He drapes a piece of straw mat over his head and shoulders, and holds a crude spear. Ewoks dislike Empire. The Ewok threatens Leia; however, he looks like a cute kid. Leia is not afraid of him; rather, she treats him lightly as a kid with a cookie. This scene in which Princess Leia ingratiates with the Ewok with a cookie in Endor's forests, from the Korean context, has the associations of the U.S. Army's support in the post-Korean War period (p. 185). Leia gives food to the benighted Ewok, and finally, brings him over to the Rebels' side. One of the most representative scenes of post-war Korea was the figure of the children chasing the U.S. military trucks shouting, 'Give me chocolate.' Korean children wearing ragged underwear begged for chocolate from the U.S. soldiers; the soldiers gave it to them from their battle jackets. The chocolate could be lunch, or even their only meal for the day. The U.S. Army was the all-powerful benefactor for hungry Korea at that time. Princess Leia, the Ewok's similarly powerful benefactor, parallels the role of the U.S. Army. The film symptomatically approaches Korean audiences by portraying the phase of the time that the U.S. was absolutely powerful and all behaviors of the U.S. could be justified without any condition. As the innocent Ewoks sacrifice themselves in the middle of the war between Empire and Rebel, Korea was likewise trampled down in the middle of the Cold War

between the Soviets and the U.S. As Endor restores the peace from the dark side by the Rebel Alliance, South Korea is supported and reconstructed after the war by the U.S. As Luke, Leia, and Han Solo are heroes of Ewoks, the U.S. Army is of Korea. In this sense, for Korean culture, *Star Wars Episode VI* can be viewed to serve as a cultural anesthetic mitigating the antipathy toward the U.S.'s econo-political control over South Korea, and at the same time, to be a culturally imperial medium infusing superiority of American culture and value.

In addition to their allegories of historical experience, Hollywood films have served to westernize Korean culture. In traditional Korean life, cohabitation before marriage could not be imagined. However, LEE Soo-yeon (1995) shows how the example of Hollywood films featuring unmarried couples, such as *Ghost* (Jerry Zucker, 1990), have heavily influenced the Korean youth's way of thinking. Since the mid-1990s, both contracted marriage, in which couples decide whether or not to get married after a period of cohabitation, and cohabitation without any condition, has become more and more common among Korean youth. In another example of westernization, forms of social activity have been rapidly changing among Korean youth. Traditional static Asian party culture, in which guests remain seated, is being replaced with western-style parties, in which the host circulates among guests and encourages the development of new friendships. This shift in social rituals seems in large part to be the result of the social models presented in western media.

If we combine Wasser, Acland, and Wang and Yeh's lines of argument, America in Hollywood films is not any historically real America but the fictitious image of America created to satisfy the global audience, while silently imposing implicitly American values. At the same time, the success of these not-so-universal films undermines the efforts of local film industries to create more specific, authentic cultural expressions. The question of whether American culture

and value themselves shown in Hollywood films are imperialist or not should be dealt with text by text; however, LEE Soo-yeon's remark, "the fact that American films disseminate American culture cannot be denied" (LEE, 1995, p. 81), seems to well represent Hollywood films' culturally imperialist aspect, in addition to the transnationally economical imperialist attitude. Even though Hollywood films have distanced themselves from American historical reality, the various value system of American culture represented in Hollywood films has latently infused to global audiences, including Korean, and influenced their ways of thinking and behavior.

Korean Nationalist Blockbuster Films as Hybrid National Cinema

Korean nationalist blockbuster films have a hybrid form between the established national cinema and Hollywood cinema. They borrow the subject of artistic nationalism from national cinema and appropriate their aesthetics from Hollywood blockbusters.

KIM Byeongcheol (2006) divides the contemporary Korean cinema into three main categories: "producer-centered packaged cinema," its variant "Korean-style blockbusters," and the "director-centered New Korean Cinema" (p. 8). According to KIM, when a producer persuades investors with a "proposal package," the package includes all matters in detail related to the film's production, such as the synopsis, market research, main actors, production company, director, and so forth. The films produced under this 'quasi Hollywood system' are packaged cinema (p. 18). Korean blockbusters follow the same business model. The difference is the larger investment of capital, affording the use of more expensive special effects (p. 20). Packaged cinema began to appear in the early 1990s, while blockbuster films came on the scene from *Shiri* in 1999.

New Korean Cinema, also called Korean New Wave, is a less commercially-oriented and

auteurist movement reflecting Korean's growing economic, political, and cultural ambitions in the 1980s and 1990s. PAE Yong-gyun, PAK Kwang-su, JANG Sun-woo, and IM Kwon-taek are representative auteurs. Their films have been recognized by international film festivals.

According to KIM Byeongcheol, New Korean Cinema has dealt with "social awareness" and "consciousness" with the reflection of national uniqueness, and it has posed itself as "a critical counter against a Hollywood cinema backed by universal capital, particularly in the form of Hollywood blockbuster" (p. 13). The New Wave films' social commentary represented through the narrativization of the socio-political problems of the times, such as the military regime's oppression of the people and the Democratization Movement as a result, the partition of the territory, the class and gender. However, despite the New Wave films' artistic or national significance as a counter cinema, they could not be a rival in terms of the box-office profits. For example, IM Kwon-taek's *Sopyonje* was a record-breaking mega-hit in 1993 which 1,035,741 audiences-in-Seoul saw. It was the first Korean film exceeding one million admissions, and was the only one over one million admissions in 1993. However, in the same year, the admissions-in-Seoul of *Cliffhanger* (Renny Harlin) were 1,118,583, and of *Jurassic Park* (Steven Spielberg) was 1,063,352.

David E. James places national cinema into the realm of art cinema, countering Hollywood films. According to James (2001), "national art-film styles" have been understood within the relationship "between the deconstruction of the language of classic Hollywood cinema and some combination of two other frames of reference: the language of cinemas standing against capitalism and the languages of pre-colonial domestic cultural practices adapted to the medium of film" (p. 16). Based on James's definition of national art-film style, Korean nationalist blockbuster films cannot be national cinema because their language is much closer to

that of Hollywood. Their language does not stand against capitalism, nor does it represent pre-colonial cultural practices. Kathleen McHugh (2005) suggests that the national cinema obtains the identity as a national cinema through the prize winning of international film festivals (p. 21). However, Korean nationalist blockbusters have not yet gained special responses from international film festivals. PARK Chan-wook's *Oldboy* was awarded Grand Prize of Jury in 2004 Cannes International Film Festival; however, it was a non-nationalist blockbuster. The value of studying Korean national cinema today is precisely because it deviates from the older models of national cinema. In this context, the significance of this chapter is to show how a cinema can embody national consciousness while still using language of Hollywood.

Even though these concepts and practices of national cinema present an aesthetic or artistic alternative to Hollywood film, they could have not been a visible economic alternative in the Korean film market. National cinemas could not overwhelm local market share. Historically, Hollywood films have dominated national cinemas, including Korean national cinemas. Direct distribution of Hollywood cinema in South Korea began in 1988. Hollywood film companies could establish their local offices in Korea, directly distribute their films through them, and able to dominate Korean film market by means of superior power of their capital. As a result, Korean films' market share, which was 35~40%, was reduced to only about 20%; this phenomenon continued to the late 1990s. The vast majority of films seen in Korea during this period were made by Hollywood. In the 1980s and 1990s, Korean cinema was regarded as a national cinema in the conventionally festival-oriented definition. IM Kwon-taek produced national art films *Come Come Come Upward* (*Aje aje bara aje*) in 1989, *Sopyonje* in 1993, and *Taebak Mountains* in 1994. PAE Yong-gyun's *Why Has Bodhi-Dharma Left for the East?* He was awarded the grand prize of Golden Leopard in the Locarno International Film Festival in 1989. CHUNG Ji-young,

CHANG Kil-su, JANG Sun-woo, and PAK Kwang-su produced national art films and were awarded prizes from international film festivals. But despite several national films' success in international film festivals, the domestic film market was dominated by Hollywood films. Korean audiences preferred Hollywood blockbusters to these Korean art films. The alienation between art and reality, between theory and practice, and between critics and audiences was pervasive. The appearance of Korean nationalist blockbusters filled this gap, becoming an alternative model for the Korean film industry.

Korean nationalist blockbuster films are a hybrid form between the two poles of national cinema and Hollywood cinema. Their subjects and artistic spirit is a kind of national cinema, but their mode of expression resembles that of Hollywood blockbuster films. They take national traumas as their subject, representing the tragedy of fratricidal war and the experience of occupation, inspiring nationalistic patriotism. Unlike many Hollywood blockbusters, according to film critic KIM Youngjin, most Korean blockbusters feature tragic endings. This is due to the fact that the filmmakers not only seek box-office profit, but also recognition as auteurs (Park, 2006).

The difference between *national* and *nationalist* indicates the difference of range of the subjects. Korean *national* cinema refers to all things related to Korean nationality; the range of its subjects is extensive. It can be Korean art cinema or Korean cinema dealing with social consciousness of economic and political status, and with self-awareness of Korean tradition, historical events, culture, and so forth. As Andrew Higson (1989) suggests, "there is not a single universally accepted discourse of national cinema" (p. 36). However, Korean *nationalist* film indicates the film concentrating on the representation of Korean nationalism and expression of Korean national identity and history. Thus, Korean *nationalist* film can be viewed as a distinct

kind of national cinema.

On the other hand, Korean nationalist blockbusters' visual image follows the Hollywood spectacle, by use of special effects. Their use of sound effect and editing style also resembles that of Hollywood. The technological level of special effects as a whole are not yet comparable to that of Hollywood, but the level of digital visual effects is in hot pursuit of Hollywood. In this sense, Korean nationalist blockbusters are a hybrid film form, standing against Hollywood's domination by means of the dominant style. This new film form of hybrid has overcome Hollywood cinema in the Korean domestic market. In this context, Korean nationalist blockbusters can be a new alternative of national cinema, countering against Hollywood's dominance over the local film industry.

From *Global Hollywood* to *Empire*

With the rise of Korean nationalist blockbuster, the Korean film industry has escaped from the status of global Hollywood and entered to the world of network in Empire. Michael Hardt and Antonio Negri argue in *Empire* that a new form of sovereignty has emerged after the collapse of colonial regimes and the Soviet Union; that is Empire. Hardt and Negri's Empire is the "political subject that effectively regulates the [se] global exchanges, the sovereign power that governs the world" (p. xi). Empire is a ruler of the world capitalist market. According to them, Empire is different from imperialism, the "modern system of nation-states" as a symbol of "European colonialism and economic expansion." Empire is a "*decentered*" and "*deterritorializing*" method of controlling the global world. In Empire, identities are mixed, hierarchy is destroyed, and exchange is multiple and plural (pp. xii-xiii). Nation-states are no longer imperial realms but merely a part of Empire. There are no barriers between nations,

markets, and races. This is the condition of postmodernity. They declare, “*United States does not, and indeed no nation-state can today, form the center of an imperialist project.* Imperialism is over” (pp. xiii-xiv). Despite the radicalized manifestation of the end of imperialism, according to Hardt and Negri, the modern imperialism ends; the era of global Empire is beginning. Likewise, Hardt and Negri’s thesis is the transition from imperialism to Empire that can be translated to that from modernity to postmodernity.

Empire is a new phase of capitalism under which the flow of capital is not ruled by nation-states but by global networks of command of the new sovereignty of Empire. According to them, the technology of cultural products such as digital effects no longer belongs to specific nations but to the realm of Empire, which has no boundaries between nation-states. The development of computer technology and the rapid popularization of PCs and the Internet, in more recent decades, have provided the instant delivery of information toward the global networks for the age of post-industrial production. As Hardt and Negri insist, if “modernization means industrialization,” the present is the time of “*economic postmodernization*” that can be called “*informatization*” (p. 280). According to them, the term “informatization” indicates the contemporary emphasis on the “domination of services and information.”

The use of the computer is the very essence of the way of post-Fordist production. It makes it possible to upgrade the quality of services and to accelerate the speed of delivery of information. The ability to operate the computer even decides the quality of one’s life. With our increasing reliance on computers and the Internet, we cannot imagine a life without digital communication. The computer has become an essential part of studying at school, of managing a household, and of working at an office. With the advent of the Internet and World Wide Web, the function of the computer has been transformed from a tool for living into a necessity of life itself.

The revolution of special effects, in particular, the transition from analog special effects to digital effects has no exception in the realm of global culture today. Digital effects become more and more essential elements of filmmaking in almost all film genres from SF to horror movies to non-action genres such as *Forrest Gump* (Robert Zemeckis, 1994). The more the computer goes to the way of life, the more digital effects become the way of filmmaking. Digital effects offer the new kind of services today, such as amusement of experiencing the marvelous spectacle to audience. Digital effects create and deliver the new kind of information such as the precise creation of dinosaurs in *Jurassic Park* (Steven Spielberg, 1993). This is the postmodern way of filmmaking with digital technology. In this sense, the digital technology is a form of “biopower”—that the power to rule “social life in its entirety” (p. xv)—in cultural Empire. Digital effects are the embodiment of the “informatization of production” as a “process of economic postmodernization.”

In addition to the digital effects’ spectacle as the formal aspect of filmmaking, digital effects provide developing local film industries like the Korean film industry with the vital mechanism that enables them to be independent of the dominance of advanced Hollywood. Under the premise of the widespread diffusion of PCs and the software for the effects, the developing film industries have the chance to escape from the imperial domination of Hollywood film industry and to enter the realm of Empire. Robert Rodriguez, the director of *Spy Kids I* (2001) and *II* (2002), says, “I’ve always felt the digital age was about freeing filmmakers. That’s why I shoot and edit my own stuff. I mean, why are all those filmmaking jobs split up anyway? ... why not just operate the camera and really make the film your own vision?... With digital technology, you can just do it all yourself” (Goldman, 2002, p. 30). In Rodriguez’s statement of free filmmaking with the author’s own vision, we can find the way the developing film

industries' connects to the empire networks. In other words, digital filmmaking, including the use of digital effects, provides the developing industries the opportunity for being freed from the past subservient relationship to Hollywood technology.

In examining this function of digital effects supporting the local film industry to be independent from Hollywood's domination, Toby Miller, Nitin Govil, John McMurria, and Richard Maxwell's *Global Hollywood* (2001) and *Global Hollywood 2* (2005) can be considered as essential works. Miller et al.'s main thesis can be described as the following three steps: First, the foreign investment for the Hollywood industry has been rapidly growing. However, Hollywood controls the fund from outside the U.S. (2001, p. 46). Second, Hollywood manages and controls the core process of filmmaking, such as the content including screenwriting, despite the trend of "runaway productions" filmed outside the U.S. Even though the environment of the division of international labor, such as "the right skills, language, familiarity, business links and foreign exchange rates to suit" influences Hollywood's runaway filmmaking, Hollywood is "never under their control" (p. 63). Third, the labor of production and location frequently occur outside the U.S. because of the needs for highly skilled labors at comparatively low wages; for example, Asia has become a major labor source to Hollywood for animation genre (p. 53). According to Miller et al., the NICL develops world markets for labour and sale. The business of the NICL goes "beyond treating Third World countries as suppliers of raw materials, to look on them as shadow-setters of the price of work, competing among themselves and with the First World for employment" (p. 52). The NICL seeks the thorough standard of comparative advantage. In this sense, the NICL is the strategy of Hollywood to use effectively the world labor, to rule the world film market, and to maintain its world power.

In addition to Miller et al., Ellen Meiksins Wood (2003) insists, in *Empire of Capital*,

that nation states are still major force of the globalized economic system, opposing Hardt and Negri's view of capitalism today controlled by "a new form of stateless sovereignty" (p. 6). Wood argues that the history of capitalism is that of subjugation and colonization developed by economic imperatives; "the economic power of capital" exceeds any existing political and military force, is essentially supported by "extra-economic force" of the political, military, and judicial that the state provides (pp. 4-5). According to Wood, through the Cold War, without plain military conflict with the Soviets, the U.S. military force functioned as the world police following U.S.'s capitalist interests; this extra-economic operation has been maintained despite "the collapse of Communism" and directly inherited to Bush Doctrine today (p. 129). For Wood, the state is the strongest impulse of global capitalism, and at the same time, globalization is not about the networked Empire, but about the U.S.-centered economically imperial project without a direct military operation.

If we follow the arguments of Miller et al. and Wood, developing film industries, such as the Korean film industry cannot overcome the pressure of the Hollywood's control over the NICL because the labor of developing film industries should be objects of Hollywood's practical use. As a result, Hollywood films, whatever the laborers' nationalities, usually dominate the domestic film markets of the developing nation-states. However, the Korean film industry counters this rule of global Hollywood by means of the development of digital technology and the core Korean context of films' storylines, even though the stylistic elements more and more resembles those of Hollywood.

The Korean film industry has grown rapidly in the last decade, thanks to the continuous success of the nationalist blockbusters. After the big success of *Shiri* in 1999, the production of Korean films has rapidly increased.

Table 2. The Productions and Screenings of Korean and Foreign Films

(Number of Films)

Year	Korean Domestic		Foreign Imported	Total Screenings
	Productions	Screenings	Screenings	
1996	65	55	320	375
1997	59	60	271	331
1998	43	43	244	287
1999	49	42	233	275
2000	59	62	277	339
2001	65	52	228	280
2002	78	82	192	274
2003	80	65	175	240
2004	82	74	194	268

Source: Korean Film Council. Full data is available on the Internet at <http://www.kofic.or.kr/contents/html/index.aspx?MenuId=131>

In 1998 the Korean film industry produced 43 films. As we can see in Table 2, from 1999 Korean films' production has increased from 49 to 59 in 2000, to 65 in 2001, and to 82 in 2004. In contrast, the screenings of imported foreign films began to be reduced from 2001. As the number of productions of Korean films has increased, that of imported foreign films has been reduced. Thus, the Korean film industry has reduced the rate of dependence on imports, and reinforced the investment on the domestic film industry, a process that began in 2000, a year after *Shiri*'s release.

The production costs of Korean films have significantly increased since 2002, as shown in Table 3. In comparison to the increase in the number of productions from 1999 to 2004, the number of productions of Korean films increased 1.7 times, from 49 to 82; however, the total production costs jumped to 3.7 times, from \$93,100,000 to \$341,100,000. Thus, the average cost per film went from \$1,900,000 to \$4,159,756, a rise of 220% reflects the greater expense of the

new blockbusters.

Table 3. The Average Production Cost of Korean Films

(Millions of Dollars)

Year	Average Production Cost	Net Production Cost	Marketing Cost	Total Prod. Cost of Total Number of Films
1996	1.0	0.9	0.1	65.0
1997	1.3	1.1	0.2	76.7
1998	1.5	1.2	0.3	64.5
1999	1.9	1.4	0.5	93.1
2000	2.2	1.5	0.7	126.9
2001	2.6	1.6	0.9	165.8
2002	3.7	2.5	1.3	290.2
2003	4.2	2.8	1.3	332.8
2004	4.2	2.8	1.4	341.1

Source: Korean Film Council. Full data is available on the Internet at <http://www.kofic.or.kr/contents/html/index.aspx?MenuId=131>

The rapid ascent of production costs indicates not only the fast improvement of the films' technical quality, but also the filmmakers' rising expectations for Korean films, and the growing potential for revenue.

We can see the growth of the Korean film market through the increase in admission and market share. As I discussed earlier with Table 1, the change in the number of admissions to Korean and foreign films, between 1998 and 2004, shows the astonishing growth of the Korean film industry. In 1998, the number of admissions to Korean films was about 12,590,000, compared to that of foreign films being 33,000,000; so, market share was 25.1% for Korean films and 74.9% for foreign films. However, the situation in 2004 was much different. The number of admissions to Korean films was 80,188,543 and that of foreign films was 54,977,632. Korean films' share of the market was 59.3% and foreign films' share was 40.7%. The box-office tickets were increased 6.4 times for Korean films; however, those of foreign films were only 1.5

times. This eye-opening market share is the “largest margin of local film share in the world, except for such English-speaking countries as the United States and Canada” (“*Silmido*,” 2004). In only six years, the Korean film industry created a new order of the domestic film market. Emerging Korean blockbusters explicitly dominate foreign films, including Hollywood cinema; this era is considered the renaissance of the Korean film.

In addition to the success of the domestic film market, the Korean film industry has tried to advance into the overseas market via several paths: the export of the remake copyright and the direct entrance into the world market.

First, the Korean film industry has exported the remake copyright to Hollywood. Its export occurred at the point wherein the Korean film industry’s desire for the world market meets Hollywood seeking new subjects.

Table 4. The State of the Export of Korean Films’s Remake Copyright to Hollywood

Year	Title	Studios Imported
2001	<i>My Wife is a Gangster</i>	Miramax
	<i>My Sassy Girl</i>	DreamWorks
	<i>Hi! Dharma!</i>	MGM
	<i>Sun Mool</i>	TV Asahi (Japan)
2002	<i>Siworaе (The Lake House)</i>	Warner Brothers
	<i>Marrying the Mafia</i>	Warner Brothers
	<i>Addicted</i>	Intermedia (UK)
	<i>Jail Breakers</i>	Miramax
2003	<i>Teacher Kim Bong-du</i>	Miramax
	<i>A Tale of Two Sisters</i>	DreamWorks
	<i>Oldboy</i>	Universal
2004	<i>R-Point</i>	Miramax
	<i>Ouija Board</i>	Dibs-Film

Source: Chosunilbo. Full data is available on the Internet at <http://www.chosun.com/magazine/news/200606/200606250096.html>

As shown in Table 4, the remake copyrights of eleven Korean films were sold to Hollywood

between 2001 and 2004. The average price was \$500,000. The highest priced film, *My Wife is a Gangster* (CHO Jin-gyu, 2001), went for \$950,000. Even though the profits from the exports were relatively small, the deals have served the purpose of securing a bridgehead to Hollywood. They open the possibility of Korean subjects' globalization. According to OH Dong-jin, because American audiences tend to avoid subtitled films, Korean-language films find difficulty entering into the U.S. film market. Instead, Hollywood prefers to remake foreign films in English, with American settings and actors. Thus, the Korean film industry can enter the American film market through the export of remake rights. Out of those thirteen films, Keanu Reeves and Sandra Bullock's *The Lake House* (Alejandro Agresti, 2006) is the first to be produced. The original Korean film was the fantasy film *Il Mare/Siworae* (YI Hyun-seung, 2000). *Il Mare* was not a commercially successful but it was noticed due to its unique subject, the love between the two living in two different time zones.

At the same time, the Korean film industry is also beginning to advance into the world market by mean of English-language films, beyond the exports of the remake copyright. *Variety's* Patrick Frater (2006) indicates that total box office receipts of \$890,000,000 of the 2005 Korean film market makes it "the fourth biggest territory for pictures after the U.K., France and Japan." As Frater mentions, the Korean film industry, which was a small fry ten years ago, has rapidly grown, and it is now building a partnership with the West, including Hollywood. The major Korean studio Showbox is preparing "\$20,000,000 biopic *The Julia Project*" with Focus Features, a unit of NBC's Universal. The Korean film industry's first trial of English-language filmmaking is SHIM Hyung-rae's *D-War* (Spring 2007). *D-War's* drama section was shot on location in Los Angeles in 2005. The main characters are native actors, Jason Behr and Amanda Brooks. Hollywood staff was hired at the LA shooting (Oh, 2006). Younggu-Art Movies in

Korea took its core process and information. They hired staff and actors from Hollywood. It is the inverse of the NICL described by Miller. Of course, *D-War* is not yet released. And because the film is the first trial of the Korean film industry's globalization in the literal meaning, any prediction of this event should be postponed. However, based on the developing process so far, it is evident that the Korean film industry is making a transition from the phase of *Global Hollywood* to that of networked *Empire*.

The Development of the Effects Industry and Technology: The National Boom in CGI

One of the reasons for the Korean films boom is the development of visual effects technology, in particular digital effects, since the mid 1990s. The first introduction of digital effects to the Korean film was PARK Hun-su's *Nine-Tailed Fox* in 1994. *Nine-Tailed Fox* was the original effects-oriented film using "digital composition, morphing, and special make-up" (Kim, J. H., 2002, p. 257); however, the result was unsatisfactory to audiences and critics. According to JANG Byoung-won (2004), the CG industry in the introductory period of the mid 1990s faced an uncertain future, to the degree that a CG artist/engineer was barely able to support his family on his earnings. The low quality of CGI was not taken seriously, with crude facilities and rare experts. Moreover, the CG part could not be treated as an official department of a studio. However, in only twelve years, the realm of visual effects has grown into one of the most important segments of a studio participating in the visual image of a film as a whole. "Over \$1,000,000 was spent on only the CGI effect of *Tae Guk Gi: The Brotherhood of War*." Although it cannot be weighed against that of Hollywood blockbusters that "effects budgets creep toward \$100,000,000" (Marr & Kelly, 2006, p. A1), it seems to be worthy of close attention in comparison to the short history of Korean digital effects.

The growth of the Korean film industry, including diversification of the film genre and the continuous success of the Korean blockbusters, has become the foundation of the Korean CG industry. In the mid and late 1990s, CGI was concentrated on the fantasy and SF genre films, such as *Ginkgo Bed* (KANG Je-gyu, 1996), *Soul Guardians* (PARK Kwang-chun, 1998), and *2001 Yonggary* (SHIM Hyung-rae, 1999). However, it has been expanded to all film genres, including comedy and melodrama. The Korean film industry's old assumption that CGI only works for fantasy and SF is being rapidly changed to the new understanding that CGI has to be used whenever the film needs the special visual image for its dramatic representation, regardless of its genre. For example, in *My Piano* (KWON Hyeong-jin, 2006), the main actress, who cannot play the piano in reality, is shown playing the piano nicely. The conventional way to represent this moment is to cut from a shot of her fingers moving over the keyboard to a shot of her face and bobbing upper body pretending to play the piano. However, the new way is the digital composition of the actress' head and the professional pianist's body playing the piano. So, the camera can take a full shot of the actress playing piano beautifully. The digital composition greatly enhances the reality effect of the sequence.

This diversification of genres, using digital effects, has supported the activation of the CG industry. Specialization of human resources has been accelerated. New CG companies have entered into the industry, and the competition is being intensified. MoFac Studio is the first generation CG company, leading the Korean CG industry from the mid 1990s. It produced the CGI in *The Gate of Destiny* (LEE Kyeong-yeong, 1996), *Soul Guardians* (PARK Kwang-chun, 1998), *Volcano High* (KIM Tae-gyun, 2001), *2009 Lost Memories* (LEE Si-myung, 2002), *YMCA Baseball Team* (KIM Hyeon-seok, 2002), and *Saving the Green Planet!* (JANG Joon-hwan, 2003). In 1998, In Sight Visual and Makod were established and have made rapid progress. In

Sight Visual took charge of the visual effects of *Tae Guk Gi: The Brotherhood of War* (KANG Je-gyu, 2004), *Blue Swallow* (YUN Jong-chan, 2005), and *Typhoon* (KWAK Kyung-taek, 2005). Makod created the visual effects of *Phantom: The Submarine* (MIN Byung-chun, 1999) and *Natural City* (MIN Byung-chun, 2003). As the production budget of Korean films has increased, due to the success of blockbuster films, the investment in digital effects has grown larger. The CG industry and technology has developed with the Korean film industry as a whole. Today in Korea, the term “blockbuster” implies a superproduction, including CGI (Kang, 2006).

In addition to the CG companies’ research and development with the growth of the domestic film market, the government’s support and local governments’ efforts are accelerating the development of visual effects technology.

The investment of the local governments of Daejeon and Kwangju in digital effects began in earnest in the late 2005. The local government of the city of Daejeon completed the construction of the “Special Effects Town” called the Universal Studio of Asia on October 31, 2005. It started to provide the hardware for efficient production of special effects. It combines the arrangements of a general studio, a miniatures studio, a CG studio, and the drainage equipments for underwater shooting. (“Daejeon Special Effects Town,” 2005). The city of Kwangju declared that Kwangju is a city of CGI, and made the contract of exchange and cooperation with William Morris Agency (WMA), the biggest entertainment corporation of Hollywood, at November 9, 2005. Five Hollywood corporations invested \$85,000,000 (“Hollywood invests,” 2005). This investment was arranged for research and development of human resources and CGI technology, which the city of Kwangju promotes with an emphasis. The co-production and co-distribution with Hollywood means to obtain Korean animation industry’s own copyright; accordingly, it is to get out of the status of a subcontract object.

Hollywood has noticed that Korean animation industry has been in advance of the cheap labored South-East Asian subcontracted animation industries, such as India and Malaysia, about 15 to 20 years in technology and engineering skill. For Hollywood, the co-work with Korean animation industry having know-how with comparatively cheap labor provides Hollywood with a chance to increase its qualitatively and economically competitive power. If Daejeon Special Effects Town provides the hardware for the visual effects industry, Kwangju's contract and investment functions as the software through the development of CG program and skilled labors. With the success of blockbuster films, local governments' support for digital effects technology makes the use of CGI in Korean films attractive.

Moreover, beginning in January 2007, in addition to the local governments, the Ministry of Science and Technology (MST) of the central government will begin to support directly the development of CGI technology. Electronics and Telecommunications Research Institute (ETRI), the biggest national policy research institute of Korea, has developed the "digital actor project," spending \$7,200,000 annually from 2003. The digital actor refers to the digital technology that CG creates a human actor's acting, such as facial expression and bodily movement, on the almost same level with the human's. The digital actor project will be carried forward as the "practicalization project" under the lead of MST from 2007 ("Digital Actor," 2006). As the digital actor project is selected as the national project, high-quality CGI and overseas expansion of the domestic CG technology will be supported. Yi In-ho, the leader of the digital actor team at ETRI, mentions that because the central government takes the lead in the project, the Korean film industry will be relieved of the burden of countering against Hollywood blockbusters ("Digital Actor"). The digital actor, developed during the last three years, stars in the fight scenes in the most recent nationalist blockbuster, *Korean Peninsula/Hanbando* (KANG Woo-suk, 2006).

The Korean CG industry, having a short history of twelve years, has gained momentum with the development of technology through the continuous success of blockbuster films. The local governments' bold investments in the hardware and software and the central government's lead of the digital actor project are creating a bright future for CGI. These investments and support of CGI, from the individual companies to the local governments to the central government, demonstrate belief in Korean blockbuster films, serving as a national cultural and economic strategy to counter Hollywood's dominance. Today, CGI is a national project and/or industry, and it is a step towards cultural independence. In the next section, I will discuss how digital effects in Korean nationalist blockbusters stand against Hollywood.

5.2 Korean Nationalist Blockbuster Films, Cultural Jujitsu

Nationalist Motif: Synergy between the National Sense of Inferiority and the Self-reflection of the 'Korean Wave' (*Hallyu*)

Korean audiences' acclamation to the nationalist blockbuster can be viewed as synergy effect between the reflection of the national sense of inferiority and the recent cultural nationalism of Korea rising from the 'Korean Wave' (*Hallyu*).

The National Sense of Inferiority

The success of *Shiri* in 1999, which was the combination of the Korean nationalist subject and Hollywood aesthetics, was not the result of the plan of the Korean film industry, but that of the director KANG Je-gyu's individual strategy. However, since *Shiri*, the film industry itself, feeling a premonition of the possibility of blockbuster, has strategically increased investment in blockbuster films. The most successful films have been movies appealing to

national emotion, based on past traumas. More conventional blockbusters, SF-oriented blockbuster without nationalist themes, such as *A Mystery of the Cube* (YU Sang-wook, 1998), *Resurrection of the Little Match Girl* (JANG Sun-woo, 2002), and *Natural City* (MIN Byung-chun, 2003), have failed, in terms of both commercial and critical reception. Audiences' embrace of the nationalist blockbuster films clearly reflects a desire to see representations of natural traumas onscreen, and perhaps to heal through the pleasures of these effects-driven narratives.

The Korean nationalist blockbuster films do not hide the traumas of recent Korean history; rather, they expose and imaginatively twist them. Their narrativization strategy has been labeled “*faction*,” by Korean journalists, referring to the combination of the historical *fact* and the imaginative *fiction*. The origins of contemporary Korean nationalism can be viewed as the traumas from the invasion of foreign powers, including China, Japan, and the U.S. Opposition to the invaders is the main motif of most Korean nationalist blockbuster films.

Table 5. Top Local Movies

Ranking	Title	Admissions (Mil.)
1	King and the Clown (2005)	12
< 2 >	<i>Tae Guk Gi: The Brotherhood of War (2004)</i>	11.7
< 3 >	<i>Silmido (2004)</i>	11
4	Friend (2001)	8.18
< 5 >	<i>Welcome to Dongmakgol (2005)</i>	8
< 6 >	<i>Shiri (1999)</i>	6.1
7	My Boss My Hero 2 (2006)	6.09
< 8 >	<i>JSA - Joint Security Area (2000)</i>	6
9	Marrying the Mafia 2 (2005)	5.66
10	Memories of Murder (2004)	5.5

Source: Hancinema. Full data is available on the Internet at http://www.hancinema.net/korean-movie-news_6587.php

As KIM Tae-jong (2006) indicates, five films out of the ten most popular films concerned a national trauma: “*Tae Guk Gi: The Brotherhood of War (2004)*, *Welcome to Dongmakgol (2005)*,

Silmido (2004), *Shiri* (1999), and *JSA – Joint Security Area* (2000)” (See Table 5.). All five films address the Korean War and its aftermath.

This nationalism reflects an eager desire for real independence as a sovereign state. As YU Gina indicates, it is the expression of “the collective sense of inferiority or anger” caused by the painful experiences (Kim T.). Korea has been attacked by surrounding powers since the beginning of its history, and has often been occupied by outside forces. Entering into the twentieth century, they experienced the painful history of Japanese occupation for thirty-six years. Five years after the emancipation, the Korean War broke out between North and South. Korea could not maintain independent sovereignty, as she was split by the military intervention of the U.S. and China. Korea is still the only divided country in the world. This collective sense of both inferiority and anger about the dark past of the Korean nation tends to explode through nationalistic subjects. This Korean nationalism was not invented by the Korean nationalist blockbusters, but it was rediscovered and reconfirmed by them. *Shiri*, the first of the nationalist blockbusters and a runaway hit, re-emancipated the suppressed sense of anger and inferiority among the Korean people. The painful history had never disappeared. As Korean film director, KANG Woo-suk, recently producing a nationalist blockbuster, *Korean Peninsula/Hanbando*, states, the reason that Korean audiences are enthusiastic over the film is that they can recover their self-respect hurt from the reality through the nationalist film and that the film can provide the space for letting off their resentment (Chun & Lee, 2006). The Korean audience is attempting to compensate for the humiliating traumas with these nationalist films. Nationalism, as the subject of Korean blockbuster films, functions as an imaginative vicarious war against the foreign forces.

This anti-foreign narrative not only emotionally absorbs the Korean audience, but also

influences its response to films made outside of Korea. Andrew Higson insists, “the concept of a national cinema has almost invariably been mobilized as a strategy of cultural (and economic) resistance” (p. 37). It is the resistance against Hollywood’s domination over local cultures and local film markets. In terms of the Korean nationalist blockbuster films, the national sentiment against foreign forces is matched with the concept of a national cinema as a response to Hollywood hegemony.

The Cultural Nationalism as the Self-reflection of the Korean Wave

The origin of this explosion of the national sense of inferiority can be viewed as the Korean Wave overwhelming East Asia since the late 1990s. The Korean Wave refers to the East Asian fever of Korean popular culture emerging from China, Taiwan, Japan, and other East Asian countries including Thailand, Vietnam, Singapore, and Indonesia, since the late 1990s. Korean popular music has entered into China since around 1997. In 1999, as the Korean television drama serial *Stars in My Heart* was televised and extraordinarily hit in China and Taiwan, the Korean popular culture including Korean dramas, popular songs, and films have been rapidly propagated all over East Asia. The unexpected fever of the Korean popular culture has been one of the hot issues of East Asia; the Korean blockbuster is not an exception. As SHIM Doobo (2006) argues, the Korean blockbuster has amplified the Korean Wave from the success of *Shiri* in East Asian film market; after *Shiri*, Korean films became “regular fixtures in cinemas across Asia” and the popularity has been continued (p. 29). The international fever of the Korean popular culture that Korea has never experienced has inspired the Korean nation with the strong cultural pride and nationalism.

Joseph D. Straubhaar (1991) interprets this enthusiastic response of the culturally

common regional market by means of the concept of ‘cultural proximity’ through the case study of Dominican Republic television programming. According to Straubhaar, the Dominican audience’s reception of national, regional, and U.S. programs showed “a preference first for national material, next for regional Latin American productions, and lastly for U.S. production” (p. 56). So, cultural proximity can be viewed as the pattern for consuming cultural products preferring the products of the common cultural region. East Asian enthusiasm about Korean culture, beyond compare to that about Western culture, can be explained in part by this cultural proximity.

In addition, Straubhaar argues that the Brazilian television soap opera, *telenovela*, hugely influenced by France and the U.S. in the 1950s, transformed itself with the nationally unique aspects, and exported *telenovelas* to the regional and global market from the 1970s (pp. 49-53). From the case of Brazilian television programming, Straubhaar argues that the colonial status of the Third World under media imperialism of the First World has developed from the status of cultural dependence to that of ‘assymetrical interdependence.’ Since Straubhaar’s study is about television channel and genres, it is difficult to apply directly to the unique genre of Korean nationalist blockbuster. However, it gives a useful theoretical inspiration of industrial independence of the Korean film industry in that the Korean film industry has been getting out of the unilateral status of Hollywood’s media imperialism, has led the regional film industry with the support of nationalist blockbuster, and has begun to knock the world market.

Following Homi Bhabha’s perspective that “natives and minorities strike back at imperial domination by recourse to the hybridization strategy” (p. 27), SHIM Doobo argues that the essence of the Korean Wave is hybridity “blend[ing] Western and Asian values to create its own” (p. 40). According to SHIM, the Korean drama and pop music represent modernized Western

culture and atmosphere and simultaneously deal with familism common in East Asian culture.

SHIM suggests the lyric lines of *To My Mother*, the Korean rap band g.o.d.'s famous song, as an example of hybrid popular culture.

Mother, I miss you.

My family was too poor to eat out.

While mother went to work, I used to cook instant noodles by myself.

Sick and tired of them, I once pestered mother to eating out.

She had to use emergency fund to go to a Chinese restaurant.

Mother ordered Jajangmyon but curiously she didn't eat.

She simply said, 'I don't like it. Eat more.'

She simply said, 'I don't like it. Eat more.'

She simply said, 'I don't like it. Eat more.'

...

Mother I love you.

I regret that I haven't said this to you before.

I love you. May you rest in peace. (SHIM, 2006, p. 39)

As the stylish attraction of westernized boy band is beautifully harmonized with the pathetic affection for Mother in the lyrics, g.o.d. touches the chord with Asia. It is the combination of the external features of Western and the internal value of "Asian sentiments" (p. 39). This characteristic of hybridity not only functions as a raw material of the Korean cultural nationalism with supporting the Korean Wave, but also directly inspires the way of filmmaking of the Korean blockbuster through the combination of Hollywood style and Korean nationalist themes. I will address the characteristics of hybridity in detail below.

However, there is some concern about the cultural nationalism derived from the Korean Wave. WON Yong-jin (2001) gives caution that the Korean Wave has possibility to be an epigone of the western cultural imperialism to East Asian countries. WON indicates that Korean manufacturers are riding the Korean Wave for the sales promotion in East Asia, travel businesses are marketing with it, and the government strongly supports the Korean Wave business. Won criticizes the cultural status of Korea, today, that Korea is forgetting the reality as the victim of the western cultural imperialism and transforming himself to a sub-imperialist to East Asian countries. To prevent this sub-imperialism, WON proposes Asian cultural block that the local culture within the block is reciprocally united with the Korean Wave and defend Asia against cultural attack of the West. For WON, the Korean Wave is a distorted nationalist phenomenon producing a Korean version of cultural-economic imperialism onto East Asia. In addition, CHO Hae-joang (2005) criticizes the nationalist perspective of the Korean Wave that the origin of the fever of the Korean Wave is not the Korean sensibility and Korean culture but popular culture, such as dance music and drama serial, mainly targeting a teenager (p. 153). CHO argues that the Korean Wave is difficult to be maintained because it is dependent on only popular culture (p. 153). For CHO, the Korean Wave is a sand castle without any clue for the understanding as cultural nationalism.

Despite WON's anxiety and CHO's criticism, it is a clear fact that the rise of cultural nationalism in Korea has been a socio-cultural phenomenon through the Korean Wave in East Asia. The interpretation of the origin of the Korean Wave and of the meaning of the cultural nationalism has a bit of difference by each scholar; however, the rise of cultural nationalism as a result of the Korean Wave is a cultural phenomenon undeniable. The Korean Wave initiated the cultural explosion of the repressed sentiment of inferiority of Korean. It has made the Korean

nation reveal and/or view the traumas to heal and to overcome with the pride of the Korean Wave, relying on various cultural forms, such as drama, dance music, and blockbuster films. In this sense, the Korean Wave can be said as socio-cultural and economical foundation for the continuous success of Korean nationalist blockbuster since the late 1990s.

Media Jujitsu, the Politics of Resistance: Anti-Hollywood by means of Hollywood Aesthetics

Some argue that a cinema that borrows so much from Hollywood could never be a true national cinema. As YOON Sun Hee (2004) argues that the imitation of Hollywood style buries the identity of the Korean film (p. 310). According to YOON, Korean blockbuster film's imitation of Hollywood blockbuster makes the national theme difficult to be absorbed into the Hollywood style because the imitation includes the way of narrativization as well as the audio-visual style (pp. 313-314). For YOON, Korean blockbuster moves backward from the national identity.

Despite this critical view of the imitation of Hollywood, the reason that blockbuster films have been continuously produced and overwhelmed the domestic market is the Korean film industry's confidence in their strategic adoption of blockbuster films as the way to take on Hollywood. The Korean film industry could not counter, by means of the existing national cinemas, Hollywood's grand size of scale, budget, and star system. As a result, the synergy between the new mode of filmmaking, adopting Hollywood aesthetics as the anti-Hollywood strategy, and the Korean nationalist subject has made the Korean nationalist blockbuster films a weapon against the cultural dominance of Hollywood.

In *Unthinking Eurocentrism: Multiculturalism and the Media*, Ella Shohat and Robert Stam (1994) diagnose Eurocentrism as "unacknowledged" and "bad epistemic habit" brought

about by mass media and academy, criticize that Eurocentric criticism shows not only political regression but also esthetic banality and futility (p. 10). For Shohat and Stam, Eurocentrism is a synonym of European or Western imperialism as they define it as follows: Eurocentrism represents the historical trajectories of empires “from classical Greece to imperial Rome and then to the metropolitan capitals of Europe and the US,” ascribes inherent democratic progress to the “West,” takes no notice of non-European democracy, regards the West’s oppression such as “colonialism, slave-trading, and imperialism” as “contingent, accidental, exceptional,” and appropriates the cultural products of non-Europeans with “glorifying its own anthropophagy” (pp. 2-3). So, for them, Eurocentrism indicates the process of Europeans’ historical and political oppression of non-Europeans; as a result of continuous Eurocentric practices, non-Europeans have become the objects of cultural imperialism.

Shohat and Stam introduce *media jujitsu* as anthropophagy, a strategy of resistance against European domination of inferior local cultures. According to Shohat and Stam, media jujitsu is a method taking advantage of the power of the dominant in order to resist and/or to gain ascendancy over the dominant. They set the Brazilian anthropophagic movement as a strategy of media jujitsu. Although the dictionary definition of the term, anthropophagy, indicates cannibalism, they use it as the appropriation of the cultural materials/products from other cultural areas. In particular, in the context of resistance to Eurocentrism, they propose anthropophagy as the recessive culture’s appropriation of the power of dominant for resistance that is the process of absorbing European techniques for developing and improving local cultures, while at the same time resisting European domination. For Shohat and Stam, anthropophagy and media jujitsu, or anthropophagic media jujitsu, can be viewed as an “excorporation” that steals “elements of the dominant culture and redeploys them in the interests of oppositional praxis” (p. 328). Despite

Shohat and Stam's use of the term media jujitsu, I prefer the term *cultural jujitsu* as its wide sense expanding the realm of resistance from media to the culture as a whole.

The concept of cultural jujitsu has a similar vein with that of *catachresis*. A dictionary definition of the postcolonial term, catachresis, refers to the rhetorical misuse of a word for the context. Gayatri Spivak uses the term for postcolonial discourse. Spivak (1990) argues that the postcolonial critique should criticize or resist the colonialist power by means of catachrestical strategy, "reversing, displacing, and seizing the apparatus of value-coding" (p. 228). Because the political claims of the postcolonial or decolonized are made up of the intentional misuse of the value of the colonial, the claims "are tacitly recognized as coded within the legacy of imperialism" (p. 225). However, they are "concept-metaphors" without historically adequate referent in the postcolonial space; that is, a catachresis (p. 225).

For Spivak, the Third World's assimilation into the First World, or the Third World's seizing the First World's value-coding, is not only the Third World's strategy for survival but also its self-defense mechanism against oppression of the imperialist. In this sense, catachresis is a tool for resistance. Gyan Prakash insists that the postcolonial criticism produced under the influence of discourse of domination locates "neither inside nor outside the history of western domination but in a tangential relation to it" (p. 8). Postcolonialism is a catachresis itself. If I apply the concept of catachresis to the Korean nationalist blockbuster, it can be viewed as a postcolonial product of the self-defense mechanism displacing and seizing the Hollywood aesthetics for the context of cultural nationalism through the anti-foreign force sentiment.

The concepts of "textual poaching" and "appropriation" seem not to fit well to the Korean blockbuster's resistance to Hollywood's cultural and economical imperialism. Paying attention to the fan-based cultural phenomena, such as fan writing of *Star Trek*, Henry Jenkins

(1992) considers “fans as readers who appropriate” cultural products and “reread”/reproduce them with their different interests (p. 23). Jenkins terms this process of fans’ rereading of mass culture textual “poaching,” borrowed from Michel de Certeau. Jenkins rejects fans as passive consumers, supposes “fans as active producers and manipulators of meanings” (p. 23). So, because the concept of textual poaching connotes the consumers’ power or resistance against dominant culture, the resistance of Korean nationalist blockbuster to Hollywood can be included to that in a large sense. However, precisely speaking, the Korean film producers and directors poaching Hollywood style cannot be viewed as or directly compared to the avid fans of *Star Wars* or *Star Trek*. For while the *Star Trek* fans’ poaching the text begins from their ardent fondness of the original text, the Korean producers’ appropriation initiates from antagonistic attitude to Hollywood. So, textual poaching seems not exactly fit into the Korean nationalist blockbuster model. The concept of appropriation also includes the meaning of resistance. The concept of appropriation can be applied to the Korean nationalist blockbuster model in that minorities asserts their power by means of the practice of appropriation modifying and absorbing dominant culture. However, in comparison to the concept of cultural jujitsu, focusing on the relationship between the colonized and the colonizer, the concept of appropriation is of very wide range.

Thus, out of the alternative concepts, catachresis, textual poaching, appropriation, the concept of catachresis can be an alternative of that of cultural jujitsu in the discourse of postcolonialism; in addition, Shohat and Stam’s concept of media jujitsu has not seemed to be firmly placed within postcolonial studies. But nonetheless the reason that I use the term, cultural jujitsu, borrowed from media jujitsu, is that the implication of the concept of jujitsu represents clearest the characteristics of the active resistance or attack of Korean nationalist blockbuster to

the Hollywood films. For cultural jujitsu as cannibalistic anthropophagy is the concept more precisely expressing the reality of econo-cultural war, today, that there is no rough accommodation between the colonizer and the colonized.

The term jujitsu originally refers to the Japanese traditional unarmed martial art that utilizes the power of the enemy's attack to defeat the enemy. It is the cultural terminology of the famous Japanese martial art judo. In the practice of jujitsu, a defender does not stop an attacker's fist, but pretends to accept it at first; then, he escapes it and reversely uses the attacker's power to throw the attacker to the ground. Because of the pretended motion of acceptance, jujitsu is frequently categorized into the flexible martial art. That is why jujitsu's Japanese characters, 柔術, are made up of the flexibility (柔) and a technique or a martial art (術).

This flexible and eclectic strategy that pretends to accept and redeploy the enemy's force to overpower the enemy well describes Korean nationalist blockbuster films that appropriate and reuse the Hollywood aesthetic to paralyze Hollywood's dominance in the Korean domestic film market, and further to enter into and to spread Korean culture to the global market. As YOON Seung-wook (2002) indicates, the strategy of pseudo-Hollywood aesthetics, which keeps "the eclectic balance between Hollywood style and the strategy of nationalism," is receiving social support (p. 100). The spectacular and standardized way of filmmaking, including high production costs and the use of action and special effects, is restructured by the actual Korean circumstances of budget; then, the applied Hollywood aesthetics packs up the nationalistic narrative. The Korean nationalist blockbusters gain mastery over Hollywood films through telling the nationalistic story of opposition to foreign forces with the familiar style of the cultural dominant, Hollywood. The strategy of pseudo-Hollywood aesthetics of the Korean nationalist blockbuster films is a good model of cultural jujitsu through the new mode of filmmaking, mixing the

characteristics of the national cinema and blockbuster style.

Paradoxically, the effect of the pseudo-Hollywood strategy grows larger as Korean culture becomes more westernized. Since the audience is already familiar with Hollywood aesthetics, then their absorption of the nationalistic narrative is faster. Of course, there may be a risk of deepening cultural imperialism in the short run. However, in the long run, I believe that the domination of the Korean nationalist blockbusters over the domestic film market will reduce the inflow of the imperialist cultural capital and will increase the input of the national cultural capital. Accordingly, through this activation of the Korean film market and industry, the Korean film's quantitative and qualitative growth and development, creating something new and unique resulting from the synergy between Korean and Hollywood culture, will bring more cultural profit than closing the country or the unconditional rejection of Hollywood.

The digital effects on which Korean nationalist blockbuster hugely rely can be considered as the aesthetic essence of the Hollywood blockbuster in that Hollywood style has developed through invisibility. As I discussed in the earlier chapters, visual effects have developed with the pursuit of reality effect, which is the cinematic illusion created by special effects. Invisibility of visual effects is a necessary condition for obtaining the reality effect. Not only visual effects but also Hollywood style itself has followed an ideal of invisibility. Edward Dmytryk's statement "The finer the cutter's technique, the less noticeable is his contribution" sums up Hollywood film's commitment to the invisible style (1984, p. 11). This tradition of invisible editing or continuity system has been the foundation of Hollywood's cinematic language. Filmic technology, including sound, color, and special effects, also has developed for the purpose of pursuing invisibility. In this context, the development of visual effects has formed an axis of the Hollywood film history, and at the same time, the reality effect of visual effects has been a part

of Hollywood style. The Korean nationalist blockbuster appropriates the reality effect of digital effects as a part of Hollywood aesthetic, gaining ascendancy over Hollywood blockbuster in the local market.

The first Korean film to successfully appropriate Hollywood blockbuster aesthetics was KANG Je-gyu's *Shiri* in 1999. *Shiri* transformed the Korean audience from the subject of Hollywood's cultural imperialism to that of Korean nationalism. Until the appearance of *Shiri*, the Korean audience acknowledged and respected the artistic value of Korean films and some preeminent authors, but was unsatisfied with the technological level that produced the spectacle. The attraction of the incredible spectacle that Hollywood blockbusters provide was one of the reasons that the Korean audiences go together in great numbers to the theaters to see Hollywood films. However, after *Shiri*, they were excited with the quality of the spectacular presentation, and were proud of Korean film. It was Korean audiences' satisfaction with Korean film's capability to represent Hollywood style that was the influence of cultural imperialism, and at the same time, an expression of confidence that "we can do it, too." Korean audiences could feel that they had overcome a sense of national inferiority, due to the creation, in itself, of a well-made pseudo-Hollywood film. The story about the national identity as the divided country was a good fit with their emotions. So, the Korean audiences, under the influence of cultural imperialism, were satisfied with their being able to see the Hollywood style Korean film, and simultaneously, inspired by the anti-foreign and/or nationalist subject that the narrative implied. They are strongly attached to the Korean nationalist blockbusters showing the powerful spectacle, which was an object of desire. The Korean audiences crowded to the Korean films; the continuous success of the Korean nationalist blockbusters has made Hollywood films take a corner of multiplex theaters. The Korean film industry is overpowering Hollywood film through using the

force of Hollywood style as the cultural dominant.

Table 6. Selected Awards from Major International Film Festivals

Year	Intl. Film Festival	Director	Exhibits	Awards
1989	Locarno	PAE Yong-gyun	Why Has Bodhi-Dharma Left for the East?	Golden Leopard
1994	Berlin	JANG Sun-woo	Hwaomkyung	Alfred-Bauer Prize
1999	Cannes	SONG Il-gon	So-Poong	Best Short Film
2001	Tokyo	HUR Jin-ho	One Fine Spring Day	Best Artistic Contribution
	Locarno	MOON Seung-wook	Nabi	Best Actress (Ho-Jung Kim)
2002	Venice	LEE Chang-dong	Oasis	Special Director's Award
	Cannes	IM Kwon-taek	Chihwaseon	Best Director
2003	Torino	BONG Joon-ho	Memories of Murder	Best Screenplay
	Moscow	JANG Joon-hwan	Saving the Green Planet!	Best Director
2004	Sundance	KIM Dong-won	Repatriation	Freedom of Expression
	Cannes	PARK Chan-wook	Oldboy	Grand Prize of the Jury
	Berlin	KIM Ki-duck	Samaritan Girl	Silver Bear for Best Director
	Venice		3-Iron	Director
2005	Berlin	IM Kwon-taek	-	Honorary Golden Bear
		LEE Yoon-ki	The Charming Girl	Netpac Prize
2006	Sundance	KIM So Yong	In Between Days	Dramatic Independent Vision
		YANG Yonghi	Dear Pyongyang	World Documnetray
	Berlin	KIM So Yong	In Between Days	The film from the Forum

Source: Korean Film Council. Full data is available on the Internet at <http://www.kofic.or.kr/contents/board/index.aspx?MenuId=615>

The significant fact that I should not fail to mention is that despite the inferiority of the box-office, a number of qualified Korean national cinemas have glorified the national identity in major international film festivals during this time when the Korean nationalist blockbusters have swept over the domestic film market. In 2004, the Korean cinemas received awards by three major international film festivals, Cannes, Venice, and Berlin international film festivals (See Table 6). Those prizes have been earnestly awarded since 1999, when the Korean blockbuster film first started to be produced. After taking an independent strategy of Hollywood style filmmaking, the Korean national cinemas' awards from international film festivals has been increased. Though I cannot say that the success of the Korean national blockbusters has had a

positive influence on the action of the Korean films only by means of the information of Table 6, we can understand that the use of Hollywood aesthetics has not buried the Korean national identity and the artistic value of the Korean film. The Korean nationalist blockbuster films, which have been training for the cultural jujitsu of the Hollywood spectacle with digital effects, are overcoming the cultural dominance of Hollywood films.

In the next section, I will discuss how the nationalistic subject of the anti-foreign forces and Hollywood aesthetics are combined together to reveal, and make an attempt to heal, the past traumas and/or the national sense of inferiority or anger.

5.3 Cultural Jujitsu: Healing Trauma through Korean Nationalism with Hollywood Style

The Korean nationalist blockbusters' spectacle with digital effects intends to imitate that of Hollywood blockbusters; however, its function within narrative deployment serves as the cultural jujitsu, implying the anti-foreign powers, and thus, countering against Hollywood's cultural dominance. I will categorize four films—*Shiri*, *Tae Guk Gi: The Brotherhood of War*, *Welcome to Dongmakgol*, and *2009: Lost Memories*—to three sub-subjects: the representation of cultural influence of foreign forces; the nationalist and anti-foreign narrative implications; and digital effects as jujitsu. Because their subjects and styles place the films into a unique category of the Korean nationalist blockbuster film, the discussion following the sub-subjects, rather than each film in chronological order, seems to be more efficient. Thus, the structure of the textual analysis section in this chapter is different from that of the earlier chapters.

The section of “the representation of cultural influence of foreign forces” will show the first step of jujitsu, which is to pretend to accept the enemy's power of attack. I will suggest the summaries of their stories and the foreign influence on Korean culture naturally absorbed in the

narratives. “The nationalist and anti-foreign narrative implications” section deals with the main subjects of the film, exposing the desire of restoring national sovereignty without the interference or help of foreign powers. I will discuss the narrative foreshadowing and implications of nationalism countering foreign forces. In the last section, “digital effects as jujitsu,” I will argue that digital effects and the spectacle they use externally remind us of those of Hollywood, but they internally represent anti-foreign/Hollywood discourse, the digital effects as a cultural jujitsu.

Shiri (1999) was directed by KANG Je-gyu, one of the most successful Korean directors. It was commercial and critical breakthrough in the Korean film industry. As 6,100,000 audiences saw *Shiri*, it surpassed the record of *Titanic* (James Cameron, 1997) admitting 4,700,000 audiences in the local film market. *Shiri* was awarded Grand Prize in Film at Baeksang Arts Award in 1998. It is the nationalist blockbuster film that describes the pain as the broken country on the Korean peninsula and the nation’s long cherished desire of unification of the South and the North by means of Hollywood style. North Korean revolutionists intend to break the mood of accommodation between North and South, to give rise to the second Korean War, and finally to accomplish military unification led by the North. They send LEE Bang-hee to assassinate Korean leaders and make her approach to the South Korean OP agent YOO Joong-won as a lover. The North Korean special force, PARK Mu-young, is sent to the South, in order to kill the minister of the North, participating in the friendly soccer game between North and South. They intend to incriminate the South, to break out the second Korean War. The name of the plan is *Shiri*. YOO saves innocent people of the South by killing PARK, the assassinator, and his real lover, LEE.

In reality, despite the South Korean’s heartiest wish for the unification, the political barrier between the North and the South seems to be heightened to the degree that the unification is felt impossible. Neither the South nor the North wants to unify via the way that each of them

want. In addition, some intellectuals of the South do not want the South's absorbing unification of the North because extreme poverty of the North may become a total burden of the South economy. The government of the South is supporting the North from various angles to prevent the North's economic collapse. This inequality of economy and the polarization into opposing politics put a question mark onto the possibility of the unification. Even now the North Korean is brainwashed from the elementary school into thinking, for maintaining the dictatorship, that the South Korea is a cat's-paw of the imperial U.S. From the mid 1990s that the military regime was over, the South began to recognize that the North is an object we had to embrace. The South's recognition of the North has changed but the North's recognition of the South has not seemed to be changed. The unification may be accomplish in the near future, or may not possible at all. For the South today, the unification seems to be closer to a fantasy than to reality. In this geopolitical context, the South agent YOO's struggle with PARK's violent provocation for the unification in *Shiri* shows the clear distinction of vision of the unification between the South and the North.

Tae Guk Gi: The Brotherhood of War (2004) was directed by KANG Je-gyu who directed *Shiri* in 1999. *Tae Guk Gi* was a mega hit recording 11,700,000 admissions. It swept over Korean film awards including Grand Prize in Film at Baeksang Arts Award in 2004. *Tae Guk Gi* deals with the story of two brothers, Jin-tae and Jin-seok who are forced to be in service in the Korean War. The elder brother Jin-tae tries to be awarded the Medal of Honor in order to have Jin-tae discharged from the service. Jin-tae transforms himself into a frenzied war hero to perform a meritorious deed. Jin-seok is wounded and sent back to the rear. However, Jin-tae misunderstands that Jin-seok is dead by South, and becomes the commander of North troops as the incarnation of revenge. Jin-seok comes back to the battle field to rescue Jin-tae; however, Jin-seok returns alone under the self-sacrificed covering of Jin-tae. Fifty years later, finding Jin-tae's

bones, Jin-seok bursts into tears of remorse. *Tae Guk Gi* projects the national trauma derived from the Korean War through the story of brotherhood.

Welcome to Dongmakgol (2005) was directed by PARK Kwang-hyun. It was commercially successful as it recorded 8,000,000 admissions and awarded Grand Prize at Korean Film Award in 2005. *Welcome to Dongmakgol* tells about the Koreans' dearest wish for unification of North and South, by means of dealing with the story about the straggling soldiers of North and South. The dropout soldiers of North—High Comrade LEE Soo-hwa, Sergeant Jang, and SEO Taekgi—encounter the South dropouts—Second Lieutenant PYO Hyun-chul and Medic Comrade MOON Sang-sang—as well as the U.S. Navy Captain Neel Smith in a remote village, Dongmakgol, in Gangwon Province. The soldiers of North and South have daggers drawn at each other; however, as assimilated by the pure souls of the Dongmakgol folks, they are gradually accorded. Allied Forces mistakenly think that Captain Smith's fighter was shot down by Northern anti-aircraft emplacements in Dongmakgol, and sends a number of fighter-bombers to make a bombing raid on Dongmakgol. The soldiers of North and South sacrifice themselves to save the pure folks who do not even know what a gun is. The dropout soldiers become new allied forces of North and South facing against Allied Forces.

2009: Lost Memories (2002) was directed by LEE Si-myung. The film's commercial and critical response was comparatively degraded; however, it can be a good example of Korean nationalist blockbuster film, combining the nationalist theme and Hollywood aesthetics. *2009: Lost Memories* appropriates the motif of time-trip shown in *Back to the Future* (Robert Zemeckis, 1985) and *The Terminator* (James Cameron, 1984). Japan sends Inoue back to 1909, a hundred years ago, to tamper with history to make Korea a tributary state. The Korean JBI (Japanese Bureau of Investigation) agent Sakamoto, knowing the facts, attempts to go back to 1909 and

rectify the distorted history. Sakamoto's best friend Saigo comes back to the past to stop Sakamoto, but he fails, and Sakamoto successfully fixes history. Back in 2009, Korea is independent, exceeds Japan, and leads the Asian countries.

Korea including both the South and the North has presented unconditional hostility after the emancipation from the Japanese occupation. The animosity towards Japan has not died down. At this moment, as the strife of the dominium about Dokdo, an island located between Korea and Japan, gets bigger, the anti-Japanese emotion of Korea is extremely rising. Superficially, the strife is for the sovereignty of the fishing industry, but internally, for the South Korea, it is the struggle for the national sovereignty reminding the loss of sovereignty in the past. If, for the South Korea, the U.S. is a friend protecting violence of the North, and at the same time, an invader interrupting the unification and dominating the economy and culture, Japan is an old foe that Korea must not be defeated again. At the moment that Korea passes Japan ahead politically, economically, and culturally, the trauma of the Japanese occupation may begin to be healed. However, it seems not expected to be achieved shortly. In this sense, *2009* can be viewed as a cultural attempt to heal the trauma through representing the national consciousness of the anti-Japan with a form of science fiction.

The Representation of Cultural Influence of Foreign Forces

As the director Kang Je-gyu states, "*Shiri* imitated the style from Hollywood action thrillers" (Shim, 2005). The film exposes the cultural influence of Hollywood in itself. In the scene wherein agent YOO Joong-won and his best friend, agent LEE Jang-gil and LEE Bang-hee pretending to be YOO's lover are having dinner together after seeing a musical, the cultural influence of West on South Korea is explicitly presented. The musical they see is the Korean

version of the Broadway musical *Guys and Dolls*. The restaurant where they have dinner is the European style family restaurant, Marché. The camera takes the logo of Coca Cola in the middle of the frame, and slowly pans right and tilts down to the parasol of the dinner table, where the logo of Marché is seen. They are in the center of cultural imperialism called globalization.

The scene in which agent YOO leads the OP special units and has a fierce battle with the North Korean special forces in the building imitates the action scenes in *The Rock* (Michael Bay, 1996) or a number of SWAT action movies. The bodily movement of OP units is much closer to that of the special forces led by Commander Anderson (Michael Biehn) in *The Rock*. The urban combat scene resembles that of *Heat* (Michael Mann, 1995). The scene in which PARK threatens YOO by a phone call imitates the scene in *Die Hard: With a Vengeance* (John McTiernan, 1995). PARK says “We have ten CTXs placed all over Seoul. I’ll call you 30 minutes before each of them goes off. You’d better find them before people get hurt.” Manhattan is replaced by Seoul, and detective John McClane is changed to agent YOO.

The main musical theme of *Shiri* is Carol Kidd’s *When I dream*. It is heard whenever the melo-scenes between YOO Joong-won and LEE Bang-hee are presented. In the very end, in particular, when YOO recalls LEE Bang-hee, it is heard again with the ending-credit. “I could build a mansion that is higher than the trees... But when I dream I dream of you maybe someday you will come true...” The mood of YOO recollecting the love with LEE Bang-hee, which is impossible to gain, is replaced by the heart of a South Korean falling in love with a North, which also seems impossible to achieve. South Korean people’s heartiest wish for the unification is repeatedly symbolized by the American popular song, rather than by Korean music, it is a vivid representation of cultural imperialism. As *Shiri* reveals the U.S.-oriented Korean culture of the present, it naturally absorbs the audiences into the nationalist narrative.

In comparison to *Shiri*, *Tae Guk Gi: The Brotherhood of War* and *Welcome to Dongmakgol* represent softly the cultural influence of foreign force, due to the periodical background of the 1950s. In *Tae Guk Gi*, Jin-tae shoeshining in Jongno admires the imported Italian hand-made shoes. Jin-tae's dream is to make good shoes equivalent to the Italian shoes and further, to have his own shoes shop.

Jin-tae: The middle ones are made of Italian leather. They just came in. ... It's a work of art. The heels are high, and the stitching is superb.

Jin-tae's dream is growing with the Italian shoes. In the beginning, we can find two black Ford deluxe sedans, which seem to be produced in the 1930s, in Jongno, the most bustling place of Korea in the 1950s. The first Korean car produced by Korean technology appeared in 1955 in reality. So, the cars appearing before 1955 were imported, most of which were from the U.S. The Ford cars in the film are a symbol of the advanced civilization and technology of the U.S. It creates a contrast with the naïve outfit of the Korean people. The imported shoes and cars are dominating the center of Korean business at that time.

After the emancipation, the economic independence of Korea was extremely low. The supply goods for the war of South Korea were dependent upon the U.S.; accordingly, most South Korean military supplies were made in the U.S.A. In *Welcome to Dongmakgol*, the U.S. mark clearly shown on the ammunition pouch of PYO represents the economic situation that the Korean army had to depend on U.S.'s suppliers. There is a scene that Medic Comrade MOON Sang-sang states his dream that he wants to be a manager of a U.S. Army Club because there are lots of girls there. It is a symbolic moment of showing Korean youngsters being strongly touched with the civilization and culture of the U.S. The sole intellectual of Dongmakgol, Teacher KIM, represents the inflow of foreign culture. Teacher KIM hardly speaks English; he can only read

simple sentences. He tries to communicate with Captain Smith by reading the introductory level of English conversation book whose title includes, “English Step by Step: New Edition.”

However, the folks of the village hold him in respect because he seems to be able to speak English, which cinematically represents the cultural dominance of the U.S.

In contrast to the other films, we cannot find some properties or symbols representing Korean culture in *2009: Lost Memories*. The superficial reason for that is the film’s diegesis supposes that Japan has colonized Korea by 2009. Since Korea has long been a part of Japan, there is no sign of Korean culture. However, the implicit reason of that is that the film projects the national trauma of Japanese liquidation of Korean national culture during the period of Japanese occupation from 1910 to 1945 onto the fictitious future. What the film shows is the Japanese culture itself, not the influence.

Japanese language dominates half of the film. All of the letters presented in the film, except the ending scene, are Japanese. Saigo’s house is a traditional Japanese house, with a Japanese garden. Saigo and his wife wear traditional Japanese costumes at home. The relationship between JBI director and Saigo is much close to that between a lord and his samurai. The Korean agent Sakamoto’s house is a westernized modern residence. There is no evidence of the culture or traditions of Korea. The gunfight scenes resemble that of Hollywood. The appearances of two JBI agents, Saigo and Sakamoto, much resemble those of two OP agents, YOO Joong-won and LEE Jang-gil in *Shiri*. The special forces’ movement looks like that of SWAT movies. The scene in which Furei-Senjins pretends to be a party server and guests at the final exhibition of Inoue Collection in the very beginning is similar to that of the operation of Ethan Hunt (Tom Cruise) in the beginning of *Mission: Impossible* (Brian De Palma, 1996). The armed Furei-Senjins’ secret infiltration from the sky by the hang-gliders to the roof of Inoue

Culture Research Center remind us of the scene of infiltration by skydiving in *Drop Zone* (John Badham, 1994).

The Nationalist and Anti-Foreign Narrative Implications

In *Shiri*, the South's dream of unification with the North seeming impossible is repeatedly represented through the leitmotif of two fishes, Kissingurami and Shiri. LEE Bang-hee, a spy from North, falling in real love with the South's agent YOO Joong-won repeats the story of Kissingurami, a tropical fish coming from abroad.

LEE Bang-hee: (as giving two Kissinguramis to YOO) If one of them dies, the other dies too. They dry up from malnutrition or their scales fall off. Don't let them die.

Feed them once a day, and change the water...

YOO Joong-won: Every five days. They don't survive where it's dark and cold.

Keep the lights on all the time.

LEE Bang-hee: I might do the same thing if you left me alone.

(They imitate the kisses of Kissinguramis.)

Their dialogue of Kissingurami with the background music of *When I dream* represents the love mood in peace. However, in reality, the kiss of two Kissinguramis refers to not a kiss of love, but a fighting to keep their territories. In the end, they point guns at each other, due to their differences of ideological and political identity, despite their real love. In the narrative, when the two ministers of North and South see the friendly soccer game between South and North, the South's agent YOO and the North special force PARK Mu-young fight desperately under the playground. So, LEE and YOO's imitation of the kisses of Kissinguramis symbolizes the relationship between the South and North, beyond that between YOO and LEE. Their tragic love

implies the recognition of South Korea's unification with North, in that despite South's real love and desire for the unification, the difference of reality getting bigger makes the future darken.

When Kissingurami symbolizes South Korean recognition of the present status of territory division, Shiri, an endemic fish, does South Korean expectation of the North Korean way of unification. In diegesis, Shiri is the name of the secret plan that the revolutionists of the North intend to make the Korean War again through killing a minister of the North during the friendly soccer game. To induce Jung-II Kim's misunderstanding that the South assassinates the minister of the North is the purpose of Shiri plan. PARK says about Shiri to YOO.

PARK: You know the fish named "Shiri"? It's a Korean aboriginal fish, living in crystal streams. Though they are separated with the country divided, someday they'll reunite in the same streams.

Shiri is a Korean aboriginal fish able to live only in the purest stream. The name of the unification plan is Shiri in diegesis. The title of the film, Shiri, symbolizes the unification of North and South, without the interference or help of foreign powers. PARK's remark that Shiris of North and South reunite in the crystal stream refers to the setting of anti-foreign forces revealing the desire of unification under pure stream/culture, which is not polluted by foreign culture/power. It is the intention of the North in diegesis, and simultaneously, the expectation of the South in reality. The different setting of symbolism of the fishes between the exotic fish, Kissingurami, as the South Korean recognition of the unification and the aboriginal fish, Shiri, as the North Korean way for the unification is a representation of self-reflection that the influence of western cultures on South Korea is getting heavier, and that North Korea's political, economic, and cultural isolation from the world is getting deeper.

Shiri implies that the unification of South and North, symbolized by Shiri reunited, has a

cultural and economic barrier placed by the foreign forces, in particular, the U.S. The special force of North, PARK, wreaks his wrath or the North Korean national wrath on the South's agent, YOO.

PARK Mu-young: "Our hope is reunification. We dream about it." When you sing this song, our people in the North are dying on the street. They barely manage to live with roots and barks. Our sons and daughters are being sold off for fucking 100 dollars! Have you ever seen parents eating the flesh of their dead kids? With cheese, Coke and hamburgers, you wouldn't know. A soccer game to unite the nations? It's bullshit. We've had enough with the 50 years of deception. We're opening up a new history of Korea.

"Our hope is reunification" is a children's song of the South. South Korean people learn this song at the elementary school year and love to sing the song throughout their lifetimes. The song can be regarded as the expression of South Korea's will for the unification. When South's children sing a rosy song, the children of the North hunger. When South Korean people are filled-up with Coke and burgers, the North is starving. Since the friendly soccer game is a political play, a war is needed for the unification. PARK's remark represents the difference of consciousness and culture between the North and South, caused by the cultural influence of the U.S. The implication of PARK's line is the anti-U.S. sentiment, that the U.S. is a setback to the unification in that the U.S. draws away South from North. This scene proves that *Shiri* is an anti-foreign nationalist film. The goal is to resist foreign interference and influence, to secure practical independence of sovereignty, and to combine two governments into one. This is the Korean nationalism that Korean films, dealing with the reality of territory partition, such as *Shiri*, *Tae Guk Gi*, and *Welcome to Dongmakgol*, are commonly based on.

While *Shiri*'s nationalist implications are indirect and metaphoric, that of *Tae Guk Gi: The Brotherhood of War* is more direct and straightforward. First, its title is nationalist and ideological because Tae Guk Gi refers to the national flag of South Korea. The original Korean title of the film is *Taegukgi hwinalrimyeo*, meaning "as flying Tae Guk Gi" and implying the extreme patriotism and nationalism that raises the national flag on the highland after killing a myriad of enemies. In the film, Jin-tae leads the victory of the battalion. As tying up Tae Guk Gi on the body of Jin-tae's rifle, the commander makes a compliment to him in front of the soldiers, "Your bravery exemplifies the men of this battalion. Raise this flag on Mt. Baekdu by the Chinese border." The soldiers give a big hand and carry him shoulder-high. The solemn music is heard, simultaneously. It is the extremely nationalist moment represented by the symbolism of the Korean national flag. This scene signifies that the film is about nationalism via the story of brotherhood.

In *Tae Guk Gi*, Korean nationalism is implied through the distorted brotherhood. The film has the narrative that the brotherhood is connected to the nationalist subject of South and North. Jin-seok tender is weak, but good at his books. Jin-tae brave is strong, but bad at his books. Symbolizing the characteristics of South and North, they represent the brotherhood that is impossible to be realized.

Jin-seok: You and I should be together. We live and die together.

Jin-tae: You know I want both of us to live. But if only one of us gets to go, I want it to be you.

If Jin-seok's lines mean the unification of South and North as a brother of the same blood, Jin-tae's lines indicate the practical difficulty of the unification and the superiority of South. The symptom of the extreme nationalism that the South is preferable for survival if the unification is

impossible seems to be shown. The reason that Jin-tae eagerly wants to let Jin-seok go back home is that Jin-seok's scholastic achievement is preeminent. The scholarship, including the rank and grades, is and has been related to the social success in Korean society. Jin-seok's success is his family's success, too.

Jin-tae: What did I risk my life for?... I want you to go home alive. I also want to go home, you know. But you're our family's hopes and dreams! I never regretted giving up school and shining shoes for you. Mom happily broke her back for you. Do you know our sacrifices?

Jin-seok: Of course, I do. I know all of it. Why am I the only one you think about? If you had thought about Young-shin and Yong-man, you couldn't have done it.

Jin-tae: I don't care what you think, as long as you can go home.

Family members' voluntarily sacrificing for or supporting the member who shows scholarly possibility has been easily found in South Korea. It cannot be said to be unique to Korean family-hood, but it is rarely seen in the West. Jin-tae not only sacrifices himself, but also attaches no importance to the other's safety. Jin-tae only considers his own family blood-related. His companions and even fiancé are easily forgotten. This extreme family-hood and brotherhood cinematically represent the extreme nationalism of Korea, proud of a single race. In this sense, Jin-tae's ignorance of others implies the strong sentiment of the anti-foreign forces.

In *Welcome to Dongmakgol*, CGI supports the symbolism of anti-imperialism. The butterflies drawn by CG protect Dongmakgol from the intervention of Allied Forces. Captain Smith's fighter is brought down in the beginning because of the butterflies' flight disturbance. Later, Smith finds out that another fighter was knocked out of the sky. When the special forces of Allied Forces come down in parachutes, the butterflies hinder the entrance of the forces into

Dongmakgol. The butterflies serve as a guardian angel of the purest village of Dongmakgol. In addition to the butterflies, when the Communist People's Army soldiers of North, High Comrade, LEE Soo-hwa, Sergeant JANG, and SEO Taekgi, enter the village, the snake exhausts the cartridge clips of their rifles. The snake demilitarizes the soldiers.

The character of Medic Comrade MOON Sang-sang is the young man who is already influenced by western culture. His dream is to become a manager of the U.S. Army Club. He is a cinematic representation of western influence on the Korean culture. He shows the extreme individualism when the dropout soldiers plan to protect the village. While the other soldiers, including Smith, participate in the plan with their life, only MOON shows heavy hesitation saying, "I'm not going! If my family... even if it were my own family I couldn't do it." It is the character setting of the anti-foreign cultures, suggesting the bad influence of western culture, in particular that of the U.S.

The name of the village, Dongmakgol, means "the village of living like children carefree." From the origin of the name, Dongmakgol refers to the village being free from the control or intervention from the externals. It is the village that is untouched by foreign forces. The story of the film is about making a small allied force of North and South to protect Dongmakgol from Allied Forces' bombing. Dongmakgol is the realm of nationalism. Allied Forces are represented through B29 bombers and P47D fighter-bombers, the major aircrafts of the U.S. Air Force.

The implication of anti-foreign powers is more concretely described in *Welcome to Dongmakgol*. Dong-goo's mom, who has lived in Dongmakgol for a lifetime, is afraid that the outsiders will entice Dong-goo to leave the village. She does not want to give him a chance to see the outside. She tries to isolate his son into Dongmakgol, rather than to give him critical

power. The lines of Dong-goo's mom embody the anti-foreign forces. She shows the anxiety about the outsiders to his father-in-law, the head of the village.

Dong-goo's mom: It's almost 9 years since Dong-goo's pa left home. Sure, he wanted to see the outside world, but I'm worried sick Dong-goo will leave, too. We have to send the outsiders away before something happens. If Dong-goo ends up leaving, too, I'll die!

The title of the film "Welcome to Dongmakgol" is a kind of paradox. The villagers of Dongmakgol are naïve and pure to the degree that they do not know understand violence. They are warm-hearted and fond of the strangers. They do not draw a distinction between a native and a foreigner, and between South and North people. Dongmakgol welcomes everybody. However, Dong-goo's mom reveals the internal caution and fear for the outsiders. She considers the soldiers as invaders breaking the peace of Dongmakgol. From her lines, we can think that almost all of the villagers have never left Dongmakgol. Neither did many outsiders enter the village because of its geographical isolation and of the support of the butterflies and snake. Her husband did not come back after going out to the world. For the villagers, the world outside the village is a certain attractive place to the degree that one does not want to come back if once soaked in the world. That is the western culture mirrored by the world outside Dongmakgol. As undergoing the war with the help of the Allied Forces, the sovereignty of South Korea is gradually disappearing. South could not reject the help of the U.S. The pure nationality has not come back home yet. The more carried away by the western culture, the more estranged from the pure aboriginal culture. The scene is a criticism against the U.S.'s cultural domination, and at the same time, against the present cultural status of Korea, which is being fully soaked in American culture.

In the end of *Welcome to Dongmakgol*, the bombers of the Allied Forces approach

Dongmakgol. The dropout soldiers prepare for the bombing induction to the place secluded from the village. Smith comes back to the base first to notify the survival of himself. Only South and North soldiers remain.

(North) SEO Taekgi: Aren't we allied forces, too? We're a North-South Joint Force, aren't we? Am I wrong?

(South) MOON Sang-sang: You can joke at a time like this?

(North) LEE Soo-hwa: That makes sense!

(South) PYO Hyun-chul: Instead of like this... if we had met somewhere else some other way... we would have had real fun. Don't you think so?

The dropouts form small allied forces, made up of South and North armies, in order to resist the Allied Forces' attack on Dongmakgol. In order to stop the Allied Forces referred to by the U.S. Airforce, South and North are accorded. To keep the purity of Dongmakgol, the allied forces of North and South confront the foreign forces. In the scene of the harmony between North and South, Director PARK Kwang-hyun refuses the help of Captain Smith.

2009: Lost Memories presents the strongly nationalist setting in the beginning. Director LEE Si-myung twists the painful history with SF imagination. First, we see the failed assassination. The credit-sequence of montage of the beginning announces that this film tells a nationalist history distorted and intertwined between Korea and Japan. With a series of montage, distorted history is presented by the following subtitles:

1910 – Japan annexes Chosun, Ito Hirobumi inaugurated as the first governor of the Chosun colony.

March 1, 1919 – Protest against Japanese occupation at Pagoda Park suppressed

1921 – Inoue inaugurated as the 2nd governor of the Chosun colony

1932 – Assassin Yoon B. G. killed on the spot at Hongkou Park, Shanghai

1936 – US and Japanese allied forces enter WWII

1943 – Japan takes over Manchuria

1945 – Atomic bombs dropped on Berlin; WWII ends

1960 – Japan becomes a permanent member of the UN Security Council

1965 – Japan launches its first satellite, Sakura 1, into orbit

1988 – Olympic games held in Nagoya, Japan

2002 – Soccer World Cup held in Japan

(The camera takes LEE Dong-guk, a famous Korean soccer player, attaching the national flag of Japan to his uniform.)

In diegesis, modern Korean history has been changed, fact by fact in chronology. In reality, ANH Jung-geun's assassination of Ito Hirobumi succeeded. This infected Korean people and spurred the independence movement. In this alternate history, Ito Hirobumi survived and became the first governor of Chosun colony. Every subsequent event has been altered as a result. In the end of the credit sequence, the camera takes the Korean soccer player LEE Dong-guk playing with the Japanese flag in 2002 Korea/Japan World Cup Soccer Game. In real life, SOHN Gi-jung won the gold medal in Marathon at Berlin Olympic Games in 1936 with the Japanese flag. So, LEE Dong-guk is a cinematic version of SOHN Gi-jung who has symbolized the sorrow of Korean whose identity was plundered. This is in exact opposition to the national emotion of the pent-up fury and hatred of thirty-six years of Japanese occupation. The credit-sequence drives the audiences to the memory of trauma, asking them to fill up with the nationalist and patriotic sentiment. It is the phase of exposing trauma before its healing process. The distorted history in the beginning functions as the strongest setting of nationalism, countering against the past

Japanese imperialism.

The nationalist sentiment of the anti-foreign forces, presented in *Shiri*, *Tae Guk Gi*, and *Welcome to Dongmakgol* are primarily aimed at the U.S. It is antipathy against the political and cultural influence and/or interference of the U.S., which occurs or cannot help occurring in the middle of supporting South Korea as an allied nation. The recent Korean films, based on the Korean War story, tend to hold in common the narrative implication that the Korean unification begins with the independence from U.S.'s political and cultural influence and interference. However, the anti-Japanese sentiment is dissimilar to the anti-U.S. in terms of its characteristics. The historical fact that Korea is thoroughly deprived of sovereignty by Japan has forced the Korean people to maintain the unconditional nationalism of anti-Japanese militarism. The narrative, implying the accordance of North and South by means of the anti-U.S., is not needed in the films like *2009: Lost Memories*. Both sides of Korea are already united with the sentiment of anti-Japan. Korean people's anti-Japanese sentiment is rising again recently because of the territory dispute of Dokdo, located between South Korea and Japan. In season, another nationalist blockbuster film, *Korean Peninsula/Hanbando* (KANG Woo-suk, 2006), was released and ignited again the anti-Japanese nationalism after *2009: Lost Memories*. One may criticize the possibility of the nationalist subject as a marketing strategy of Korean film studios; however, no one can deny the existence of unconditional nationalism of the anti-Japanese militarism.

2009 depends upon this unconditional nationalism. Sakamoto listens to the secret history from a senior Furei-Senjin, at the hideaway, Kayaran. Sakamoto becomes aware that Japanese occupation has been continued because the organization of Japanese extreme right came back to 1909 and changed the history of Korea and Japan.

Senior Furei-Senjin: I know it's hard to believe. I was like that too. But over the last one

hundred years, many of us have died for this unbelievable story, and your father is one of them. Now, we want to put history back on its original path.

It is Korean resistance's unconditional belief in the distorted history between Korea and Japan. He asks Sakamoto to accept the unconditional nationalism of the anti-Japanese militarism, only because Sakamoto has Korean blood. The unconditional belief in succession from the father to the son portrays the unconditional anti-Japan nationalism in succession from Korean ancestors to the present people. The camera takes Furei-Senjin's forming a line with the sublime sound effects. The senior's voice-over is heard: "... This will be our last chance; the last chance to right the altered history, and terminate our pain and suffering. We've endured decades of disgrace and humiliation for this day..." His line directly shows the sense of national inferiority and suggests a way to heal the trauma: coming back to the past and correcting the history. To see the coming-back and correcting the history seems to be a vicarious healing of the trauma that Director LEE Si-myung suggests to Korean people.

Digital Effects as Jujitsu

Digital effects and the spectacle they create remind us of Hollywood spectacle, but their narrative implication serves as the anti-foreign forces, including the anti-U.S. Digital effects in the Korean nationalist blockbuster films functions as a cultural jujitsu, using the attacker's force to defeat the attacker.

Since *Shiri* (1999) was the first trial of adopting Hollywood aesthetics, the limited budget and the level of technology producing special effects were problematic. As David Scott Diffrient indicates (2001), *Shiri*'s production cost was only about 2% of that of average Hollywood blockbusters, although "twice the budget of the standard Korean motion picture" (p. 42). Even

the 2% was possible by Samsung Group's investment of \$2,000,000 (p. 42). Almost all the special effects, as much as possible, were mobilized. However, the digital effects technology in 1998, when *Shiri* was being produced, was inferior to today's. Although digital effects technology was an important point to make the film like a Hollywood one, the level of CGI could not support the production environment. For example, according to Production Designer LEE Sunghun and Director KANG Je-gyu (2002), the scene of the friendly soccer game between North and South was produced by the stealth shot because the shot during the actual soccer game between South Korea and China was denied. It means that they could not consider the use of CGI for creating the mob scene of the spectators in the stands. For shooting the drama section of the soccer game scene, they had to mobilize 2000 extras. 5 years later, Director KANG Je-gyu creates the grand-scaled mob scene of 100,000 Chinese Army by means of the Motion Control Camera (MCC), with only 400 extras, during the filmmaking of *Tae Guk Gi* (p. 149). If the level of digital effects technology was not satisfied, he had to spend much at the expense of payment and time for the myriad of extras. In Richard Attenborough's *Gandhi* in 1982, Gandhi's funeral scene in the end of the film was shot with 200,000 volunteers and 94,560 extras paid a small fee ("Gandhi"). In *The Lord of the Rings: The Fellowship of the Ring* in 2001, Peter Jackson produced the mob scene of 3-D characters made by "hundreds of thousands of monsters and warriors" by means of scanning "dozens of statuettes of the Orc warriors and knights" (Pintea, 2003, pp. 180-181). The development of CGI technology, over the last 20 years, has reduced the number of extras and the production costs, and simultaneously, has increased the scale and efficiency of filmmaking.

It is important that the liquid bomb CTX, the essential element of *Shiri* plan, was produced by CGI, although the digital effects technology was at an elementary level. The glass

filled with the liquid was an actual property, but the red nucleus was created by CG. The countdown digital watch was produced by CG, too. In diegesis, the CTX is the key to Shiri plan. The North Korean special force, PARK eagerly attempts to explode the CTX at the soccer ground. PARK allegorizes the unification as the joining of Shiris of North and South. Shiri can live only in the purest stream. So, the explosion of CTX implies the purification of the Korean cultural stream, which is turbid by Coke and burgers. The CGI of CTX functions as a cultural jujitsu countering against the cultural influence of the U.S.

Tae Guk Gi's digital effects present the intervention of the foreign forces, such as the U.S. and China. In order to serve with distinction, Jin-tae leads his battalion and retakes the highlands that the North were taking. After the battle, Jin-tae and Jin-seok show their deep brotherhood. Jin-seok asks Jin-tae to be safe, and Jin-tae persuades Jin-seok to come back home alone. After the scene of brotherhood, the Commander announces the participation of the U.S. Marines' landing at Incheon. The U.S. entered the war to maintain the Korean Peninsula adjacent to China and the Soviet Union when the fighting front was at the end of South. The Korean Peninsula falling to the Communists was not profitable to the U.S., in particular, right after the end of WWII. With the announcement of the participation of the U.S. Army, the battalions raise a war cry and a dozen of the U.S. Airforce fighters drawn by CG are flying on the sky. The CG shot of the U.S. fighters is inserted after the scene of nationalism represented by the brotherhood. The CGI of Hollywood style shows the help of the U.S.; on the other hand, it reveals the intervention of the U.S.

As a result of the U.S.'s entrance, Jin-tae's battalion advances to the national boundary. They get excited by the expectation of the termination of the war. The award of the Medal of Honor to Jin-tae is announced. The battalion produces a celebration atmosphere. At this moment,

they were ordered to retreat, due to the entrance of the Communist Chinese Army into the war.

Signalman1: The U.S. Army is retreating, too.

Commander: How many Chinese reinforcements are coming?

Signalman1: For Woon-san city alone, at least 100,000.

Signalman2: They'll fire on us any minute, sir.

The destiny of South and North is under the control of foreign forces, the U.S. and China. Real sovereignty does not exist. With the help of the U.S. Army, South seems to snatch a victory out of defeat, but comes at a crucial moment, due to China supporting the North. The Korean territory is trampled by the foreign forces again. As I stated earlier, the scene in which 100,000 Chinese soldiers are surging from mountains was produced by CGI. 400 extras and MCC created the mob scene (Kang Je-gyu Film, 2004, p. 149). The retreat occurred before the victory or unification, due to the participation of China. The CGI of the Communist Chinese Army pouring cold water on the nationalist atmosphere exemplifies the intervention of the foreign forces.

In the end, Jin-seok goes over to the camp of the North to rescue Jin-tae and they meet again. At the moment of the brothers' reunion, the U.S. Navy F4U Corsair fighters, created by CG, make a bombing raid on the North camp. The Corsair fighters used in the scene were not the mix of live-action and CGI, but a hundred percent CGI (Jang). The harmony of North and South, symbolized by the union of the brothers, is interrupted again by the U.S. fighters created by CGI. The use of CG, including fighters, bullets, and explosions, and the dazzling spectacle, caused misunderstanding that *Tae Guk Gi* was only a bad imitation of *Saving Private Ryan* (Steven Spielberg, 1998); however, their function in narrative stands facing the opposite side. That is, the anti-foreign forces, the U.S. and China: the jujitsu of CGI.

Welcome to Dongmakgol; that the number of CGI shot was over 500 (Kim, K. Y., "The

Behind CG Story,” 2005) shows the grand finale of the pattern bombing CGI created. All of the B29 fighter-bombers, P47D fighters, and the bombs in the last scene were produced by CGI (Kim K. Y., “The CG Highlight,” 2005). The pilots of the fighters of the Allied Forces are described as the U.S. Airforce. The mark of the U.S. Airforce is seen at the body of the fighters. Although they are the Allied Forces, the U.S. Army makes a decision and the U.S. Airforce does bomb. In diegesis, the identity of the Allied Forces is the U.S. The North-South Joint Force, SEO Taekgi called, succeeds the induction of bombing to the other place. Dongmakgol becomes safe. When the bombing begins, a myriad of shells that CGI created is poured from the sky. The shells, symbolizing cultural imperialism, miss Dongmakgol, representing the purest local culture. The pure nationality is maintained by the sacrifice of the North-South Joint Force. The flashes of shellbursts look like fireworks celebrating the harmony between South and North, represented by the birth of the joint force. Seeing the flashes, the villagers of Dongmakgol emit a whoop. In this sense, the CGI of the pattern bombing serves as the jujitsu, representing the anti-U.S. sentiment, by means of the effects-oriented Hollywood spectacle. In the very last shot, we can see that the soldiers of both sides are sleeping together in a small room. It is Korean people’s heartiest desire for the unification of North and South.

If the CGI used in *Shiri*, *Tae Guk Gi*, and *Welcome to Dongmakgol* implies the anti-U.S. sentiment through breaking the harmony of North and South, by means of the liquid bomb, the fighters, and the bombs, the CGI in *2009* directly exposes the anti-Japanese sentiment through providing the key to relieving the national inferiority, by means of killing JBI, saving Sakamoto, and opening the time-gate. As the narrative of the film presents the unconditional nationalism, the CGI helps the narrative deployment more explicitly than the other films. Sakamoto and Haelin, the female leader of Furei-Senjinn, get inside the ship with the templestone to come back

to the past. When they insert the Lunar Soul into the hole of the templestone, the pillars of light rise from the surface of the templestone to the sky. The lights explode the JBI helicopters and burn the JBI agents. Saigo shoots Haelin dead. When Sakamoto is taken aim by Saigo, the time-gate is opened. The harsh light from the time-gate interrupts Saigo, so that he cannot shoot Sakamoto.

The time-gate that CGI produced punishes JBI and saves Sakamoto. It provides the key to correcting the distorted history through opening the time-gate. The CGI directly supports the nationalist narrative because the fantasy element of the time-gate is into the narrative. The CGI in *2009* directly abhors JBI and defends Sakamoto, presented as a Korean, in a different way from the other nationalist blockbuster films dealing with the Korean War. For *2009* does not need to find an allegory or an indirect way to reveal the anti-Japanese sentiment, and neither does the CGI. Korean unconditional nationalism about the past trauma of the Japanese occupation gives infinite permission to the film.

6. CONCLUSION

The visual effects aesthetic in SF that originated from early cinema's trickality has developed from the analog reality effect of modernist Fordism to the digital reality effect of postmodernist computers. The distinction between live-action footage and effects-added footage has gradually disappeared, thanks to the invisibility of contemporary visual effects. The augmentation of this invisibility through CGI is breaking down SF and fantasy's historical monopoly of visual effects. Without distinction among film genres, digital effects are now being used to the point where the film's production budget and the creative imagination intersect with each other. This diversification in the film genres that use digital effects will continue as long as the reality effect of today's visual effects satisfies both production budgets and creators' imaginative power.

From the history of visual effects seeking the reality effect, the spread of digital effects not only has brought about blurring of the line between live-action and effects-added footage, but is also breaking down the boundary between effects-added live-action footage and animation. This symptom has already been shown through effects-oriented films such as *Sky Captain and the World of Tomorrow* (Kerry Conran, 2004) and *Sin City* (Frank Miller, Robert Rodriguez, and Quentin Tarantino, 2005). The still images of comic books, the original sources of both films, were transformed into moving images through digital post-production in which live-action footage was digitally composited, manipulated, and animated to enhance dramatic reality and to deliver faithfully the atmosphere of the original comics. The boundaries among live-action, digital effects, and animation are becoming vague. Moreover, the reality effect of digitally composited scenes is too high to be distinguished to the degree that we cannot easily recognize the use of visual effects without accessing film magazines, special features section of DVDs, or

“making-of” books.

Providing convenience and utility, digital technology has become a substantial part of our lives. As a result, we can hardly separate our digital life accessing new media from ordinary analog life. In this way, digital effects themselves will also become an essential element of the future of filmmaking through providing both economically efficient production and opportunities for the expansion of human imagination. The use of digital effects can save budgets from the construction of huge sets and the payment of extras. Digital effects allow the filmmaker to be able to take location shots in the studio with the blue screen, and to reduce risky factors by substituting CGI for dangerous blast shots. And most of all, digital effects can represent these scenes indistinguishably from reality. In this context, digital post-production and the use of digital effects will become a more standard part of filmmaking no matter what the genre.

Digital effects are efficient to produce, since the only equipment needed is computers and software. So, they bound to speed up the transformation, already in progress, of the dynamics between Hollywood and local film industries. For today, local film industries can produce a spectacle tantamount to that of Hollywood if they provide themselves with computers, software, and human resources. Breaking from Hollywood’s unilateral dominance of local film markets worldwide, this new network of resources, which is based on each local film industry’s free trade of resources for obtaining qualitative labors, equipments, and low costs, may become an alternative to Miller et al.’s New International Division of Cultural Labor.

For example, in South Korea, today, *The Host/Gwoemul* (BONG Joon-ho, 2006) is an unprecedented box-office hit, selling over 12,000,000 tickets. Chunggeorahm, which produced *The Host*, made contracts with China, Singapore, and Malaysia about the film’s direct distribution in their local markets, and with the U.S., U.K., and Argentina about the export of the

film (Moon, 2006). *The Host* is the story about a Beast living in Han River, Seoul, mutated by pollution. A school girl is kidnapped by the Beast. Her family desperately struggle with the Beast to rescue the girl. The Beast of Han River was created by the visual effects company Orphanage, which produced the visual effects of *Sin City*, *Superman Returns* (Bryan Singer, 2006), and *Pirates of the Caribbean: Dead Man's Chest* (Gore Verbinski, 2006). The local film studio, Chungeorahm, produced the film, hiring the Hollywood staff. In comparison to Chungeorahm, Younggu-Art Movies, the studio behind *D-War*, another Korean effects-oriented blockbuster, which will be released in spring 2007, produced the visual effects with the pure Korean effects technology. Because *D-War* is a fantasy movie dealing with the Korean traditional myth that old anacondas transform to dragons, it is expected that CG-oriented spectacle will dominate the whole film. *D-War* is raising the flag of globalization while reversing conventional information flows, hiring Hollywood actors and adopting the English language in order to export a Korean-made film around the world.

The European film industry also shows the adoption of digital effects as a major strategy for filmmaking. Jean-Pierre Jeunet's *Amelie* (2001) can be considered as one of the representative adoptions. According to Box Office Mojo, the worldwide box-office profit was \$173,921,954 (\$33,225,499 of domestic and \$140,696,455 of foreign); the film was commercially successful to the degree that its box-office was ranked 24th in the worldwide in 2001, and was nominated for four Oscars in 2001. The use of digital effects in *Amelie* is unique. Expressing the characters' inner action, CGI directly entered into the realm of the narrative. When Amelie encounters Nino, CGI renders her heartbeat. When she misunderstands that Nino is interested in someone else, digital effects make her body crumble to the ground like sand. CGI not only produces spectacle, but also enhances characterization and propels the narrative. *Amelie*

succeeds through drawing digital effects from non-exhibitionist comedy genre to the realm of narrative.

In addition, Bollywood has begun to produce effects-oriented blockbuster films. Rakesh Roshan's *Krrish* (2006) has been considered by many critics the first Indian film which is truly visual effects-oriented. With \$10,000,000 of production costs, *Krrish* has grossed about \$30,000,000 in worldwide box-office within first four weeks of release ("Krrish"). Its combination of Hollywood-style visual effects with the traditional Bollywood structure of inserting singing and dancing into the narrative provides the Indian film industry with a new vision of the globalized future.

The struggle for hegemony in the international film market between Hollywood and local film industries will depend on how effectively those local industries can participate in a new globalized network of resources, and effectively and creatively take advantage of digital technology. Visual effects stand in the heart of this transformation toward the new international dynamics. As long as technology develops, reality and effect will be getting closer. Effect is certainly not reality. On the other hand, effect is reality in that it provides a clue for judging the level of present technology transforming present reality.

REFERENCES

- Acland, C. R. (2003). *Screen Traffic: Movies, Multiplexes, and Global Culture*. Durham: Duke University Press.
- Agel, J. (Ed.). (1970). *The Making of Kubrick's 2001*. New York: The Agel Publishing Company, Inc.
- Ahrens, J. (2006). *From the antique to outer space*. Retrieved June 7, 2006, from http://www.avh.de/kosmos/kultur/2006_001_en.html
- Allen, G. (2003). *Roland Barthes*. London & New York: Routledge.
- All-Time USA Boxoffice. *Internet Movie Database*. Retrieved August 28, 2006, from <http://www.imdb.com/boxoffice/alltimegross>
- Arnheim, R. (1988). *The Power of the Center: A Study of Composition in the Visual Arts: The New Version*. Berkeley, Los Angeles, London: University of California Press.
- Barnouw, E. (1981). *The Magician and the Cinema*. New York & Oxford: Oxford University Press.
- Barthes, R. (1982). The Reality Effect. In T. Todorov (Ed.). *French Literary Theory Today: A Reader* (pp. 11-17). Cambridge, NY: Cambridge University Press.
- Baudrillard, J. (1994). *Simulacra and Simulation*. (S. Glaser, Trans.). Ann Arbor: The University of Michigan Press.
- Bazin, A. (1967). *What Is Cinema?* (H. Gray, Trans.). Berkeley and Los Angeles: University of California Press.
- Bérubé, M. (1994). *Public Access: Literary Theory and American Cultural Politics*. London & New York: Verso.
- Bolter, J. & Grusin, R. (2000). *Remediation: Understanding New Media*. Cambridge, MA: The

- MIT Press.
- Bordwell, D. (1988). *Ozu and the Poetics of Cinema*. Princeton, NJ: Princeton University Press.
- Bordwell, D., Staiger, J. & Thompson, K. (1985). *The Classical Hollywood Cinema: Film Style and Mode of Production to 1960*. New York, NY: Columbia University Press.
- Bottomore, S. (1996). The Coming of the Cinema. [Electronic Version]. *History Today*, 46 (3), 14-20.
- Bourne, M. (2001). *Forbidden planet*. Retrieved June 8, 2006, from <http://www.dvdjournal.com/reviews/f/forbiddenplanet.shtml>
- Bowers, Q. (2001). *Thanouser Films: An Encyclopedia and History 1909 to 1918*. August 2001 Release 1.4i Edition (CD-ROM). Thanouser Company Film Preservation, Inc.
- Box Office Mojo. <http://www.boxofficemojo.com>
- Brecht, B. (1992), *Brecht on Theatre*. (J. Willett, Trans.). New York: Hill & Wang. (Original work published in 1957)
- Bukatman, S. (2003). *Matters of Gravity: Special Effects and Supermen in the 20th century*. Durham, NC: Duke University Press.
- Byers, T. (1995). Terminating The Postmodern: Masculinity and Pomophobia. *Modern Fiction Studies* 41 (1), 5-33.
- Cameron, J. (2003). Special features in *T2 – Extreme DVD (1991)*. Lions Gate.
- Chan, F. (2005, September 12). A Letter to Pusan International Film Festival, Director of *Made in Hong Kong*, Fruit Chan. *Joong-Ang Ilbo*. Retrieved December 11, 2006, from http://article.joins.com/article/article.asp?ctg=1500&Total_ID=1679122
- Cho, H. (2005). Reading the “Korean Wave” as a Sign of Global Shift. *Korea Journal*, 45 (4), 147-182.

- Chun, S. & Lee, J. (2006, July 20). Director KANG Woo-suk, “Why is Japan afraid of Korean Peninsula”? *Sports Chosun*. Retrieved October 25, 2006, from <http://www.chosun.com/se/news/200607/200607200184.html>
- Cole, R. (2005). The Reality Effect: Emerson’s Speakers and the Phenomenon of Personality. [Electronic Version]. *The Yale Journal of Criticism* 18 (1). 80-81.
- Cubitt, S. (1999). Phalke, Méliès, and Special Effects Today. *Wide Angle*, 21 (1), 115-130.
- Curtin, M. (1996). On Edge: Culture Industries in the Neo-Network Era. In R. Ohmann (Ed.). *Making & Selling Culture* (pp. 181-202). Hanover, NH: Wesleyan University Press.
- Diffrient, D. S. (2001). Reviews - Shiri. *Film Quarterly*, 54 (3), 40-46.
- Djuna. (2001). *2001: A space odyssey*. Retrieved June 14, 2006, from http://djuna.nkino.com/movies/2001_a_space_odyssey.html
(Translation is mine.)
- Dmytryk, E. (1984). *On Film Editing: An Introduction to the Art of Film Construction*. Boston: Focal Press.
- Donner, R. (2001). Special features in DVD of *Superman – The Movie (1978)*. Warner Home Video.
- DVD-ROM, *The Cutting Edge: The Magic of Movie Editing* (Wendy Apple, 2004)
- Finch, C. (1984). *Special Effects: Creating Movie Magic*. New York: Abbeville Press.
- Forum of learningRussian.com. (2003), retrieved June 15, 2006, from <http://learningrussian.com/forum/messages/2099.htm>
- Frazer, P. (2006, March 12). Pic biz seeking a Seoul mate: Flush with cash, Korea woos Western partners to spread its culture abroad. *Variety*. Retrieved August 3, 2006, from <http://www.variety.com/article/VR1117939568?categoryid=1019&cs=1&query=korean+>

[and+film+and+welcome+and+to+and+dongmakgol&display=korean+film++%26+welco
me+to+dongmakgol](#)

Friedman, T. (2005). *Electric Dreams: Computers in American Culture*. New York and London: New York University Press.

Gaeta, J. (1999). Special Features in DVD of *The Matrix (1999)*. Warner Home Video.

Gaudreault, A. (1987). Theatricality, Narrativity, and “Trickality”: Reevaluating the Cinema of Georges Méliès. *Journal of Popular Film & Television*, 15 (3), 111-119.

----- (1990). Film, Narrative, Narration: The Cinema of the Lumière Brothers.

In Thomas Elsaesser (Ed.). *Early Cinema: Space, Frame, Narrative* (pp. 68-75). London: British Film Institute.

Geraghty, L. (2005). Creating and comparing myth in twentieth-century science fiction: Star trek and star wars. *Literature Film Quarterly*, 33 (3), 196-197.

Gilruth, R. (1975). I believe we should go to the moon. In E. M. Cortright (Ed.). *Apollo:*

Expeditions on the Moon. Scientific and Technical Information Office National

Aeronautics and Space Administration Washington, DC. Retrieved June 6, 2006, from

<http://www.solarviews.com/history/SP-350/ch-2-1.html>

Goldman, M. (2002). The Man who Hates Film. *Millimeter*, 30 (8), 30. Retrieved July 5, 2006,

from http://digitalcontentproducer.com/mag/video_man_hates_film

Gomery, D. (1992). *Shared Pleasures: A History of Movie Presentation in the United States*.

Madison: The University of Wisconsin Press.

Gordon, A. (1978). Star wars: A myth for our time. *Literature Film Quarterly*, 6 (4), 314.

Govil, N. (2002). The metropolis and mental strife: The city in science fiction cinema. In R.

Vasudevan, R. Sundaram, J. Bagchi, M. Narula, G. Lovink, and S. Sengupta (Eds.). *Sarai*

- Reader 2002: The Cities of Everyday Life*. Retrieved July 7, 2006, from <http://www.sarai.net/journal/02PDF/04spectacle/06metropolis.pdf>
- Gunning, T. (1990). The Cinema of Attraction: Early Film, its Spectator and the Avant-Garde. In Thomas Elsaesser (Ed.). *Early Cinema: Space, Frame, Narrative* (pp. 56-75). London: British Film Institute.
- (1991). *D. W. Griffith and the Origins of American Narrative Film: The Early Years at Biograph*. Urbana and Chicago: University of Illinois Press.
- (1994). The Whole Town's Gawking: Early Cinema and the Visual Experience of Modernity. *Yale Journal of Criticism*, 7 (2), 189-201.
- Hardt, M. & Negri, A. (2000). *Empire*. Cambridge, Massachusetts: Harvard University Press.
- Harvey, D. (1990). *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Malden, Massachusetts: Blackwell Publishers Inc.
- Hassan, I. (1987). *The Postmodern Turn: Essays in Postmodern Theory and Culture*. Columbus: The Ohio State University Press
- Henderson, B. C. (Autumn, 2005). Conservatives in Hollywood?! *City Journal*. Retrieved September 26, 2006, from http://www.city-journal.org/html/15_4_urbanities-conservatives.html
- Higson, A. (1989). The Concept of National Cinema. *Screen*, 30 (4), 36-37.
- Hollywood invests \$85,000,000 in Kwangju (2005, November 10). *Newswire*. (Translated). Retrieved July 30, 2006, from http://www.newswire.co.kr/read_sub.php?id=96618&no=0&ca=&ca1=&ca2=&sf=&st=&of=&nwof=&conttype=&tm=1&type=&hotissue=&sdate=&eflag=&emonth=&spno=&exid=&rg1=&rg2=&rg3=&tt=

- Hunter, T., Kaplan, S., & Taszi, P. (2000). Review of 2001: A Space Odyssey in Harvard Crimson. In M. Scorsese (Ed.). *The Making of 2001: A Space Odyssey* (pp. 151-158). New York: The Modern Library.
- Huruhata, Y. (2004). Desiring resistance in the age of globalization. *New Cinemas*, 2 (2), 91-106.
- Hutchinson's Biography Database
- James, D. E. (2001). Im Kwon-Taek: Korean National Cinema and Buddhism. *Film Quarterly*, 54 (3), 16.
- Jameson, F. (1991). *Postmodernism, or, The Cultural Logic of Late Capitalism*. Durham: Duke University Press.
- (2003). Symptoms of Theory or Symptoms for Theory? *Critical Inquiry*, 30 (2). Retrieved September 25, 2005, from <http://www.uchicago.edu/research/jnl-crit-inq/issues/v30/30n2.Jameson.html>
- Jang, B. (2004, May 1). CG Technology showing its real value in Tae Guk Gi. *Shin-DongA*, 536, 566-572. (Translated). http://www.dongailbo.co.kr/docs/magazine/shin/2004/04/29/200404290500043/200404290500043_1.html
- Jenkins, H. (1992). *Textual Poachers: Television Fans & Participatory Culture*. New York: Routledge.
- Jujitsu. Definition. *Wikipedia Dictionary*. Retrieved August 8, 2006, from <http://ko.wikipedia.org/wiki/%EC%9C%A0%EC%88%A0>
- Kael, P. (2005, October 24). [Review of 2001: A space odyssey]. *New Yorker*, 81 (33), p. 25.
- Kang, J. (2002). Special features in DVD of *Shiri* (1999). Columbia TriStar Home Entertainment.
- Kang Je-gyu Film. (2004). *The Making of Tae Guk Gi*. Seoul: Sigongsa.

- Kang, P. J. (2006, July 21). The Cutting Edge CG Typoon in Korean Theaters. *Inews24.com*.
(Translated). Retrieved July 31, 2006, from
http://news.inews24.com/php/news_view.php?g_serial=215535&g_menu=020200
- Kim, B. (2006). Production and Consumption of Contemporary Korean Cinema. *Korea Journal*,
46 (1), 8, 13, 18, 20.
- Kim, J. H. (2002). A Study of Visual Special Effects Technology in the Recent Korean Film
Industry. *Film Studies (Younghwa-Yeonku)*, 18, 244-270.
- Kim, K. (2002). Post-Trauma and Historical Remembrance in Recent South Korean Cinema:
Reading Park Kwang-su's *A Single Spark* (1995) and Chang Sön-u's *A Petal* (1996).
Cinema Journal, 41 (4), 95-115.
- Kim, K. W. (2002). The Ideology of The Hollywood Blockbuster. *Film Studies (Younghwa-
Yeonku)*, 19, 171-190.
- Kim, K. Y. (2005, September 13). The Behind CG Story of *Welcome to Dongmakgol*. *Magazine
Jungle*. (Translated). Retrieved August 10, 2006, from
http://magazine.jungle.co.kr/cat_webmulti/detail_view.asp?master_idx=11044&pagenum=1&temptype=5&page=1&code=1&menu_idx=44
- (2005, October 4). The CG Highlight of *Welcome to Dongmakgol*. *Magazine Jungle*.
(Translated). Retrieved August 10, 2006, from
http://magazine.jungle.co.kr/cat_webmulti/detail_view.asp?master_idx=11059&pagenum=1&temptype=5&page=1&code=1&menu_idx=44
- Kim T. (2006, July 19). Local Movies Thrive on Nationalism. *Hancinema*. Retrieved July 30,
2006, from http://www.hancinema.net/korean-movie-news_6587.php
- Kimball, A. S. (2002). Conceptions and conceptions of the future: *Terminator 2, The Matrix*,

- and *Alien Resurrection*. *Camera Obscura*, 17 (2), 69-107.
- King, G. (2000). *Spectacular Narratives: Hollywood in the Age of the Blockbuster*. New York: I. B. Tauris Publishers.
- Knoll, J. (2003). Special features in *T2: Extreme DVD (1991)*. Lions Gate.
- Korean Film Council, *Korean Film Industry Statistics*. (Translated). Retrieved August 1, 2006, from <http://www.kofic.or.kr/contents/html/index.aspx?MenuId=131>.
- Kracauer, S. (1960). *Theory of Film: The Redemption of Physical Reality*. New York: Oxford University Press.
- (1995). *The Mass Ornament: Weimar Essays* (Y. Levin Trans. & Ed.). Cambridge, MA & London: Harvard University Press.
- “Krrish,” India’s first Super Hero. *Autodesk.com*. Retrieved September 16, 2006, from http://images.autodesk.com/apac_sapac_main/files/case_krrish.pdf#search=%22Bollywod%2C%20Krrish%2C%20digital%20effects%22
- Lang, J. S. & Trimble, P. (1988). Whatever happened to the man of tomorrow? An examination of the American monomyth and the comic book superhero. *Journal of Popular Culture*, 22 (3), 157-173.
- Lee, D. (1999, May 23). The Naming of The Matrix. *Chosun Ilbo*. Retrieved October 3, 2006, from <http://www.chosun.com/svc/news/www/viewArticle.html?id=199905230305>
- Lee, S. (1995). Reading American Films of a Korean audience: A Critical Examination of Cultural Imperialism. *Journalism and Society (Eunron-kwa-sahoe)*, 10, 53-85.
- Lerer, S. (2000). Forbidden planet and the terrors of philology. *Raritan: A Quarterly Review*, 19 (3), 84.
- Lev, P. (1998). Whose future? Star wars, alien, and blade runner. *Literature Film Quarterly*,

- 26 (1), 32-33.
- Lucas, G. (2004). Audio commentary in special features. *DVD of Star Wars Episode IV: A New Hope (1977)*. 20th Century Fox.
- Manovich, L. (1997). 'Reality' Effects in computer animation. In J. Pilling (Ed.). *A Reader in Animation Studies*. (pp. 5-15). Sydney: John Libbey & Company Pty Ltd.
- (2001). *The Language of New Media*. Cambridge: The MIT Press.
- Marr, M & Kelly, K. (2006, May 12). Budget Busters: With Special Effects the Star, Hollywood Faces New Reality. *The Wall Street Journal*. Retrieved July 31, 2006, from Proquest Newspapers.
- McHugh, K. (2005). *South Korean Golden Age Melodrama: Gender, Genre, and National Cinema*. K. McHugh & N. Abelmann (Eds.). Detroit: Wayne State University Press.
- Miller, T., Govil, N., McMurria, J. & Maxwell, R. (2001). *Global Hollywood*. London: British Film Institute.
- Moon, S. *The Host* makes export-contracts with ten countries. *Cine21.com*. (Translated). Retrieved September 16, 2006, from http://www.cine21.com/News_Report/news_view.php?mm=001001001&mag_id=38755
- North, D. (2001). Magic and Illusion in Early Cinema. [Electronic Version]. *Studies in French Cinema*, 1 (2), 70-79.
- Oh, D. (2006, February 24). Shim flies with Showbox. *Pressian Movie*. (Translated). Retrieved July 31, 2006, from http://www.pressian.com/Scripts/section/article.asp?article_num=60060224115626&s_menu=movie
- (2006, June 25). Hollywood buys the Ideas of Korean Films. *Chosunilbo*. (Translated).

- Retrieved July 30, 2006, from
<http://www.chosun.com/magazine/news/200606/200606250096.html>
- Park, J. H. (2005, July 12). Discovery, starting count down. *Science Times*. Retrieved June 5, 2006, from <http://www.sciencetimes.co.kr/data/article/11000/0000010822.jsp>
- Park, J. Y. (2006). Failure of Some Korean Blockbuster Films. *Newsmaker*, 659. (Translated). Retrieved August 2, 2006, from
http://newsmaker.khan.co.kr/khnm.html?mode=view&dept=116&art_id=11332
- Petrou, D. M. (1978). *The making of superman: The movie*. New York: Warner Books.
- Pierson, M. (2002). *Special Effects: Still in Search of Wonder*. New York: Columbia University Press.
- Pintea, P. (2004). *Special Effects: An Oral History—Interviews with 38 Masters spanning 100 years*. (L. Hirsch, Trans.) New York: Harry N. Abrams, Inc.
- Poole, R. (2001, January). [Review of *2001: A Space Odyssey*]. *History Today*, 51 (1), pp. 39-45.
- Prakash, G. (1992). Postcolonial Criticism and Indian Historiography. *Social Text*, 31/32, 8-19.
- Prince, S. (1996). True Lies: Perceptual Realism, Digital Images, and Film Theory. *Film Quarterly*, 49 (3), 27-37.
- Rickitt, R. (2000). *Special effects: The history and technique*. New York: Watson-Guption Publications.
- Sandner, D. (1998). Shooting for the Moon: Méliès, Verne, Wells, and the Imperial Satire. *Extrapolation*, 39 (1), 5-25.
- Schatz, T. (1988). *The Genius of the System: Hollywood Filmmaking in the Studio Era*. New York, NY: Pantheon Books.

- Shepard, L. (May, 2005). Korean Futures. *Fantasy & Science Fiction*, 108 (5), 125-130.
- Shohat, E. & Stam, R. (1994). *Unthinking Eurocentrism: Multiculturalism and the media*. London and New York: Routledge.
- Shim, D. (2005). Globalization and Cinema Regionalization in East Asia. *Korea Journal*, 45 (4), 233-260.
- . (2005, December 27). Understanding Golden Rules of Culture. *Media Daum*. (Translated). Retrieved July 31, 2006, from <http://news.media.daum.net/snews/foreign/englishnews/200512/27/korherald/v11217022.html>
- . (2006). Hybridity and the rise of Korean popular culture in Asia. *Media, Culture & Society*, 28 (1), 25-44.
- ‘Silmido’ and the Korean Film Industry: Is the Screen Quota Still Necessary? (2004, February 2). *Hankookilbo*. Retrieved July 30, 2006, from http://times.hankooki.com/cgi-bin/hkiprn.cgi?pa=/lpage/opinion/200402/kt2004020216520511300.htm&ur=times.hankooki.com&fo=print_kt.htm
- Singh, P. (2004). Globalization and Education. *Educational Theory*, 54 (1), 103-115.
- Smith, T. G. (1986). *Industrial light & magic: The art of special effects*. New York: A Del Rey book.
- Sobchack, V. (1980). *Screening Space: The American Science Fiction Film*. New York, NY: Ungar.
- Special Features. (2000). DVD of *Jurassic Park* (Widescreen Collector’s Edition) (1993). Universal Studios.
- . (2004). DVD of *The Thief of Bagdad* (Deluxe Edition) (1924). Kino Video.

- Spivak, G. (1990). Poststructuralism, Marginality, Post-coloniality and Value. In P. Collier & H. Geyer-Ryan (Eds.). *Literary Theory Today* (pp. 219-244). Ithaca: Cornell University Press.
- Straubhaar, J. D. (1991). Beyond Media Imperialism: Asymmetrical Interdependence and Cultural Proximity. *Critical Studies in Mass Communications*, 8 (1), 39-59.
- The Completion of Daejeon Special Effects Town. (2005, October 31). *E-Daejeon News*. (Translated). Retrieved July 31, 2006, from <http://citynews.daejeon.go.kr/citynews/article.html?seq=933>
- The Digital Actor Conquers Hollywood. (2006, July 21). *Electronics and Telecommunications Research Institute (ETRI)*. (Translated). Retrieved August 5, 2006, from http://www.etri.re.kr/www_05/search/view_03.php
- The Screen: More on *The Thief of Bagdad*. (1924, March 19). *New York Times*, p. 19.
- Thompson, K. & Bordwell, D. (1994). *Film History: An Introduction*. New York: McGraw-Hill, Inc.
- Trivia for Gandhi. *Internet Movie Database*, Retrieved August 15, 2006, from <http://www.imdb.com/title/tt0083987/trivia>
- Vardac, A. N. (1949). *Stage to Screen: Theatrical Origins of Early Film: David Garrick to D. W. Griffith*. New York, NY: A Da Capo Paperback.
- Vaz, M. C. & Barron, C. (2002). *The Invisible Art: The Legends of Movie Matte Painting*. San Francisco: Chronicle Books.
- Vaz M. C. & Duignan P. R. (1996). *Industrial Light & Magic: into the Digital Realm*. New York: A Del Rey book.
- Wang, G. & Yeh, E. Y. (2005). Globalization and Hybridization in Cultural Products: The Cases

- of *Mulan* and *Crouching Tiger, Hidden Dragon*. *International Journal of Cultural Studies*, 8 (2), 175-193.
- Wasser, F. (1995). Is Hollywood America? The Transnationalization of the American Film Industry. *Critical Studies in Mass Communication*, 12 (4), 423-437.
- Winston, S. (2000). Special features in DVD of *Jurassic Park* (Widescreen Collector's Edition) (1993). Universal Studios.
- Weinberg, L(arry). (1980). *Star wars: The making of the movie*. New York: Step-Up books and Random House.
- Williams, D. E. (1984). 2001: A space odyssey: A warning before its time. *Critical Studies In Mass Communication*, 1 (3), 320, 321.
- Witte, K. (1975). Introduction to Siegfried Kracauer's "The Mass Ornament." *New German Critique*, Spring 75 (5), 59-76. (Kracauer's essay included in this article was originally published in *Frankfurter Zeitung*, July 9 and 10, 1927.)
- Won, Y. (2001, September 26). The Korean Wave, Inside Out. *Hankyereh*. (Translated). Retrieved October 14, 2006, from <http://www.hani.co.kr/section-001055000/2001/09/001055000200109262346001.html>
- Wood, E. M. (2003). *Empire of Capital*. London: Verso.
- Yomota, I. (2001). *Understanding Japanese Films* (Park, C. Trans.). Seoul: Hyun-Am Sa. (This book is written in Korean. Translation of Title is mine.)
- Yoon, S. H. (2004). Beyond Movement-image and Time-image of Korean Blockbuster films. *Korean Journalism & Communication Studies (Hankook Eun-ron Hakbo)*, 48 (2), 310, 314. (Translated).
- Yoon, S. W. (2002). The Research on the strategy of development of the Korean Film Industry

through Globalization. *East-West Communication (Dong-seo Eun-ron)*, 6, 100.

(Translated).