TECHNOLOGICAL CONSTRUCTION OF PERFORMANCE: CASE OF ANDY SERKIS

A Master's Thesis

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TECHNOLOGICAL CONSTRUCTION OF PERFORMANCE: CASE OF ANDY SERKIS

Graduate School of Economics and Social Sciences

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by

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I certify that I have read this thesis and have found that it fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Media and Visual Studies.

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ABSTRACT

TECHNOLOGICAL CONSTRUCTION OF PERFORMANCE: CASE OF ANDY SERKIS

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December 2016

Performance in film can be considered as a construction that goes beyond mere recording of the actors to comprise a synthesis of discrete elements that have been removed from their original contexts, rearranged, and reshaped. Today, owing to digital effect technology such as motion capture and digital compositing, the film industry shows an advanced degree of these processes that allows filmmakers to influence, reconstruct, and even alter the actor's performance. This study examines the technological construction of performance, dealing especially with motion capture technology in Hollywood blockbusters. This study relies on an analysis of specific performances in order to explore how they have been constructed with the help of technological intervention. As the main case study, the career of Andy Serkis, the most visible example of the motion capture actor, is analyzed to understand and discuss how the technology is perceived in terms of screen performance.

Keywords: Andy Serkis, Motion Capture, Performance Capture

ÖZET

PERFORMANSIN TEKNOLOJİK İNŞASI: ANDY SERKİS VAKA İNCELEMESİ

Balcı, Ceren
Yüksek Lisans, Medya ve Görsel Çalışmalar
Tez Yöneticisi: Yrd. Doç. Dr. Colleen Kennedy-Karpat

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Film performansı; yalnızca aktör perfromansının kaydedilmesinin ötesinde, orjinal içerikleri yeniden düzenleyen ve şekillendiren belirli ögelerin sentezi olarak düşünülebilir. Bugün, hareket yakalama ve dijital birleştirme gibi görsel efekt teknolojilerinin gelişimiyle birlikte, film yapımcılarının, aktörün performansını yeniden yapılandırmasına ve hatta değiştirmesine tanık oluyoruz. Bu çalışma, film performansının teknolojik inşasını incelemektedir. Özellikle Hollywood filmlerindeki hareket yakalama teknolojisini göz önüne alan bu çalışma, teknolojik müdahale ile ortaya çıkmış olan belirli performansların analizine dayanmaktadır. Bu teknolojinin film performansı açısından nasıl algılandığını anlamak ve tartışmak için; ana vaka incelemesi olarak hareket yakalama teknolojisinin en gözle görünür örneği olan isim Andy Serkis ve kariyeri seçilmiştir.

Anahtar Kelimeler: Andy Serkis, Hareket Yakalama, Performans Yakalama

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CHAPTER I
INTRODUCTION

In 2001, *The Lord of the Rings: Fellowship of the Ring*, directed by Peter Jackson, and based on the first volume of J.R.R. Tolkien's trilogy of novels *The Lord of the Rings*, was released to high acclaim from critics and fans. Over the following years, with the release of second and third films receiving immense media coverage, Jackson's film trilogy brought up a discussion of its use of effects and their impact on actor performance. Andy Serkis, the actor behind the digitally created character Gollum, was aggressively promoted by director Peter Jackson and New Line Cinema for his performance, arguing that it was more worthy than voice-over acting (Leaver, 2014). Creating the character's movements using a motion capture suit and providing voice of the character, Serkis was praised for contributing the character not only physically but also emotionally (Wojcik, 2006). Regarding his performance as actor-led than driven by visual effects, various responses gathered from both critics and fans. However, despite the campaign on his behalf, Serkis did not receive an Oscar nomination for this certain role.

In 2011, *Rise of the Planet of the Apes* (dir. Rupert Wyatt), took the discussion to another level. In the film, Serkis plays an intelligent ape named Ceasar who is adopted and raised by scientist and becomes the leader of a rebellion against humankind. During the promotion of the movie, Serkis commented on his motion capture performance by claiming "It's a given that they [visual effect artists] absolutely copy the performance to the letter, to the point in effect what they are doing is painting digital makeup onto actors' performances" (Amidi, 2014). The term "digital makeup" immediately got many negative responses from visual effect and animation artists, stating that the term itself minimizes the work of many talented

artists. They complained to sites like Film Drunk by claiming "Without the VFX guys, he is just a British guy in a leotard pretending to be a magical creature" (Mancini, 2014). Even though, Serkis was ignored once again by the Academy, in 2015, the Empire Awards—an annual British awards ceremony presented by the British film magazine *Empire* since 1996, with the winners voted by the readers of the magazine—found his performance worthy of its Best Actor prize.

More than a straightforward recording of actors, performance in cinema can be considered a synthesis of discrete elements that have been removed from their original contexts, rearranged, and reshaped. Certainly, post-production techniques contribute a great deal to film performance through technological means. With the improvement of visual effects, especially motion capture technology, we are seeing an advanced degree of these technological processes allowing filmmakers to influence, reconstruct and even alter the actor's performance. In this age of digital post-production and digital performance, it is critical to rethink performance as composited element due to the large number of people in creation of it.

The purpose of this study is to explore technologically enhanced acting in the context of performance studies. It begins with some fundamental questions: what do we mean when we speak of acting or performance? What are the contributing factors that shape our perception of performance? What are the differences between screen performance and something recorded, but not performed? Using these questions as starting point, I will briefly examine screen acting in historical context. Considering mediation of performance with motion capture technology, I will direct my focus to the issue of acting in the digital age. Within this framework, especially dealing with motion capture performances in Hollywood blockbuster movies, I will examine three case studies: *The Polar Express* (Robert Zemeckis 2004), *The Curious Case of*

Benjamin Button (David Fincher 2008) and *Avatar* (James Cameron 2009) with close reading of these movies and related materials, such as behind the scene videos, commentary of actors, directors and visual effect artists; along with responses from critics. As an actor-specific case study, Andy Serkis, whose career is based entirely on motion capture performances, will also be discussed within this framework to point to a crisis regarding the issue of film acting in the digital age.

The second chapter focuses on earlier discussions of performance. Providing a brief history of screen acting, the transition from silent film to sound film will be explored in order to examine the connection between stage and screen acting. To understand this significant connection and its influence on Hollywood screen acting, Constantin Stanislavsky's approach known as "Method" will be used as starting point. Along with Stanislavsky's approach which is mainly developed for theater, Lee Strasberg's critical contributions will be also discussed to understand the development of naturalistic performance in Hollywood. Questioning actor's presence and authenticity, James Naremore's useful framework and vocabulary including key elements such as presentational/representational performance, ostensiveness and frames will be familiarized to reader in order to provide further understanding of naturalistic performance. Considering earlier experiments of Lev Kuleshov, the certain distance between performance and its consumption along with post-production techniques such as editing and framing will be discussed to examine separation of performance and actor. Especially analyzing the relation between performance and sound, which is already mediated by recording, the notion of performance will be examined as composited element within this mediation. Considering changing concepts of acting, technically enhanced performance will be explored in historical contexts from the earlier use of body doubles, to attempts to

technologically recombine and reconstruct actors' abilities as final performance that include optical compositing, rotoscoping techniques. These techniques provide a background for current motion capture technology. For the last part of the chapter two, motion capture technology will be explained in technical details, including pre-production, capture session, and post-production along with facial capture and hand capture to provide further understanding of this certain process.

First part of the chapter three analyzes modes of performance in the digital realm by examining three case studies. *The Polar Express* (2004), one of the early attempts in Hollywood for full motion capture performance, provides an example of the fragmentation of performance due to the fact that the main character of the film is collaborative result of a 12-year-old boy's captured performance, Tom Hanks's facial features, and voice actors' efforts. Within this framework, I introduce the phenomenon of the uncanny valley, the unease provoked by failures of photorealism in digital characters, which also helps to explore the presence of the actor in the performance. The second case study, *The Curious Case of Benjamin Button* (2008) provides more valuable insights about actor's contributions to the digitally enhanced character. Brad Pitt, as Benjamin Button, portrays a credible character with the help of digital tools without evoking the presence question. The last case study *Avatar* (2009) successfully combines motion capture technology with live action performance. However, Zoe Saldana's motion-capture performance as a Na'vi princess creates similar discussions to Serkis' considering the presence of the actors and their contribution to these digitally enhanced characters.

The last part of chapter three focuses on Andy Serkis, with his breakthrough role in *Lord of the Rings* and his later roles including *King Kong* (Peter Jackson 2005), *Rise of the Planet of the Apes* (2011) and *Dawn of the Planet of the Apes* (Matt Reeves

2014). Serkis, as a figure whose performance capture work has garnered much attention both popular and scholarly, serves as a useful starting point to performance discussion in the digital age. In this sense, as a vocal advocate for motion capture performance, it becomes illustrative to examine how the technology is understood and discussed in terms of screen performance within the context of Serkis' career.

CHAPTER II

DEFINING AND ANALYZING SCREEN PERFORMANCE

2.1. Brief History of Screen Acting

The years following the transition from silent to sound in Hollywood during the mid-1920s can be considered a critical era in terms of film performance. This transition not only led to the creation of the new positions in the industry, but also it made stage experience highly significant, since synchronized sound created new connections between stage and screen.

The arrival of sound also led to changes in production processes that considered the new technical demands of the sound film. In "Acting in the Hollywood Studio Era" Cynthia Baron (2004) asserts that film performances can be considered as a consequence of ever increasing levels of division of labor, also a result of certain production demands developed between 1926 and 1934. In accordance with those production demands, the studios employed dialogue coaches and dialogue directors to prepare actors for specific scenes. They also hired drama coaches with stage background to prepare both young and experienced actors for screen performances. The transition to sound thus made stage experience quite valuable and offered a chance for actors to migrate from Broadway to Hollywood. As Baron (2004) puts it:

> In an article entitled 'Acting for the sound film', *New York Times* critic Otis Skinner perhaps summarizes the received wisdom of the day arguing that the traditional actor, the stage actor schooled in the method of bringing life, emotions and humor directly to the audience looked to be the dominant type of actor in theatre and the Hollywood sound film. (2004: 85)

As the 1930s progressed, Hollywood studios' hiring of experienced actors as coaches accelerated. In 1933, Paramount hired veteran stage producer/director Lillian Albertson as coach for assisting actors and analyzing scripts for meaning and

dramatic structure (Baron, 2004). In 1935, Florence Enright, a founding member of the prestigious Theatre Guild in New York, was hired as drama coach by Universal. In the late 1930s, Hollywood studios established drama schools and by 1939 a majority of the studios had formalized actor training programs (Baron, 2004). Thus, the emergence and importance of training for film actors positioned acting teachers working in Hollywood in significant place requiring systematic methods for cultivating skills and developing performances. The shifting bond between screen and stage also posed problems, for instance, "Actors who came to film from theatre had to unlearn the practice of presenting large gestures on the stage, and discovered instead 'that shades of feeling could be made intimately visible by minute contractions of a muscle" (Baron, 2004: 37). Consequently, during the studio era it is possible to observe that many film actors developed their craft with the guidance of experienced coaches and established institutions.

2.2. Method Acting in Hollywood

The significance of the connection between stage and screen acting can be most readily understood by examining the era of classic Hollywood. Richard Blum has noted that in the 1950s, Hollywood screen acting was greatly influenced by the approaches known as "the Method," established by Constantin Stanislavsky and developed by Lee Strasberg, Stella Adler and others (as cited in Drake, 2006).

In "Masculinity in Crisis" Wexman contrasts Stanislavskian Method acting to the British tradition of actor training to describe the former's special quality. She states:

> Where British school focuses on external technique, emphasizing makeup, costume and verbal dexterity, the Method relies on understatement and what it calls 'inner truth' cultivating an aura of mood and emotion derived from the actor's own persona rather than stressing the interpretation of the language in the written script. The British system encourages audiences to appreciate the actor's

> craft from intellectual distance. The Method, by contrast, seeks to maximize the audience's identification with the performer. (2004: 128)

Influenced by realist playwrights, Stanislavsky laid down his own interpretation of realism at the Moscow Art Theatre. Focusing on the psychology of the actor, Stanislavsky developed certain terms defining his method. The term "living in the part" suggested that actors should be more focused on their psychological status rather than social status of the character. Furthermore, claiming that actors need to merge their private moments and personal histories with those of the characters they play instead of interacting with audience, Stanislavsky proposed the term "affective memory" (Wexman, 2004). Having claimed that the audience must identify with actors, he suggested that actors have to ignore the audience, even going so far as turning their backs to the house. In other words, refraining from interacting with the spectators would allow actors to blend into the characters they play.

Even though Stanislavsky's approach was developed for theater, the absence of live audiences in filmmaking allowed actors to ignore spectators while expressing inner emotions, making the Method particularly adaptable to film performance. Further, techniques like close-ups and long takes emphasize characters' feelings and focus on actors' emotional changes rather than external effects. The process of shooting scenes separately and out of sequence also creates time for actors to prepare each scene individually, unlike theater, which requires actors to repeat the performance from start to finish, every night, over a certain period of time. As a recorded medium, film can compile the best performance of each individual scene.

It was not until the 1950s that Lee Strasberg declared his version of the Method at the Actors Studio. As has been noted frequently, Strasberg's formulation of the

Method can also be considered as a reinterpretation of Stanislavskian process, which could be seen as the first systematic approach to film acting (Baron & Carnicke, 2008). Having influenced Stanislavsky's system, Strasberg stressed the "individuated psychoanalytic dimension" by enhancing affective memory techniques with certain exercises requiring use of personal memories. Strasberg's training not only increased actors' capacity to perform strong emotional characters such as Terry Malloy (Marlon Brando) in *On The Waterfront* (Elia Kazan 1954), Jim Stark (James Dean) in *Rebel Without a Cause* (Nicholas Ray 1955) but also encouraged them to exchange their own feelings for those of the characters portrayed rather than combine the two together as Stanislavsky had suggested (Wexman, 2004).

Even though Strasberg built his method on Stanislavsky's, he decisively changed the Method's basic elements by questioning the "responsibility of performance." According to Baron and Carnicke (2008), Strasberg managed to do this in two basic ways. First he encouraged actors to alter Stanislavsky's question, Instead of asking "What would I do if I were in the character's circumstances?" he suggested personalizing the question by asking "What in my own life would make me behave as the character?" Having reframed the question, Strasberg proposed "personal substitution," asking actors to create connection between character and their personal life rather than imagining characters' feelings and emotions. Second, he used actors' personal substitution as material for the camera. Once the actor has achieved connection between his emotional life and affective memory, he does not need to think or feel like his character, since the actors' thoughts form his performance. This strong relation between actors and their roles made it possible for them to play their "real" personalities on screen. As a consequence, performance of method acting came to be seen as natural behavior. Such emphasis on being "real" and "natural"

revealed a strong association between method acting and notion of stardom. As Wexman clearly puts it:

> Because of their tendency to substitute their personal feelings for those of the characters they were playing, Actors Studio performers were well suited to become Hollywood stars. In Hollywood, star types were defined through their participation in specially tailored films ("star vehicles") and through publicity surrounding their off screen activities" (2004: 131)

In other words, it became crucial for actors to fill the gap between their personalities and roles in order to portray and promote themselves as star. In short, "Lee Strasberg transformed a socialistic, egalitarian theory of acting into a celebrity making machine"(Wexman, 2004: 131).

In this sense, James Naremore's *Acting in the Cinema* (1988) questions the distinctiveness of the Method while providing valuable insights about the nature of star acting. Having questioned the relationship between stars, actors and the characters they play, he argues that "the performer, the character and the star are joined in a single, apparently intact, image, so that many viewers regard people in movies as little more than spectacular beings" (Naremore, 1988: 157). In order to examine these relationships, Naremore defines three elements of characterization: role as a character in the literary sense; actor as the being performing character; and star image as a complex, intertextual matter stemming from actor's previous roles, various filmic qualities and publicity (1988: 158). Having examined Cary Grant's performance in *North by Northwest* (Alfred Hitchcock 1959), Naremore argues that the star image tends to dominate both actor and role in Hollywood. As he states "viewers lose sight of Grant's craft because of his image, like that most of the major stars, overshadows the technique that helped to create it"(1988: 234). However, he also points out "a vivid star personality is itself a theatrical construction" claiming

that "it takes as much acting to play "Cary Grant," adjusting him slightly to meet the requirements of "Roger Thornhill," as it does to perform any other movie role" (1988: 234). Analyzing Grant's performance the considering actor's technical expertise, interaction of his performance, and his star image, Naremore regards Cary Grant as one of the most accomplished star performers in classical Hollywood cinema.

Correspondingly, Philip Drake, in his essay "Reconceptualizing Screen Performance" argues:

> Star performances must always be recognizable as the products of stars, of individuals whose signifying function exceeds the diegesis (this is an economic imperative of stardom). It is by varying the ostensiveness of their performance, as well as external reframing signifiers (such as publicity and reviews) that they can manage this without disrupting the representational mode of the performance as a whole. (2006: 93)

Qualifying Naremore's approach Drake points out:

> *all* star performances must to an extent therefore be already encoded ostensive signs. This is in part due to the way individual stars become associated with a repertoire of performance signs: their "idiolect" the performing tropes strongly associated with a particular actor. (2006: 87)

"Thus, performance signs such as Robert DeNiro's sideway glances, open-hand gestures, and eye crinkling grin, Julia Robert's wide-mouthed smile, and Harrison Ford's startled eyes with wry grin becomes particular prominence of their star images" (Drake, 2006: 88). Consequently, many Hollywood stars manage to stay in character, even though they are recognized as stars with their own acting style, by portraying additional expressions and gestures. In order to explore this aspect of star performance, Drake analyzes Marlon Brando's performance in *The Godfather* (Francis Ford Coppola 1972). Using Erving Goffman's notion of "involuntary expressive behavior" which refers to an act that requires spontaneous or an automatic

action and reaction, Drake claims that such behavior provides sense of authenticity, truth and sincerity. Particularly associating with method actors, he notes that involuntary expressive behavior provides information about their character indirectly: for instance, through a telling minor or secondary gesture which can be considered as unmotivated or even accidental. In this sense, Brando's performance with certain mimics and gestures, thoughtful pauses and expressive use of objects such as petting the cat maintains the audience's interest in his character as well as demonstrates the connection between his star image and his character as the mafia boss (Drake, 2006).

Method acting proposes a strong connection between actor and character as the notion of stardom suggests it. However, the question of stardom paradoxically generates further discussion in terms of performance. As Drake (2006) asserts, due to the fact that they are recognizable personas off-screen, stars should construct performance that embeds the star image into the character. Consequently, this raises important issues of presence considering naturalistic performance in method acting.

2.3. Questions of presence and authenticity

In order to understand the distinctiveness of Method performance, it is possible to reconsider some fundamental questions: What are the contributing factors that shape our perception of performance? What are the differences between screen performance and something recorded, but not performed? Grahame F. Thompson described performance as a "mode of assessment of the textual/character/actor interaction" (as cited in Drake, 2006: 84). According to Drake (2006), this definition is crucial because not only does it acknowledge the strong relation between text,

actor and character, but it also emphasizes something fundamental about performance: audiences.

In his diary, German playwright and theatre director Bertolt Brecht noted that "in the cinema, the audience no longer have [sic] any opportunity to change the artist's performance" (as cited in Drake, 2006: 86). In other words, he argued that in the cinema it is not possible for spectators to influence performance, unlike in the theater, which retains this power owing to the "presence" of the performer before a live audience. At this point, embodiment of presence becomes a significant point to discuss considering screen performance. Both Brecht and Stanislavsky approach performance as a function of physical presence. In this respect, Philip Auslander claimed that Brecht and Stanislavsky "assume that the actor's self precedes and grounds her performance and that is the presence of this self in performance that provides the audience with access to human truths" (1995: 54). In spite of their differences, both Brecht and Stanislavsky presume that the presence of the performer is given rather than created with performance. In the Stanislavskian theory of performance, embodying the truth of the character is only achieved through the actor's emotional memory. However, for Brecht, rather than embodying character from "inside", the actor should be able to portray character "outside." In other words, instead of proposing plays in which the audience could identify emotionally with the character or action before him, Brecht provoked rational self-reflection and critical view of the action on the stage by employing series of techniques to remind the audience that the play represents reality (Squiers, 2015).

However, despite the general lack of a live audience on set, this concept of presence remains a critical issue for screen performance. As Drake emphasizes:

> Audiences bring their particular cultural capital, expectations, and memories of previous performances to the cinema, and they are involved in a complex process of evaluating and ascribing cultural value to a particular performance, often expressed through vernacular critical terms such as "believable," "sincere" and "authentic." (2006: 85)

Correspondingly, screen performances are frequently discussed in popular film criticism, where they also receive negative comments that critique the "authenticity" of a performance that is not sufficiently "realistic" or "honest." Such terms describing performance as not fully committed can be found in any magazine or website, revealing that audiences clearly still value the presence of the character emphasized by performance itself. For instance, Roger Ebert, in his review of *The Godfather* (1972) writes:

> He [Marlon Brando] embodies the character so convincingly that at the end, when he warns his son two or three times that "the man who comes to you to set up a meeting—that's the traitor" we are not thinking acting at all. (1997)

James Naremore, influenced by Erving Goffman's *The Presentation of Self in Everyday Life* (1959) suggests a useful framework and a vocabulary for analyzing screen performance. Goffman fundamentally explores the relation between theatre and life, considering people's tendency to perform in everyday situations (Shingler, 2012). According to Naremore (1988), significant elements such as representational and presentational performance, ostensiveness, and frames suggest that screen performance might be reconsidered for different media. For example, in order to differentiate those performances previously discussed, he used the term "representational" for the performance that creates a sense of behaving rather than actually performing while using "presentational" to define those which performer can be seen as a performer rather than a character. Additionally, as Drake states "Naremore adopts the term ostensiveness from the discussion of ostentation in pragmatics to explain the extent of the gestures of the performance" (2006:87). Thus,

he claims that due to a reduced degree of ostensiveness, screen acting (compared to theater) is mostly representational while also giving the everyday life effect. However, as he comments on representational performance requiring naturalistic behavior, he observes that theatrical performance involves "a degree of ostensiveness that marks it off from quotidian behavior" (Naremore, 1988:17). In order to make the distinction between daily life performance and theatrical performance, Naremore (1988) uses Goffman's term "frames" asserting that theatrical performers are differentiated in some way as objects to be looked at, while all their actions are considered as performance elements. Having analyzed actors' gestures, postures, and looks he also emphasizes that "professional players—even the most natural-looking—have learned to master both the performing space and every aspect of their physical presence" (1988: 49).

2.4. Mediation of Performance

Adding to Brecht's claim about the separation of actor and audience in film, Walter Benjamin (2008) emphasizes that film separates not only actor from audience, but also actor from performance, considering the possibility of interference between its production and reception. Thus, this significant separation of performance's production and consumption along with its mediation sparks a debate. Daily conversation or live theatre requires presence of both performer and audience in same space. On the contrary, screen performance is recorded. That is to say, it provides a performance that has already taken place. The certain distance between performance and its consumption is also affected by many other signifying systems such as editing, framing, etc. Drake claims:

> Mediated forms of performance including screen performance is not to suggest that there is no relationship between the performer as an individual and his or her

> performance onscreen, but to stress that such intention is inferred rather than empirically observed by audiences. (2006: 87)

Accordingly, audiences evaluate performances based on degrees of expressiveness and ascribe certain traits like "charisma" to some screen actors and not to others. Thus mediating presence of the cinematic apparatus also challenges established terms such as "aura" and "authority," allowing the medium itself to twist our experiences of performance and knowledge of how they are constructed. However, "owing to the power of movies to recontextualize detail" (Naremore, 1988:25), it also becomes possible to edit pieces of actor performance to create an influential character. Therefore, the character portrayed on screen is inevitably the result of more than one person's effort:

> A voice is dubbed; a body double represents a torso; a hand model manipulates objects in close-up, a stunt man performs dangerous actions in long shot, etc. All these different figures are merged in the editing and mixing, appearing on screen as a single characterization, an "object" of fascination ties together by name of the character and the face of a star. (Naremore, 2006: 79)

In *More than a Method,* Paul McDonald (2004) in his essay "Why Study Film Acting?" argues that it is more crucial to examine performance details as they are presented on screen to determine their meaning, rather than considering whether those details are produced consciously or not. According to Bode;

> this move stems from the need to cultivate "nuanced semiotic vocabulary" in order to explain and analyze the contribution of acting to film meaning and to correct the neglect of acting in Film Studies' disciplinary fixation on the "expressive possibilities" of montage and mise-en-scène. (2010: 47)

One of the essential reasons for thinking that mediation of screen performance undermines the film actor's craft originates from the editing experiments of Soviet filmmaker Lev Kuleshov in the early twentieth century. In one of his experiments, Kuleshov used a long take in close up of pre-revolutionary matinee idol Ivan Mozhukhin's expressionless, neutral face and intercut it with different shots,

including a bowl of steaming soup, a woman in a coffin and a child playing with a toy bear (Baron & Carnicke, 2008). The experiment indicated that when the image is displayed in combination with another, it can provide particular narrative meaning.

While Kuleshov interpreted the experiment as source of information about how connotations differ considering isolated or suggested images, his colleague Pudovkin took the test as proof that acting in film is different from stage acting. Since audiences *saw* "hunger, compassion and sorrow" in the actor's face, Pudovkin claimed that it was Kuleshov's editing more than Mozhukhin's contribution that had created the performance (Butler, 1991).

Another experiment of Kuleshov involves use of "creative geography" or the "juxtaposition of separate shots taken at separate places and times" in order to create the illusion of unified space or causal relationships. In one of these studies, Cook (as cited in Baron & Carnicke, 2008) explained that he synthesized a woman's body using several different women, combining images that showed the lips of one woman, the legs of another, the back of third, and the eyes of a fourth. Thus, for many film scholars, it is possible to claim that the experiment is primary evidence that montage performs rather than, or in addition to the actor himself. Kuleshov's experiments "had involved the creation of a synthetic person out of fragmentary details of different bodies – a technique that undermines the humanist conception of acting, turning every movie editor into a potential Dr. Frankenstein" (Naremore, 1988: 25).

Definitely, Kuleshov's approach suggesting how editing could recontextualize emotion, offers a new way of thinking about relation between actor's body and its original context. According to Kuleshov, while in some films "an idea is expressed

through the actor's work above all" in others "vivid expression of an idea is achieved through montage above all" (as cited in Baron & Carnicke, 2008).

Exploring recent developments and approaches in editing theory and practice since Kuleshov helps understand how such advancements rearrange and reshape performance elements. Walter Murch, an American film editor and sound designer whose credits include *The Godfather* (Francis Ford Coppola 1972), *Apocalypse Now* (Francis Ford Coppola 1979) and *The English Patient* (Anthony Mighella 1996), in his highly regarded book, *In the Blink of an Eye: A Perspective of Film Editing* (2001) argues the "rule of six": a list of priorities to build a story within the editing process, underlining six important values in editing. . The most important element is emotion, and each cut has an emotional influence on the audience regarding certain scenes of the film. Considering the story, Murch stresses the importance of the edit in benefiting the story. Thirdly he emphasizes the rhythm of the cut suggesting that it has to take place rhythmically right moment. Next the idea of eye-trace indicated that the cut should consider spectator's focus on location and movement within the frame. Finally, Murch underlines the importance of the physical and spatial relationships within the world of characters, rounding out the six elements by recognizing both the two-dimensional plane of the screen and three-dimensional space of action.

Considering Murch's hierarchical breakdown to enhance emotion and story with editing, an editor's decision should be considered a significant element in creating performance. In a way, editors shape the actors' performances by coordinating their reactions and timings to achieve a performance consistent with its dramatic purpose. In other words, an editor's decision plays a significant role providing the best performance to match the scene and the character. In this sense, Walter Murch states:

> An editor is very much like an actor in a film. You are the actor's actor, in that your responsibility is to take the most interesting moments from all of the performances and find ways to make them hang together in a way that enhances and clarifies everything further. (as cited in Chandler, 2004: 144)

Correspondingly, comprehending modernist directors and their directorial visions requires understanding their range of strategies for integrating performance and other cinematic elements. For instance, Robert Bresson's approach consists of "the flattening of both external elements of performance: the physical and the vocal" (Tomlinson, 2004: 76). In his compositions, Bresson "systematically downplays the importance of the human figure, generally rendering it the equal of environment"(2004: 77). His editing strategies minimize "the on-screen representation of cathartic or paroxysmal acts" (2004: 77). Therefore, he often avoids using the actor's emotional and vocal expressions to connect with the audience. Instead, Bresson makes certain casting choices including non-professional actors to avoid the emotional connection to existing stars and acting choices to emphasize his framing and editing. In other words, actors are required to repress the emotional expression, as other elements such as framing, editing becomes important. This approach to presentation of performance is also exemplified by films of another modernist director, Michelangelo Antonioni. As Tomasulo points out:

> Certainly, *all* film directors shape the performances of their actors by utilizing wardrobe, hair-style and props. What sets Antonioni apart is that he relies on decoupage, camera angles, color, lighting, set design, sound track articulations, music *and* pared-down performances to construct his singular cinematic language of characterization. (2004: 96)

Having analyzed Antonioni's *Blow-up* (1967), Tomasulo (2004) asserts that he decisively limits actors' gestures and emotional expressions in order to use them as graphic elements. Additionally, "Whereas in most films (and plays), actors use props to convey meaning and character and to *enhance* their performances, in *Blow-up*,

props actually take the place of performance and communicate directly with the spectator" (2004: 115).

In this sense, it is important to recall Naremore's term "expressive coherence" adopted from Erving Goffman. The term 'expressive coherence' refers "to the extent to which all the elements contributing to characterization help to maintain the illusion of consistency and wholeness" (Bode, 2010: 47) In other words, he asserts that producing screen performance with the extent of technological manipulation challenges the limits of our ideas about acting and our image of a coherent, complete representation of body.

2.5. Performance and Sound

Considering the diverse processes involved in producing film performances, it is also important to examine how film actors use their voices and how the voices are mediated by technology and contextualized by the soundtrack as whole and by the intervention of sound personnel. "The film voice, unlike that of theatre, is not given, fixed value, but a variable. The film actor does not simply speak: he/she is recorded" (Sergi, 1999: 131). In other words, like any other aspect of film performance, the voice is also mediated. This mediation may be negotiated through technological choices, such as how many or which types of microphone to use. Even though some of these choices may seem practical, they also influence a work's artistic integrity. For instance, actors may need to deliver the same lines over a number of takes within the same scene. At this point, continuity becomes a valuable element of the vocal performance. John Lithgrow stated that "you have no idea how I've had to save actors' performances who don't pay any attention to continuity" (as cited in Seger & Whetmore, 2004).

At first glance, deciding on technical details in terms of sound may stem from practical necessities. However, it is possible to identify many ways where the actor's voice is employed as an acting tool, recorded by film crews and integrated into soundtrack as final form. For instance, microphones with different vocal properties can be used in different locations in order to produce many notable variations. A poor choice in terms of these technological decisions will affect the acting performance and determine the need for dubbing the scene in post-production. Automatic Dialogue Replacement (ADR) is a post-production technique used to rerecord dialogues that filmmakers consider unsatisfactory (Marcello, 2006). The typical arrangement for ADR requires the actor to stand in front of a video monitor, with directional microphone and headphones in a sonically dead room with very little reverberation, while he/she is trying to recreate an earlier performance (Marcello, 2006). Axinn states that the ADR experience mostly refers to a difficult process through which actors try to recreate their initial performance by matching its tone, pitch or emotion (as cited in Marcello, 2006). Having rerecorded their dialogues separate from their physical performances, actors usually describe ADR sessions as frustrating. In his book *Acting in Film,* Michael Caine defines this process as "a laborious pain in the neck and a great deal of hard work that ends up diminishing the performance in those bits by about 25 percent" (1990: 81).

After an actor has spoken the words and delivered the sound, with or without the help of ADR, one might think that the actor's performance has now taken final shape. However, along with post-production clean-up processes for undesired sound elements such as background noise, the most important manipulation of an actor's voice is yet to take place. The last step is about the place the voice will have in the final soundtrack. Sergi (1999) carefully examines Andrew Davis' film *The Fugitive*

considering how performance can be greatly enhanced with supporting sound in the final mix. In this film, Tommy Lee Jones plays Samuel Gerard, a US Marshall who is trying to find escaped murder suspect Dr. Richard Kimble (Harrison Ford). Discussing the train and car crash scene after Kimble escapes, Sergi (1999) states that when Jones stands up and delivers his instructions, most of the background noises fades out even though we can see in the background of the shot dozens of people dealing with wreckage. In a sense, Jones' performance was protected from these additional sounds, which might have masked his voice or drawn away attention from him. In other words, in the scene Jones has no auditory competitors. Moreover, combined with very effective editing on Ford's voice, which resembles the "grumble of an animal out of breath," the hunt between the Marshall and the fugitive is thus established (Sergi, 1999). In this context, it is crucial to acknowledge that the careful arrangement and editing of effects, music, and silence that surround an actor's voice can have a major impact on the performance.

Even though Sergi (1999) argues that film acting is essentially a matter of relations between actors and scripts, between actors and crew, between actors and technology, and between actors and their knowledge of their own skills and limitations, he still views the notion of acting as seperate from technology and sound design process. In other words, he suggests that the mediation of performance may influence the *perception* of acting, but the act of performance itself remains consistent and intact.

However, "film acting as such does not exist prior to mediation. A fissure between sound and image and subsequent manipulation of both sound and image, together and apart is constitutive of film acting" (Wojcik, 2006: 75). In this sense, Wojcik (2006) also argues that rather than claiming authenticity for performance that is

recorded and manipulated, the idea of original performance can be considered as merely an "ideological effect" achieved through the art of reproduction.

At this point, it is critical to examine the distinction between live and recorded performance. Discussing Walter Benjamin's claim that "that which withers in the age of mechanical reproduction is the aura of the work of art" (2008: 21), Sterne states:

> The "original" sound embedded in the recording— regardless of whether the process is "continuous"—certainly bears a causal relation with the reproduction, but *only* because the original is itself an artifact of the process of reproduction. Without the technology of reproduction the copies do not exist, but, then, neither would the originals […] "Original" sounds are as much a product of the medium as are copies—reproduced sounds are not simply mediated versions of unmediated original sounds […] Sound fidelity is much more about faith in the social function and organization of machines than it is about the relation of a sound to its "source". (2003: 219)

Correspondingly, Lastra argues that sound recording should be considered as sound representation in the sense that an original sound only exists by the act of recording (as cited in Wojcik, 2006). Having compared live and mediated performance, performance theorist Philip Auslander (1999) also points out the fact that live performance is already mediated due to its existence in mediatized culture. In other words, "live" is both the result and the effect of mediation. To return to film acting as well as voice acting,

> Rather than assume an integrated performance by the actor that is than manipulated, fragmented, or otherwise mediated, we need to consider actor labor as existing within, for, and through mediation. Rather than imagine acting and recoding as rivals or discrete steps in the film making process, we need to recast film acting as a complex and layered process of audiovisual representation, a process that often depends upon separation and reintegration of sound and image (Wojcik, 2006: 78).

At this point, analysis of performance as recorded medium in terms of sound may address further issues. Having considered performance elements occurring in various time intervals such as actor performances' repeated moments in production, post-

production and exhibition, we might use this approach to describe technological issues constructing performance.

2.6. Changing Concepts of Acting

Performance in cinema can be considered as a construction that goes beyond mere recording of the actors to comprise a synthesis of discrete elements that have been removed from their original contexts, rearranged, and reshaped. Beyond any doubt, post-production techniques contribute a great deal to film performance by technological means. Today, owing to digital effect technologies such as motion capture and digital composing, we are all witnessing the advanced degree of these processes that allow filmmakers to influence, reconstruct, and even alter the actor's performance. Thus, in this age of digital post-production and digital performance, it is crucial to rethink concepts such as screen acting, performer presence, and especially technological mediation, which involves a considerable number of people besides the cast of actors in the creation of performance.

2.6.1 Acting in the Digital Age

With advanced technological and digital devices, filmmakers were given the power of manipulating composite images and enhancing the existing approaches of completing and conceiving performance is post-production. However, discussing the influences of those digital processes on screen acting and presence of the performance is rare. For instance, Sean Cubitt claimed that digital cinema, including computer-generated scenes and virtual extras allowing crowd control, are just a "continuation of analogue media by cheaper means" (as cited in Bode, 2010: 48). Thus, there is a tendency among film theorists and historians to overlook the impact of visual effects and digital technologies on screen acting. Wojcik (2006) highlights

this connection, considering that scholars of screen acting have criticized it as "vaguely theatrical" or interpreted it through "theatrical models defined in relation to concepts of realism, thus effacing the role of technology"; additionally, she points to ongoing tensions regarding the issue of film acting already mediated by technology, claiming that "acting must find a way to account for the role of technology in performance" (Wojcik, 2006: 80) Furthermore, Prince (2004) suggests that in the digital age, the status of acting is no longer theatrical due to the influence of digital tools in all stages of film production. As he states:

> George Lucas continues to direct his actors long after they've gone home—after converting their performances to digital video, he tweaks line readings and interchanges facial expressions from scene to scene or slows the synch in a performance in order to slip a cut around an eyeblink, with ILM artists implementing his ideas at their keyboards. (Prince, 2004: 25)

Comparatively, screen performances "are shaped in part by directorial decisions made in editing rooms, where actors' images and voices are manipulated in their absence" (Carnicke, 2004: 42). Carnicke (2004) also argues that film performances emerge from intricate relationships between actors and directors, and there have always been some directors reducing actors' contribution to the level of prop or puppet. In this sense, digital manipulation might take this type of actor-director relationship into the domain of post-production.

In order to find similarities and differences between analog and digital modes of filmmaking, in *Digital Visual Effects in Cinema* (2012) Stephen Prince examines two screen performances and the extent to which they have always been mediated or constructed. Comparing two different actors with similar performances, though separated by a significant time difference, Prince attempts to explore actors' contribution to a performance that is also defined by its visual effects. The film *Wolf Man* (George Waggner 1941) starring Lon Chaney Jr. is compared to its remake *The*

Wolfman (Joe Johnston 2010) starring Benicio Del Toro, particularly each film's treatment of the werewolf transformation. In the earlier movie, we see Chaney sitting still on a chair and gradually growing body hair, which is applied by make-up artists, scene by scene, along with fangs and a prosthetic nose. Each element applied to Chaney was filmed a shot at a time and connected afterwards with dissolving images. During transformation, the camera also stands still and locks into Chaney's feet as we wait for completion of the transformation. Since the camera is only focused on the feet we cannot know what the character is doing or his psychological state; it is even possible to claim that the character may be sleeping through the process.

In the remake of the movie, when Del Toro first changes into a werewolf, we see the first signs of the coming change with the help of 2D painting effects in his eyes. After that, he looks at his hand, which is also created with 3D animation, and realizes his fingers are enlarging and growing hair. Throughout, he remains in camera, as we see all-digital replacements of his leg, foot, and back. At the end of the scene we see Del Toro standing with prosthetic make-up on his face, evoking the appearance of Lon Chaney in the earlier film. Compared to the static sequences in the original movie, digital tools enable the sequence to be more composed and in continuous motion. Moreover, they facilitate the audience's ability to see all the expressions and emotions portrayed by performer. In this case we see Del Toro's confusion, fear, and pain. Contrary to analog cinema performances, digital manipulation presents the actor as a composite image involving multiple layers. Even though his face and body are digitally manipulated, Del Toro manages to participate in the performance as a live actor. In other words, though we do not see him on camera throughout the scene, he remains as a part of the character. According to Prince (2012), virtual performance is not limited to contours of actor's body, the body itself is flexible and

inclined to digital manipulations and the performer may be result of combination of flesh and computer algorithms. This does not reduce the contributions of actor, but rather it empowers ambiguities of screen acting that require actors to perform in non-existent locations with other characters not present, sometimes even in close-up. In this sense, "film performance itself was really a Gestalt rather than an isolated element" (Wolf, 2003: 49). And digital tools evoke the viewer's gestalt, which can be defined as a unified pattern of elements taken as a whole by using new methods to explore the potential of new characters.

2.6.2 Technically Enhanced Performance

Due to technological advances allowing dismantling, reintegrating and reconstructing actors' performances as final product, it is possible to claim that actors' film performance is achieved through contribution of various elements. In order to understand how performance is constructed in the age of technical enhancement, we must examine those elements that might be produced solely, reshaped and rearranged for the final from, then analyze the implications of this multifaceted compilation.

Presumably, Kuleshov's editing experiment aided the realization even dissimilar bodies might be used for portraying the same character. Thus, the use of "doubles" has become common for filmmakers considering limitations of actors or human beings in general. One of the earliest uses of body doubles was dummies, humanoid objects used instead of live actors primarily for scenes of destruction or violence, as seen in the fight scene on top of a train in *The Great Train Robbery* (Edwin Porter 1903) (Wolf, 2003). Moreover, Wolf (2003) asserts that in Hollywood different types of doubles were and remain extensively used as stunt doubles, dancing doubles (as in Adrian Lyne's 1983 film *Flashdance*), nudity doubles, scale doubles, or riding

doubles (as in Peter Jackson's *Lord of the Rings* trilogy). Since the rise and refinement of digital filmmaking, doubles can also be computer generated for scenes too dangerous or difficult to obtain. For instance, computer-generated doubles were used for *Lord of the Rings: The Fellowship of the Ring* for the scene where the fellowship has to cross the bridge at Khazad-Dum (Wolf, 2003).

"Compositing actors into a scene became more common with the development of the optical printer by Linwood Dunn in 1944, which allowed images to be rephotographed together into a single piece of film with great precision" (Wolf, 2003: 51). Optical compositing required certain keying processes such as bluescreening or greenscreening, in which actor is placed in front of blue or green colored background. Following that, in the post-production stage, solid background is changed into desired background that is digitally crafted (Wolf, 2003). With this process, actors not only need to conceive the background where they are required to be, but they also need to imagine the other (digitally created) characters they are supposed to interact with. In this respect Wolf states:

> Whereas optical compositing technology turned the actor into a graphic element to be combined with other elements on screen, digital compositing changed actor into image, a surface and bunch of pixels that can be manipulated even further. Thus, digital techniques allowing cut and paste have separated the actor's image, body and face to a degree even greater than in optical techniques used in the past (Wolf, 2003: 52)

In 2002, Andrew Niccol wrote and directed the movie *S1m0ne* in which film director Victor Taransky (Al Pacino) replaces a moody star with a digitally created actor. After this replacement, the film becomes a huge success, the public believes that she is a real person, and Taransky struggles to keep Simone's true (non-)identity a secret. Prince (2012) argues that Niccol's film provides a world where digital simulations of human beings are inapprehensible and actors are replaceable by computer-generated

images. The filmmakers no longer need human actors due to cheaper digital replacements that can achieve intended actor quality. In other words, Simone "represents the death of the actor and even of reality" (2012: 99). Correspondingly, Simone is also the invention of a mad scientist who has developed a tumor from spending too much time staring at a computer screen. Before his death, he bequeaths his invention to Taransky. Use of the mad scientist figure also suggests the idea that the origin of digital images is connected to the Frankenstein myth. That is to say, rather than decades of research conducted by many institutes, Simone is the result of one lone inventor's effort. Taransky's effortless use of Simone by controlling a few keys at his computer also eliminates the need of digital animators. Devastated by his dishonest behavior, Taransky tells his ex-wife, "There is no Simone. She is pixels, computer code molded by me from a mathematical equation I inherited from a madman." But throughout the film Niccol suggests that Simone represents a new reality, and it is impossible for Taransky to walk away from her and the success she has brought him (Prince, 2012).

"Now that computer animation techniques have become photorealistic enough to be used in live action film, the creation of realistic digital humans [becomes] the high watermark in computer animation." (Scott, 2003: 17). Like in traditional cell animation, which combines layers of drawings together, computer animation allows shooting and producing visual elements separately, then combines them into the same image. At this point, the actor's effort becomes one of the great numbers of elements to create performance, and the distance between his body and the environment increases. Thus computer-generated characters strengthen this certain distance in terms of image, voice and behavior.

2.7. Motion Capture Technology

In 1915, Max Fleischer developed an animation technique called rotoscoping, which provides actors' image without their direct involvement in a film (Wolf, 2003). Rotoscoping can be described as an animation technique that involves live-action footage trace frame by frame in order to produce a realistic look and proportionality (Kitagawa & Windsor, 2008). During the rotoscoping process, animators redraw previously recorded images onto glass panels, making it possible to capture movements of an actor and certain movements which are challenging to create by hand. Following its invention, Walt Disney used rotoscoping in its first, enormously successful feature length animation *Snow White and the Seven Dwarfs* (William Cottrell 1937). In the movie, live-action footage of dancer Marge Champion was used as reference for rotoscoping both Snow White and the dwarfs (Miller, 2009). Due to its huge success, rotoscoping became a prominent method for Disney Animations to study both animal and human motions when creating highly stylized characters. DVD extras that accompany Disney's classic animation releases typically contain live-action footage from the Disney archive comparing certain scenes that reveal skillful and selective use of rotoscoping by Disney animators (Kitagawa & Windsor, 2008). Over the years, rotoscoping has been adopted by other cartoon studios such as Warner Bros. and MGM Cartoons, although some claim that the technique is cheating and contributes to the desecration of the art of animation (Menache, 2011).

Even though, rotoscoping is utilized with live-action footage tracing, it might be considered as two-dimensional process designed for traditional, hand-drawn cartoons. The use of reference footage limits the movement to the single point of view of the camera. However, with the advent of three-dimensional (3D) animation,

a method of 3D rotoscoping has been developed, a technique also known as motion capture. In this sense, Menache states:

> Motion capture is the process of recording alive motion event and translating it into usable mathematical terms by tracking a number of key points in space over time and combining them to obtain a single three-dimensional (3D) representation of the performance. (2011: 2)

In other words, this technology enables the process of translating an actor's live performance into a digital one. Even though motion capture is a lengthy and fairly technical process, it can be divided into basic steps such as pre-production, capture session, and post-production.

Briefly, pre-production consists of calibration of the capture area and the actor. It starts with establishing capture volume, which is the amount of 3D space that the motion capture system can see (Kitagawa & Windsor, 2008). In other words, placement and number of cameras to be used during the process are determined, and after that, calibration of the capture area takes place. The process includes a calibration tool called a wand being waved around the desired performance space. Each camera captures the coordinates of the wand and this data is used for determining cameras' relation to each other as well as the origin of the space (Kitagawa & Windsor, 2008). Once the space has been captured, an actor wears a motion capture suit which has reflective markers positioned on his joints and other specific places on the body. In order to record the actor's range of motion, each joint is moved to its extreme so that system understands the movement of every joint. The range of motion data is used for creating a labeling system that eventually will be used for actor's movement. After calibration has finished, the actual work of capturing movement, including the actor's performance, can begin. The actor portrays his actual performance within a motion capture suit with props and required

camera setups. Once recorded, markers from different angles are connected together in the computer for not only creating basis of actor's movement but also constructing characters' three-dimensional movements, allowing critical manipulations. However, this connection of markers offers only a labeled skeleton image of actors that allows the crew to move or control them in basic steps.

Therefore, the final form of the performance is achieved only after involvement of computers. In post-production process, 3D artists apply the collected data using 3D animation software such as Maya or Motion Builder in order to turn the labeled skeleton into the digitally captured body of an actor and then, in turn, the character's body, which is also created via software. At the end of this long and complex process, either an animation of an actor's body based on his movements is achieved or a 3D model of a computer-generated character is constructed based on the actor's movements. In other words, the actor's body becomes a 3D animated model that can easily be manipulated, and the concept of performance must account for technological inputs such as character rig which refers to the digital skeleton bound to the 3D model of an actor's body and key frames which is used for track and change actors' bodily movements.

Additionally, a related technology is also used for converting the movements of person's face into digital data using cameras and computer software (Kitagawa & Windsor, 2008). Similar to bodily motion capture, facial motion capture also requires the actor's face to be covered with reflective markers in order to track movements and even subtle expressions. Having used digital cameras, actor's neutral face expression is calibrated to find exact position of the mouth, nose, eyes, eyelids and cheeks. After calibration, facial movement takes place and differences from neutral expression provide a map of the face and data for further manipulations. Moreover,

hand capture is also achieved by following similar steps in order to enhance emotions with subtle movements of hands and fingers or provide coherent characters generated with computers.

Motion capture has intensified the division between actors' motion and performance, and abstracted the movements as well as expressions. When technologies of motion capture, dubbing, facial capture, digital compositing are combined together, the weight of this technology obscures the actor's physical presence. Having recorded and manipulated in three-dimensional space, an actor's performance becomes "an ensemble performance, involving the direct input of actors, technicians, editors, and director in its creation" (Wolf, 2003: 55).

CHAPTER III

CASE STUDIES

3.1. Hollywood Examples

3.1.1. *The Polar Express* and the Uncanny Valley

In 2004, Robert Zemeckis directed the *The Polar Express,* an early attempt to use motion capture performance in Hollywood. The film, based on a 1985 children's book by Chris Van Allsburg, presents the story of a nameless boy who does not believe in Santa Claus and travels with a phantom train to the North Pole on Christmas Eve.

Already known as major director with effects-driven films such as *Back to the Future* (1985), *Who Framed Roger Rabbit* (1988), and *Forrest Gump* (1994), Zemeckis pursued digital filmmaking with motion capture technology for photorealistic animation. For *The Polar Express,* he used this technology to create all of the characters in the film and innovatively combined body capture with facial capture, using the term performance capture for this unification (Fordham, 2005). Debbie Denise, the film's associate producer, clarifies: "We realized that shooting facial capture separate from body capture was not ideal and that we would achieve a much better total performance by shooting both together" (as cited in Fordham, 2005: 117).

Throughout the film's motion capture sessions, including both facial and bodily performance, Zemeckis intensely praised this technological process and emphasized how it could enhance the craft of film acting. In the *New York Times,* he underlines the limitations of traditional filmmaking:

> Without the tyranny of hitting marks and leading the lights and worrying about the boom shadow and your make-up and your wig and the line on your wig and all that horrendous stuff that stifles an actor's performance. Or when they do the greatest take ever and they miss the focus. (Kehr, 2004)

Zemeckis' longtime collaborator and senior visual effects supervisor of the film, Ken Ralston also comments on how quickly Zemeckis saw the benefits of this certain process. "Bob loved how simple it was […] There was no waiting on lights, cameras and costumes, and it gave him total freedom to select performances and camera angles" (as cited in Fordham, 2005: 114).

Zemeckis cast Tom Hanks for five characters in the film: the hero boy, the boy's father, the train conductor, a mysterious character called Hobo and Santa Claus (Fordham, 2005). Hanks performed all those characters in a motion capture suit with reflective markers on it, while his face was also outfitted with approximately 150 markers for capturing his facial expressions (Fordham, 2005). However, David Shaub, animation director of the film, explains:

> When Tom Hanks came running out of the house, as the boy running up to the train, he looked as if he was six-feet-inch tall kid […] we found where all the hurdles were going to be in translating adult performances to children. Adults don't move like kids. (as cited in Fordham, 2005: 114)

Since motion capture technology allows composited performances; twelve-year-old Josh Hutcherson was cast for additional capture work. He was scanned for the hero boy's movements and his captured data was manipulated including his nose, mouth, eyes and eyebrows, to have some of Hanks' features, and to achieve final form, the character's voice is provided by Daryl Sabara (Fordham, 2005).

Even though mediation of performance elements has long been a key component of film production, it is possible to claim that motion capture technology enables fragmentation of performance to a great extent. In this respect, Balcerzak states:

> As a performer forced to emote in fragments, the film actor has always had less power in determining onscreen performance than what is promoted in the popular Stanislavski-influenced discourse on acting. With mo-cap, we see this discrepancy widen as the actor is literally stripped of his physical body to exist as pure kinesis

> – a marker cloud to be employed as a tool by the film maker. (Balcerzak, 2009: 211)

In this sense, Tanine Allison also discusses performance as a composited element considering the motion capture process:

> Motion capture allows performances to be divided from the star, with multiple performers creating only fragments of the whole. This piecemeal characterization flies in the face of […] who would like to see digital character as a direct extension of the human performer, transmitting every nuance of expression and intention. (Allison, 2011: 123)

However, having focused on the potential benefits of motion capture for actors, Zemeckis pursued convincing digital representations of human beings. After *The Polar Express*, he released *Beowulf* (2007) and *A Christmas Carol* (2009), both produced using similar, though more fully developed production technology. In an interview with Harry Knowles, Zemeckis explains:

> My goal here is to present this art form to tell stories that we never had a way to do before […] We are never going to replace actors, we actually liberate actors. All of the fears that you are hearing about this new art form is the same fear we heard about sound, color, wide screen, and everything. My feeling is we now have this new art form to present stories that shouldn't be animated and are impossible to make live action. (Knowles, 2009)

Unfortunately, the aesthetics in *The Polar Express* were not well received by film critics, despite Zemeckis' ambition about what motion capture might accomplish. In her *New York Times* review, critic Manohla Dargis points out "the eerie listlessness of those characters' faces" (2004). For an *MTV* review, Kurt Loder states "[…] upon close contemplation of the characters here, with their smooth, doll-like skin and count-every-strand hair, another word creeps into mind: eerie" (2004). Paul Clinton's review for *CNN* asserts that the film should be titled as 'The Night of the Living Dead'. Nevertheless, not every critic regarded Zemeckis' first motion capture

performance film as a failure. Roger Ebert, giving the film a four-star-review, states "It's a little creepy. Not Creepy in an unpleasant way, but in that sneaky, teasing way that lets you know eerie things could happen" (Ebert, 2004). Similarly, Jessica Aldred, in her essay "All Aboard *The Polar Express*" clarifies that, "[…] the critical response to *The Polar Express* […] suggests that this fluctuation between belief and decipherment, wonder and scrutiny, partly defined the film's reception" (2006: 158).

At this point, "the uncanny valley" theory provides a notable explanation for the perception of *The Polar Express*. Japanese robotics researcher Mori Masahiro first suggested this term in his influential 1970 essay "The Uncanny Valley." Masahiro attempts to describe the perception of characters that fully replicate human features, whether they are robots or animated characters. He suggests that the closer a "humanoid object" comes to resembling a human being in terms of its movement and appearance, the more positive our emotional response and feeling of familiarity to that object becomes (Mori, 1970). In other words, the increasing resemblance evokes growth in viewer empathy for the character. However, suddenly, at some point of very close resemblance, our positive emotional response turns from empathy to uneasiness. "As robots appear more humanlike, our sense of their familiarity increases until we come to a valley. I call this relation the 'uncanny valley'"(Mori, 1970: 33).

Even though Mori's theory dates to 1970, the concept has become recently popular due to the failure of the first photorealistic, computer-animated film, based on the successful Japanese computer game *Final Fantasy: The Spirits Within* (Hironobu Sakaguchi 2001). In "In Search of the Uncanny Valley" Frank Pollick states:

> The uncanny valley entered the popular lexicon not long after the full-length feature film *Final Fantasy* appeared. This film consisted entirely of characters

> generated by computer graphics and used a high level of realism. The audience response was lukewarm and a general consensus began to evolve that it failed due to falling into the uncanny valley. (2009: 71)

Similar to the production of The Polar Express, in Final Fantasy actors portrayed the action in motion capture process. Yet, the facial data was not used to animate characters. Instead, animators tried to achieve expressive, photorealistic faces by using mirrors to model their own expressions for the characters (Duncan, 2001). However, despite the attention to detail, faces of characters remained less expressive than a real human face. Having analyzed Tzevatan Todorov's theory on the "Fantastic," Dan North states:

> The factors inhibiting the viewer's acceptance of the characters in *Final Fantasy*, are, I believe, due to their uncanny humanness; occasionally the movements of the characters are so 'true' that the mind alternates, as in Todorov's conception of the Fantastic, between belief and the disbelief in their reality, or rather, their indexicality […] The balance between the visibly false and the partially realistic has been upset. (2008: 154)

Even though Tom Hanks' facial data was captured, along with minor characters of the film, it could not provide complete information. In "Anatomical Considerations in Facial Motion Capture" anatomist Elizabeth Raga and biologist Stuart Sumida explain:

> Unlike every other body area, the movements in the face are not principally the movements of skeletal elements other around joints. Rather, most facial movements are the result of highly variable thin sheets of muscle which attach—not to bone—but from skin to skin. This results in movement that does not proceed along a vector from a clear anchor point, but rather a surface deformation approximating various skin attachment points. (2009)

Moreover, in *The Polar Express* actors' eyes were not captured and the animators had to infer the behavior of the eyes and accurate direction of the actor's gaze from the markers placed around the eyes (Fordham, 2005). In this sense, Raga and Sumida (2009) point out that captured facial data often fail to provide precise information

about eyes. Particularly, blinks and saccades contribute to the zombie-like quality of many photorealistic digital characters. “It is this failure to capture or animate saccades based on character interaction in 3-D space which gives most unmodified performances based on motion capture a vacant and dead stare” (Raga & Sumida, 2009). In *The Polar Express,* motion capture performance resulted in one of the most widely criticized qualities of the film: the lifeless appearance of its characters. Even though the audiences couldn't empathize with the computer-generated characters, an important point remains. Zemeckis’ working method with motion capture has won great praise from his actors due to the resulting improvement in their working conditions. Unlike typical film acting, where actors spend much of a day waiting to go on camera and deliver short pieces of performance, motion capture offered the chance to work in very long takes covered by multiple cameras, so that actors could perform continuously like theater performance. Colin Firth, who appears in *A Christmas Carol* (2009), states that it was stimulating to play a whole scene without stopping, adding that:

> In some ways you had to rise to the occasion of having all that freedom**.** There is no proscenium. There is no camera to play to […] It’s even more authentic than doing theater because there is no imaginary fourth wall. (as cited in DeMott, 2009)

Bob Hoskins, who plays Fezziwig in the film, also states: “What was extraordinary was the fact that once you’re covered in all this stuff [motion capture markers] you got nothing else to do but to concentrate on your performance. They have taken all responsibility from you. It’s extraordinary.” (as cited in DeMott, 2009)

From an actor’s perspective, then, motion capture performance can be perceived as liberating, enabling performance to take place in real time, unlike the fragmentation of traditional live-action film production. While many cast members find this

exhilarating in the moment of performance, what remains problematic is that much of their performance, including facial expressions, cannot be fully rendered into the final version of their on-screen characters.

3.1.2. Brad Pitt in *The Curious Case of Benjamin Button*

Directed by David Fincher, *The Curious Case of Benjamin Button* (2008) portrays the journey of a character whose life runs backward. During childhood, Benjamin (Brad Pitt) has the appearance of man his eighties, and as he grows up he becomes seemingly younger until, in his advanced years, he takes on the appearance of a child. He dies looking like an infant. Having life running backwards, Benjamin experiences difficulty in connecting with other people emotionally and instead forges only fleeting emotional connections. As we all do, he loses everyone he loves, but reversal of time—which emphasizes the existential dilemma—cuts him loose from the lives of other people around him.

This particular narrative was adapted from F. Scott Fitzgerald's 1922 short story *The Curious Case of Benjamin Button*, whose protagonist was born as an old man and then appeared younger with the passing of time. Conceptually, literature might be considered as less problematic in terms of this kind of physical representation. However, as an adaptation of Fitzgerald's short story, the film struggles with physical representation in terms of performance. In this sense, the film could only be made successfully in digital era since this narrative would be too challenging to be handled by conventional approaches to screen acting. A traditional solution to showing character aging throughout his lifetime is to have the same character played by different actors at different points in his/her life. Even though the actors are cast to resemble one another and give skillful performances, the audience could still feel

the deception in realizing they are watching different actors. For instance, in *Little Big Man* (Arthur Penn 1970) we see Dustin Hoffman's aging achieved through use of prosthetics and make up. No matter how brilliant the make–up in these notably accomplished scenes, viewers can perceive that the actors are wearing things on their faces. Another example of the traditional approach is *The Notebook* (Nick Cassavetes 2004), in which Rachel McAdams and Ryan Gosling play young lovers who spend their life together, then in their later years turn rather unconvincingly into Gena Rowlands and James Garner.

However, in *The Curious Case of Benjamin Button* (2008) David Fincher rejected the notion of casting different-aged actors in the role (Duncan, 2009). As Executive producer of the movie, Ed Ulbrich states:

> David believed that there would be an emotional and visual roadblock every time the actors changed in the movie […] you would lose the thread of the movie, the sense of this being one person's entire life, beginning to end. The power of it was going to be seeing one actor, Brad Pitt, at all these different stages of life. It had to be the same guy. (as cited in Duncan, 2009: 77)

Visual effect supervisor of the film Eric Barba also clarifies why the conventional approaches generally do not work well for screen aging:

> The problem with old age make up is that it is additive whereas the aging process is reductive. You have thinner skin, less musculature, everything is receding. There is no way to do that 100 percent convincingly by adding prosthetics (as cited in Duncan, 2009: 77).

Additionally, Brad Pitt wanted to do the film only if he could play Benjamin's entire lifespan, rather than doing one or two age intervals and leaving the rest to other actors (Duncan, 2009).

Aging Benjamin backward from eighties to infancy can be considered the most crucial part of the movie since it requires the conviction of the viewer that the

character's many forms remain Brad Pitt, in other words, that these transformations are anchored by single (star) actor. At this point, it is possible to claim that digital solutions along with Pitt's performance brought the film to this whole new level.

During the film's first hour, three different actors perform Benjamin's physical movements, with Pitt appearing as digital head replacement as the character "ages" from his eighties into his late sixties. On the set there were three actors, each one representing Benjamin at different ages: Peter Badalementi played the smallest, most aged looking Benjamin; Robert Towers portrayed him for scenes where he appears to be in his 70s; and Tom Everett played the strongest Benjamin before the film switches to Brad Pitt in digitally enhanced make-up (Duncan, 2009). During the process, each actor wore a blue hood with markers on it in order to facilitate capturing process and tracking the computer-generated head to his body (Duncan, 2009). Fincher shot all the scenes with three stand-ins as the old Benjamin, then edited this material to determine which scenes would require head replacements.

The challenge was placing Pitt's facial performance convincingly inside the aged Benjamin. To accomplish this, three lifelike plaster head models were created, depicting Pitt as he might look in his 80s, 70s, and 60s, and those models were scanned for CG artists to create digital models for animating (Duncan, 2009). In the performance capture stage, Pitt enacted Benjamin's facial responses in scenes that had already been filmed, and his performance was recorded with high definition cameras focusing mainly on the actor's head from a variety of angles (Duncan, 2009). Barba explains:

> We captured him performing every head-replacement scene […] so that every movement of that performance would be driven by Brad Pitt. Benjamin's lips would move like Brad's, his eyes would move like just Brad's, every nuance of expression would be Brad's. That was crucial thing to getting Brad to come

> across in Benjamin. It couldn't just be likeliness. We had to re-create his exact timings and mannerisms, the exact way is facial muscles move, the exact expression he uses. All of that had to be in our Benjamin Button character. (as cited in Duncan, 2009: 80)

In order to get detailed facial capture, rather than using traditional marker based facial capture, Pitt's face was covered with special phosphorescent make-up that provided detailed three-dimensional micro expressions (Flueckiger, 2011). Having captured his facial expressions, animators transferred Pitt's live-action facial performance to the digital head model and then positioned the computer-generated head on actor's body to resemble the aged Benjamin (Flueckiger, 2011). After each cut scene, Fincher and Pitt watched the scene in a monitor to ensure his performance did not contradict what had been established in the on-set actor's body language (Duncan, 2009). Producer of the film Cean Chaffin narrates:

> When we put the performance capture next to live-action suddenly, instead of just an actor in a blue hood in the scene, we had Brad Pitt's performance in Benjamin. He put so much thought into it, all subtleties of playing someone who can't physically move like a child, but who still thinks like one […] he did that acting all alone on a performance capture stage, without being able to interact with other actors or sets or anything. (as cited in Duncan, 2009: 80)

Capturing Pitt's facial expressions and forming a library of micro expressions for further manipulations helped modulate the character's responses moment to moment.

However, bringing off the illusion required more digital manipulations, including the rendering of Benjamin's skin and eyes, and matching the lighting on his digitally created face with the environments that had been constructed on set. Other techniques included displacement maps, a form of texture mapping that alters the shape of the model, used for creating bumps, pores, blemishes, age spots and tissue thinning (Flueckiger, 2011). Eyes always pose a significant problem while animating

photorealistic human beings. For the film, a special animator was tasked only with visualizing Benjamin's eyes (Duncan, 2009). Barba says:

> We knew if we didn't get the eyes right, it wouldn't matter how good the rest of it looked. Without eyes, it wouldn't be Brad Pitt, and it wouldn't be Benjamin Button […] Every element— the amount of water in the eyes, the different layers of the skin, the red in the conjunctiva of the eye— was rendered out separately for control, and then the compositors layered those things together again, shot by shot. (as cited in Duncan, 2009: 88)

Additionally, aligning head replacements properly with the character's spine for coherent body representation also required matching the light effects to those created on set during filming. In the scene where Benjamin looks into mirror, raises his arms and flexes his biceps, for instance the lighting of his head and movement of the body had to look identical. In order to light Benjamin's face properly with the environment, they examined every light source on the set and replicated this construction in a computer-generated environment (Duncan, 2009).

In this sense, the smooth result suggests that the actor portraying Benjamin provides a complete performance on the screen. Thus, the actor, as composited presence, derives from the on-set performer executing body movements of Benjamin; Brad Pitt's captured performance as Benjamin's face and the team of animators who constituted the final form of the character through combining all elements with facial animation and lighting.

At first glance, it is not hard to see the contributions of the body actors since they provided performances that gave the character personality as he moved through the spaces of narrative. For instance, when eighty-year-old Benjamin tries to go back home after missing his streetcar, hobbling on crutches, we see the dramatic image of his vulnerability and his spirited nature. On the other hand, Pitt's presence in the

character throughout the story gives Benjamin the continuity of personality needed to make the concept of the character work.

Benjamin is shown to be quiet and calm, rather than verbal or aggressive. His condition, being born old, makes him distant from the lives of the other people around him. Seeing people aging in the opposite direction from his own, he continually confronts what everyone faces during intervals of crisis, including the loss of friends and loved ones. Therefore, Benjamin develops a patient, restrained, and passive character. He is not excessively communicative, and this characteristic both challenges and facilitates the facial animation to bring the character to life. It facilitates facial animation because Benjamin does not speak much, thus dialogues with other characters often need not be portrayed. He usually listens to what old people say at the boarding house where he lives, and he builds a connection with them. However these relationships are portrayed in visual terms rather than verbal ones. Therefore, speech never becomes a major requirement of Benjamin's facial animation. On the other hand, his reaction and reflection upon what others do and say was a difficult challenge. Benjamin's digitally enhanced face requires being convincingly expressive, because he demonstrates his emotions indirectly, in a subtle manner. Unlike the characters in *The Polar Express* (2004), Pitt's motion capture performance can be considered more intricate, since Pitt enacts the character carefully with focused emotions and responses while his thoughts are presented in voiceover narration. That is to say, Benjamin lives onscreen in the ways that he reacts and responds to events around him. As he looks at the children playing on the street from the porch of his mother's boarding house, we see curiosity blended with passivity. He gazes admiringly at an old woman who taught him to play piano when he found out she had passed away. He silently sits while Daisy's grandmother,

thinking Benjamin is molesting her due to his and young girl's close relationship, scolds him.

The success achieved in the character's concept and execution derives from Pitt's success as an actor inhabiting the character throughout the story. This becomes especially apparent when it breaks down in Benjamin's advanced years. When Benjamin appears as a twelve-year-old kid, for the first time, we see a child actor who is clearly not Brad Pitt. Because, up to this point, Benjamin always looked like Brad Pitt, no matter how aged he was, the audience might think that is not Benjamin. Fincher explains: "We decided we would have to go with child actors to play Benjamin when he looks 12 and younger; but by then we felt we would have made the case that this was the same guy, and people would roll with it" (as cited in Duncan, 2009: 74).

Even though this decision risks breaking the audience's illusion for the last act of the narrative, *The Curious Case of Benjamin Button* clearly indicates that digital tools have the expressive power to create credible characters and provide new performance methods for the actor In this sense, it would be mistake to consider that Brad Pitt's performance created by visual effects: his presence is essential to selling character's reality. In "The Unusual Birth of Benjamin Button" Jody Duncan states: "Benjamin Button, created through a marriage of an actor's imagination and stunning technological breakthrough, is not a timid baby-step forward; rather, he is an Evel Knievel-like leap over the uncanny valley." (2009: 118)

On the other hand, in addition to reading Benjamin Button as a character with a deep relationship to digital cinema effects, it is also crucial to consider Brad Pitt's star image in regard to audiences' intertextual relationship with it. Certainly, Brad Pitt's

intertextual image is constituted and constructed along with discourses of Hollywood stardom including his widely circulated photos and his publicity in films and interviews. Those elements become crucial while reading Benjamin as character. In Director's Commentary with David Fincher, Fincher states:

> It occurred to me that this might be a better place to put the audience if this was somebody that you really knew what their face looked like, because you could peer into it and kind of go 'I know who that is, how do I know?' [...] When you could see it was him, there was something sort of exciting about it. (2008)

At this point, it is important to consider Richard Maltby's concept of "dual presence" to contextualize the acting in the film:

> Our impressions of actor's presence and his or her disappearance into character readily alternate with each other. […] In every performance, two identities—actor and character—inhabit the same body […] the technical skill of the actor consists eliding the difference between two identities, in disembodying himself or herself to embody the role (2003: 381).

Correspondingly, In Director's Commentary with David Fincher, Fincher explains:

> You are talking about someone who you can't walk thirty-five feet in the titillized world and not see a picture of him; I mean literally like very ten seconds, here he is getting on his motorcycle […] here he is having a snow cone. In a weird way it kind of helped us. (2008)

Even though aging Pitt's face and convincingly placing it on top of another actor motivates the audience to focus on Pitt's bodily movements, it is possible to claim that we are asked to look at his body throughout the film. The film, providing numerous moments in which Benjamin admires himself by continually inspecting his reflection in a mirror, suggests us to notice the physical change of Benjamin and growth of Pitt's star image into the diegesis. For instance, when he travels to Paris to see Daisy (Cate Blanchett) after her accident, we see him sitting and waiting in the hospital lobby. As Benjamin narrates the dramatic accident, the camera shows us Pitt's entire body from his feet to his profile with tracking shot. Following that scene,

Benjamin sits at Daisy's hospital bed and his face comes into focus in close-up, as Daisy comments "My God, look at you. You are perfect." For this scene, the audiences are invited to share Daisy's point of view, confirming Brad Pitt, with his ideal masculinity, is finally perfect.

In this sense, it is also important to examine young Benjamin as Brad Pitt in terms of discourses of celebrity, including the desire to preserve youth of celebrity in order to remember them in their iconic period. This desire might stem from the fact that ageing stars have the potential to provoke a disturbing bodily experience in viewers, since stars reflect the ideal self, mirroring spectators' resistance to their own acceptance of old age. In this respect, Michelle Royer argues that

> The age of the stars defamiliarises the audience's common notions of stardom, and if spectators identity and sympathize with the stars or characters, the result is confronting experience of ageing and its effects on the body that subverts the mythic persona of the stars. (2015: 211)

In *The Curious Case of Benjamin Button*, Lola Visual Effects Company performed the "youthening" effect with the consultation of a plastic surgeon (Duncan, 2009). Calling their process "digital cosmetic enhancements," they managed to de-age Brad Pitt by removing bags from under his eyes, erasing wrinkles or shadows, changing geometry of his eyes, altering the eye sockets and adjusting the tissue density (Duncan, 2009). Those enhancements are usually meant to convince to think an actor looks in particular way. However, in this case it is possible to claim that they are used for making Brad Pitt twenty years younger with particular reference to his breakout image in the 1991 film *Thelma and Louise* (dir. Ridley Scott) (Duncan, 2009). For instance, we see young Benjamin when he visits a now aging Daisy at her dance studio. Throughout the sequence, Pitt stands in entirely in shadows. When he moves from darkness to light, revealing his youthful face as symbol of virile

masculinity, an icon of handsomeness, we see (again) the revelation of young Brad Pitt.

At this point, it is crucial to remember Andre Bazin's "The Ontology of the Photographic Image" as he considers "the charm" of family photographs. Bazin describes:

> […] the rather disturbing presence of lives halted at a set moment in their duration, freed from their destiny […] by the power of an impassive mechanical process: for photography does not create eternity, as art does, it embalms time, rescuing it simply from its proper corruption (1960: 8).

In this sense, *The Curious Case of Benjamin Button* with the help of digital technologies, attempts to free the character from the destiny of his aging backwards, as well as Brad Pitt's iconic star image from time itself.

3.1.3. Zoe Saldana in *Avatar*

Directed by James Cameron, *Avatar* (2009) is officially the top-grossing movie of all time. It is possible to claim that one of the main reasons of its success is its use of innovative filmmaking technology, including 3D viewing and development of motion capture cameras that were specially designed for the movie's production.

The movie presents the story of Jake Sully (Sam Worthington), a disabled Marine who has been selected to take part an expedition to the planet Pandora. To solve an ecological crisis in 2154, distant planet Pandora has been invaded by humans in search of rare minerals. In order to communicate with Pandora's ten-foot-tall blue cat like indigenous race, the humans established a system that maps person's conscious into to the physical form of Na'vi. Known as an "avatar," this hybrid form provides a body of Na'vi race while preserving human knowledge and emotion in this form. In his new avatar form, Jake is assigned to infiltrate Na'vi in order to enlist their

assistance for mining the rare ore. As Jake discovers the Na'vi world, he meets a Na'vi princess named Neytiri (Zoe Saldana) who introduces him to the Na'vi race. As he comes to perceive the planet Pandora through Neytiri's eyes, he sides with Na'vi race against the human invasion.

Similar to Benjamin Button and the characters portrayed by Tom Hanks in *The Polar Express*, Na'vi characters are created with motion capture technology. Along with *Avatar*, these movies provide two broad stylistic objectives: photorealism and caricature. While photorealism involves creating perceptually convincing digital representations of human beings, caricature includes styles of representation aiming for exaggerated, cartoonlike, or nonhuman kinds of portraits. In this sense, characters in *Avatar* can be considered as stylized and exaggerated characters whose design does not aim to replicate human appearance. In this sense, the problem of uncanny valley is not relevant to these characters.

When James Cameron began a pre-publicity tour for *Avatar* he stated: "The first thing you have to understand is that this is not an animated picture" (as cited in North, 2015: 10). Presumably, Cameron did not want his audience to approach his film through the certain frameworks, which might include ordinary appreciation for an animated film. Instead, he attempted to shape audience's reception by not only emphasizing actors' performances mediated by technology but also underlining the technological excellence of the process of film production.

Unlike previous examples of performance capture that required performance after the scenes had been shot, in *Avatar* the main goal was to take capturing process from being a post-production tool to one that was integrated with the filming and directing of live actors. For this reason, a special camera referred to as a "simulcam," was

developed and allowed Cameron to see low-resolution, composited footage of CGI and live action performance with a hand-held camera (Duncan, 2010). As Cameron describes: "the camera is used as a monitor, linked to a computer system that could stream captured performance and camera movement in real time, and map them to primitive visualization of characters and environments" (as cited in Duncan, 2010: 107). Thus, it became possible for Cameron to direct digital characters and to follow their action while they interact with live environments and actors. For instance; the scene, where Jake wakes up for the first time as his Na'vi character, was shot on a simple set with basic props to modify the physical difference between Jake's human form and avatar form. This footage was streamed through the simulcam and subsequently mapped on Worthington's performance, enabling Cameron with hand-held camera to adjust frame and the characters' position in the frame as he shots the following scenes (Duncan, 2010). Thus, it is possible to claim that Cameron's use of simulcam enabled the actors to be filmed as their digital characters during the production.

Faces of Na'vi characters were created with familiar facial features of the actors who appeared in the film as human characters such as Jake and Grace (Sigourney Weaver). Producer John Landau states: "We found the best way to convey the essence of the performance, to see if we were really getting an actor's performance, was to bring in similarities in the faces of their Na'vi counter-parts" (as cited in Duncan, 2010: 109). For instance, Grace's avatar was the most challenging due to facial features of Sigourney Weaver. Her nose was particularly difficult to render in a Na'vi face. As Cameron explains:

> The Na'vi facial features include this very broad, lion-like nose. It's like a brick in the middle of the face […] she also has a very narrow, patrician nose; and the second we tried to put that wide Na'vi nose on her, you lost her. You couldn't tell

> it was Sigourney Weaver anymore […] we just gave Grace's avatar Sigourney's nose, and it worked fine because the character still had the big eyes and other features. (as cited in Duncan, 2010: 110)

Having attempted to preserve the live actor's presence in the computer generated character, in order to animate digital faces, instead of the marker based capture, Cameron followed image-based facial capture. Similar to the head microphones worn by concert performers, special headgear was built that also incorporated a single camera placed in front of actor's face to provide animation reference regardless of head and body movements (Duncan, 2010). Cameron explains:

> Early on people thought we need more cameras that we would have to photograph the entire face. But I kept saying: 'We don't need to see the entire face. What we need is a camera that can see what eyes and the mouth are doing; and then, we need a model that is so thoroughly and well rigged, that when the camera image shows that the corner of the mouth is pulling back, the system knows what to do from there' (as cited in Duncan, 2010: 83)

The system to which Cameron's referring is Paul Ekman's Facial Action Coding System (FACS) widely used for the final facial models. Lead facial motion editor Jeff Unay explains: "FACS allows you to encode all of the facial muscles numerically. If you want an anger pose, you put the right numbers, and the system knows which muscles to pull" (as cited in Duncan, 2010: 137). Basically, the system maps the facial data in terms of zones, micro-expressions, and muscles so that animators could produce facial responses such as an eyelid twitch or an eyebrow raise using numerically encoded data. Additionally, in certain scenes requiring active body performance, stunt performers were used for body capture while the facial data was provided by the credited actors. Similar to Automatic Dialogue Replacement (ADR) sessions, Facial Performance Replacement (FPR) is used for achieving the final form of an animated face (Duncan, 2010). In this procedure, actors came back after the scenes were shot and provided facial expressions while sitting in front of a monitor and being recorded by multiple cameras. As Cameron clarifies: "We were

uncoupling the facial performance, but in a way that the actors embraced. It actually freed them up to perfect their performance without having to worry about how they were jumping or rolling around" (as cited in Duncan, 2010: 119).

Considering its aesthetics and technical innovations, *Avatar* also was well received by many film critics. In his review, Roger Ebert states "*Avatar* is not simply sensational, although it is that. It's a technical breakthrough. It contains such visual detailing that it would reward repeating views and it creates new movie stars." (2009). In her *New York Times* review, Manohla Dargis points out "Mr. Cameron lays out the fundamentals of the narrative efficiently, grabbing you at once with one eye-popping detail after another" (2009). For *Wired*, Joshua Davis states "James Cameron's new 3-D epic could change film forever" (2009). In *Variety*, Todd McCarthy claims:

> Cameron is also pushing the envelope with truly photo-real CG – something which has been promised for years but has finally been delivered with *Avatar*. The interactions of the characters with the environment are incredible and the details on the faces of the motion-captured leads (Worthington and Zoe Saldana) bring them to life. You will believe totally in their performances, representing another quantum leap tolls which have rarely been used for anything other than spectacle (2009).

For *Dark Horizons*, Garth Franklin comments on Saldana's performance as "even stuck entirely behind a blue face as the native with easily the most screen time, Saldana makes her into a multi-dimensional character with a varied and fully conveyed emotional personality" (2009).

Having described the entire process as "actor driven," James Cameron also singles out Saldana's performance as especially worthy.

> Every second of the performance is Zoe. To carry a film on her shoulders and to step up every day for over a year is no small task. If you think about it, she did many things for this role, from mastering an accent and leaning a new language to

> intense physical training, that are the kinds of things that earn people Oscars. And she did it all in a blank room. (as cited in Bell, 2010)

Her co-star Sigourney Weaver also points out:

> Zoe played Neytiri with such strength, grace and force. If the audience realized just how much, they would have appreciated the performance more […] The technology is so innovative, and it will just continue to get more innovative— we might as well recognize [the contributions of actors] now. (as cited in Abramowitz, 2011)

Even though Cameron and his cast intensely promoted the contributions of Saldana to the character, acting in *Avatar* was not well received by all film critics. In *Entertainment Weekly*, Mark Harris states:

> Zoe Saldana may be a fine actress; I don't feel that her work in *Avatar* can fairly be labeled an onscreen performance. What I saw was a CG character created in very large part by an army of technicians; to me, Neytiri is a superb visual effect enhanced by an actor, not a performance enhanced by F/X. (2010)

In this sense, Scott Balcerzak's comment on performance capture technology is important to recall. As Balcerzak notes:

> […] these technologies are not about a digitization of the human, but the humanization of the digital through the addition of supposedly real movement. It is a process developed to make the special effect perform realistically as opposed to, as suggested by many, digitally enhances the actor. (Balcerzak, 2009: 196)

At this point, it is possible to claim that James Cameron is among those who see the technology the latter way. As he comments:

> I'm not interested in being animator. That's what Pixar does. What I do is talk to actors. 'Here's a scene. Let's see what you can come up with,' and when I walk away at the end of the day, it's done in my mind. In the actor's mind, it's done. There may be a whole team of animators to make sure what we've done is preserved, but that's their problem. Their job is to use the actor's performance as an absolute template without variance for what comes out the other end. (as cited in Abramowitz, 2011)

Even though the original acting provides raw data to visual effects artists, the process does not finish there, and additional elements interfere considering the distance

between actors' performances and final form of the characters on the screen. Throughout the film, unlike Sigourney Weaver and Sam Worthington's characters, we never see Zoe Saldana in human form. Thus, Saldana's performance as pure Na'vi character becomes important in terms of demonstrating an actor's contribution to a digitally enhanced character. In this sense, Bode notes:

> With digital screen characters like Caesar or Neytiri (Zoe Saldana) in *Avatar,* we can only take on faith (and with the assistance of the behind-the-scenes documentation) that what we see on screen has a direct transcriptional relationship to gestures and expressions performed by actor, whereas we know (from deduction or promotional information) that there has to be *someone* inside the rubber suit or behind those grotesque layers of latex pushing it around. (2015: 92)

In "Motion-Capturing an Oscar" Kristin Thompson (2010) points out significant dissimilarities between images that film studios regarded as valid illustration for depicting emotions and expressions of actor and their final (digitally enhanced) characters'. Thompson focuses on the scene in which Neytiri pulls her knife and snarls to intimidate the attacker who is trying to kill Jake, and compares that image to Zoe Saldana's image in motion capture suit for the same scene. At first glance, we can see that Neytiri has much longer canine teeth compared to Saldana, and this increases the impact of her snarl face. Comparing facial proportions, we can see that Neytiri's mouth is bigger in proportion to her head. Moreover, since the Na'vi have blue tongue and lips, Neytiri's teeth stand out more clearly. Additionally, Na'vi race has pierced and pointed ears, however we never see Saldana's ears. For the scene; Neytiri mimics enraged animals with the laid-back ears, contributing considerably to the shot's impact. Faces of Na'vi have also certain lines similar to canine faces, covering their faces from inner end of their eyes and radiate across the upper forehead. For the snarl face, Neytiri's face is covered with long wrinkles in order to enhance impact of anger, while Saldana's face only depicts human frown lines. The change in the eyes also can be considered especially significant. While Saldana has

dark eyes with barely visible pupils, Na'vi has much larger yellow eyes with bigger, more clearly delineated irises. As a result; black pupils stand out dramatically, conveying strong emotions.

At this point, it is possible to claim that there is also branch of animators whose work has to be recognized. Animation supervisor of the film Richard Baneham points out:

> When Neytiri is furious, we don't see only what Zoe did— we also see her lips pull back and her teeth clench; we see her ears flatten out and tail switch back and forth like a lion's. The animators did all of that […] however it had always been our intention to preserve the actors' performances. (as cited in Duncan, 2010: 138)

In this sense, *Avatar* indicates that the digital technologies and visual effects have developed to a point where the outcomes could be really impressive. On the other hand, Saldana's and other actors' performances on *Avatar* contributes to the believability of the characters and aid us to empathize with them. At this point, recalling Paul Ward's argument about the relationship between live-action and animation being a complex set of shifting sand, rather than a replacement of live action with the logics animation, might help to understand dynamics of these relations. (as cited in Bode, 2010)

3.2. Case of Andy Serkis

3.2.1 Andy Serkis in Blockbuster Movies: Gollum and Caesar

Throughout filming *The Lord of the Rings* trilogy, Peter Jackson was already using motion capture technology to create the illusion of thousands of creatures engaging in battle sequences. But for the character Gollum, Jackson pursued a different goal. Since Gollum was a corrupted animal-like creature under the influence of the Ring, it was risky to create a performance through human stunts. Jackson explains that "Gollum was so emaciated and twisted, walking on all fours, scrambling up and down cliff faces—it just wasn't conceivable that we could have done [it] with a

human" (Fordham, 2003: 74). In the first film, *The Fellowship of the Ring* (2001), Jackson sought nothing more than a voice actor for Gollum, which is shown visually in the film as a fully computer-generated character. When Andy Serkis auditioned for the role, Jackson discovered that in order to achieve the oddly hollow, hoarse sound of Gollum, Serkis needed to contort his face along with his body. In other words, Gollum's voice only could come from an actor who also physicalized the character's body. Jackson clarifies "It was really in that audition that I came to realize something that had never occurred to me: that the [actor's] voice and facial expressions […] are related; you can't separate the two" (as cited in Carnicke, 2012: 327). Carnicke suggests that what Jackson found in Serkis' audition corresponds to what Stanislavsky called the "psycho-physical." Holistic use of the self's psycho-physical is an acting technique established by Stanislavsky and developed further by Michael Chekhov, a Russian-American actor, director, and theater practitioner (2012: 328). Chekhov describes:

> The actor in the future must not only find another attitude towards his physical body and voice, but to his whole existence on the stage in the sense that the actor, as an artist, must more than anyone else, enlarge his own being by the means of his profession. I mean the actor must enlarge himself in a very concrete way, even to having a quite a different feeling in space. His kind of thinking must be a different kind, his feeling of body and voice, his attitude in the settings— all must be enlarged. (as cited in Petit, 2010: 8)

Correspondingly, a theatrical acting technique known as "biomechanics," developed by Russian theater director and actor Vsevolod Meyerhold, posits a significant connection between physical and psychological status of the actor. Meyerhold states:

> All psychological states are determined by physiological processes. By correctly resolving the nature of his state physically, the actor reaches the point where he experiences the excitation which communicates itself to the spectator and induces him to share in the actor's performance: what we used to call 'gripping' the spectator. It is this excitation which is the very essence of the actor's art. (as cited in Braun, 1979: 166)

Biomechanics as an acting method includes certain process where actors, considering the natural movements of both man and animals, are trained for complete mastery of their body in order to use action to invoke a desired emotional response out of the audience. Work in this acting method is achieved through completion of two stages of training. While the theoretical part mainly consists of learning to observe all living bodies in the execution of any action, the practical portion of the training includes a series of exercises ranging from basic movements, such as running, to more complicated physical action which requires organized movement in a group of people (Gordon & Law, 1996). Developing this relationship between an actor's physical and psychological status enables them to create a gripping performance. In other words, through physical mastery, an actor perceives and masters the psychological status of the character. In this sense, Meyerhold claims, "We need to understand the character physically as well as psychologically, in order to *consciously* express the ideas of the author, and [...] *consciously* relate to the play and the public" (as cited in Braun, 1979: 65).

Serkis' need of physical movement to produce Gollum's exceptional voice and inform the psychological status of the character convinced Jackson that Gollum's computer generated animation had to be revised based on Serkis' live-action movements. So the production team's animators recreated and remapped Gollum's facial and physical features to resemble Serkis' own.

Serkis performed the character Gollum in several contexts. First, he played alongside Elijah Wood (Frodo) and Sean Astin (Sam) by being there physically as Gollum, so they could provide performance in relation to his character, aiming to achieve emotional authenticity in acting. For these shots, Serkis wore a skin-tight, flesh-

colored unitard to provide a physical reference for animators. To achieve the final form of the scene where Gollum attacks Frodo and Sam in order to wrest the Ring from them, filmmakers experimented with two different shots, to which they referred as animation reference shots and mime passes shots (Carnicke, 2012). For "animation reference" shots Serkis performed along with other actors, while in "mime passes" he was pulled out of the frame, and Wood and Astin repeated their physical actions without Serkis. In other words, in mime passes Gollum was treated as an absent image to be added in post-production, while the other two actors worked with a green screen. Even though the animation team assumed that the mime passes would be more useful for final film, they noticed that the acting was invariably more convincing in the animation reference shots, where Serkis physically contributed to the scene. "Thus, they had discovered another of Stanislavsky's primary maxims—that an actor's best assistant is his or her scene partner" (Carnicke, 2012: 328).

Similar to rotoscoping, animation reference shots enabled the animators to see action with Serkis performing on camera as character. After Serkis was rotoscoped, the other performance contexts, motion capture and ADR, took place. In the former, Serkis physically performed all of Gollum's scenes in a motion capture suit, with reflective markers on it, on a soundstage that included basic props for him to manipulate, while surrounded by multiple cameras. In the latter, Serkis voiced the character for the sound editors (Carnicke, 2012). In order to provide Serkis with more control over the computer generated performance, animators combined rotoscoping with animation and motion capture. First, Serkis was rotoscoped, then digitally painted out, and finally an animated Gollum whose actions were also based on Serkis' motion capture performance was inserted into the final film.

Even though animation reference shots were used as both physical and facial models for the animators, Gollum's face was an entirely digital creation. As Prince (2004) states, Gollum's face was created by a team of twenty animators using the blend-shape animation process, the same process used to create Yoda's expressions in *Star Wars* episodes II and III, which uses a series of modeled expressions to build a performance. Bay Raitt, lead facial animator of the character, modeled a digital facial puppet with hundreds of facial expressions, which could be manipulated to produce facial performance. In order to manage the character's transition from one emotional state to another, the look of his face—for instance, when he is angry, frightened or upset—was animated and controlled with micro-movements of lips, nose, brow and other facial features (Fordham, 2003). Those expressions could be visually blended, edited and saved for later use. As Prince states: "Terror, for example, could be programmed, its settings saved for instant recall" (2012: 129). In addition to the digital creation of Gollum's face, animators controlled the entire character whenever they added non-human motions that Serkis could never have achieved either on set or in motion capture performance (Fordham, 2003). For instance, in *The Two Towers* (2002), Gollum leads Frodo and Sam in Emyn Muil, a maze of rocky crags, to reach the Black Gate of Mordor. In those scenes, Gollum climbs vertically, like a spider, down the rocky cliff. Since such movements are beyond human capability, they were achieved without Serkis' performance.

In the creation of Gollum, the digital character's physical interaction with environment and other actors was convincingly portrayed with help of visual effects; however, another challenge was to create an emotional character. Gollum was described "perhaps the first truly emotionally expressive computer generated character ever created for the film" (as cited in Prince, 2012: 127). To portray an

emotional character, Serkis searched for a way to understand the character's psychological dimensions. In *Digital Visual Effects in Cinema* (2012) Stephen Prince examines Serkis' performance in *The Lord of the Rings* trilogy to explore his conception for the character. In order to make Gollum convincing, Serkis decided to portray the character as if he is in the throes of physical addiction. Similar to an alcoholic or a drug addict, his desire to acquire the Ring had deformed him physically while filling him with hatred and corroding his mind to a state of psychosis. In *The Two Towers*, throughout the film, schizophrenic dialogues take place between Gollum and Smeagol, his former self, expressing contests of personalities between lust and shame. In this sense, as Naremore notes in *Acting in the Cinema*, such dualistic scenes direct the spectator's attention to the art of acting because they allow them to see the actor at work by juxtaposing two different characters performed in turn by the same person (1988: 78). Serkis' performance along with his voice providing psychic violence and duality, expresses the tortured and debased qualities of the character. Since there is no other character that suffers such torments, it is possible to claim that Gollum is the most psychologically driven character in the trilogy. His cunning and aggression are frightening and make the character an intimidating antagonist, yet his agony confuses the spectator's response, evoking empathy despite his creature-like appearance.

While Serkis' performance preserves Gollum's humanity in terms of emotional expressions, the animators also contribute to the character's emotional status throughout the film. Considering their efforts for eye movements, facial expressions, and bodily inflections, they managed to keep animation in the character's emotional center. For instance, in the scene when Gollum attacks Frodo and Sam in Emyn Muil, in order to catch the Ring bound around Frodo's neck, an extended close up

shows Gollum's face twisted with ferocious desire. As Gollum grabs Frodo, his digital eyes act as would those of live actors', containing moisture and surface reflections of Frodo and the landscape. When Frodo struggles free and aims his sword to Gollum's throat, we see the character's emotional turn from aggression to submission as he swears to serve Frodo as the master holding the Ring. Serkis states "I was interested in finding a way to play the transition from the aggressive Gollum to the moment he gives in," thinking that it would be right to play Gollum "as a manipulative child throwing a tantrum to get his own way and then playing the sympathy inducing passive-aggressive child" as he agrees to guide Frodo and Sam in their journey (as cited in Prince, 2012: 131). When Frodo puts his sword to Gollum's throat and tells him to release Sam, we see two close-ups switching in shot-reverse shot between Frodo's and Gollum's face. While Frodo's eyes are full of anger, Gollum responds with saccadic eye movements that indicate his calculation of a new strategy. In this scene, we see their eyes as equally lifelike. But especially, along with Serkis' vocal performance, Gollum's emotional transformation from aggression to submission, achieved mainly with digital animation, conveys the character's inner life. In this sense, live action and digital animation provide a seamlessly unified performance.

Subsequent scenes also present levels of behavioral complexity considering Gollum's shifting faithfulness. His schizophrenic monologues show two sides of his personality: Gollum as monstrous being, willing to commit any act to obtain the Ring; and Smeagol as his former self, a hobbit who murdered his cousin to obtain the Ring. The first of these monologues takes place after he has sworn to serve and guide Frodo and Sam to Mordor. As Frodo and Sam sleep, Gollum's shattered mind starts a dialogue between his two selves. Gollum declares his hatred for hobbits; while

Smeagol defends them by claiming Frodo is a friend. In this scene we see quick personality changes, enforced by different shots framed as if they were two separate beings. Gollum attacks Smeagol and tells him he is a friendless thief. However, some of these monologues take place within a single take, providing extreme close-ups of faces. In those scenes, Gollum's face contorts with hatred while Smeagol crouches submissively with his eyes filled with guilt and shame. The emotional contest provides complex emotional reactions, as intensely visible across the character's features as they would be on the face of a live actor, with extreme close-ups whose emotional power depends heavily on the quality and conviction of the digital performance. In this sense, Gollum can be considered as a composite being, stranded by the Ring's power between human and inhuman as well as a character achieved through a combination of live action (human performance) and animation ("inhuman," technological enhancement).

In a later sequence, Gollum dives into the Forbidden Pool, then catches and eats a fish. Carnicke states that Serkis improvised this action in a motion capture studio since he wanted to show Gollum at his happiest (2012: 332). Thus, animators carefully followed his performance in their rendering of the scene. Carnicke analyzes this specific scene using Stanislavsky's term "object of attention," referring to anything that demands the actor's focus during performance, whether it be prop or partner (2012: 334). Throughout the scene, we see Gollum as totally absorbed by this object. He seems so deeply focused on the fish that Serkis efficiently conveys the character's sense of personal isolation. Therefore, Gollum remains entirely unaware of other possible objects of attention in the vicinity, like Faramir and his rangers watching him from above, preparing to execute him. When Frodo intervenes and convinces Gollum to come with him, we see clearly in his face and eyes the

character's hesitation and inner conflict over whether to trust Frodo. As rangers grab Gollum, his face responds with awful realization as a result of Frodo's betrayal. Throughout the scene, filmed in a single moving camera shot that lasts nearly two minutes, we see Sméagol fighting for his better self, but he loses the psychic struggle, surrendering to his addiction and embracing Gollum. Covering this scene in a single shot presents the performance as a real-time construction, as Serkis remarks "It was like being back on stage performing a monologue" (as cited in Prince, 2012: 133). Even though a team of animators contributed to the performance, Serkis strongly argues that they had taken the character from literature and proceeded to

> filter that character through great screenwriters, then take the emotional physicality, and voice of an actor's performance, which had grown organically from acting with other actors on set, and synthesize them with a range of animation techniques and motion capture. (2012: 134)

Serkis' performance as Gollum was well received by many film critics. In his review for *The Two Towers* (2002), Roger Ebert refers to the character as "one of the most engaging and convincing CGI creatures I have seen" (2002). For *Rolling Stone*, Peter Travers writes that "Serkis is wicked wonder, making Gollum a creature to haunt your dreams. Computers helped to create the effect, but it's Serkis who gives Gollum life" (2003). Visual effects artists were also impressed. Rick Baker, visual effects artist for *Star Wars* (George Lucas 1977) and *Men in Black* (Barry Sonnenfeld 1997), states "The stuff in Jurassic Park was great. But those were still dinosaurs stomping around. Gollum was a real *character*. That's what excited me" (as cited in Prince, 2012: 134). For Richard Edlund, visual effects supervisor of *Star Wars: Episode V – The Empire Strikes Back* (Irvin Kershner 1980) "Gollum was the most exciting visual effect to happen in the last decade—a totally believable CG character" (2012: 134).

The critical attention that Serkis' performance has gathered also led to attempts to have his work recognized by the Academy. Having listed Serkis as the actor who plays Gollum in the scrolling list of credits, New Line Cinema and director Peter Jackson launched a nomination campaign in 2003 for Serkis' performance in *The Two Towers*, "the first attempt to get a role driven by performance capture acknowledged at the Academy Awards" (Leaver, 2014). In *The Telegraph*, Oliver Poole writes:

> There is a buzz in Hollywood about a British actor and his Oscar chances […] a man who few could name or even recognize if they saw him on the street […] most remarkably; it is for a performer who does not appear on screen in person during the film. (2003)

President of domestic marketing for New Line Cinema, Russell Schwartz claims: "What's the difference between John Hurt wearing a latex mask in The Elephant Man and Andy Serkis wearing a pixel mask of Gollum now? […] There is no difference. They are both human" (as cited in Poole, 2003). The film's producer, Barrie Osborne states: "The performance is really driven by Andy. He deserves a nomination and we are going to campaign for him to get one" (as cited in Poole, 2003).

Even though Serkis did not finally receive an Oscar nomination, he received other nominations and some acting awards, including the Academy of Science Fiction, Fantasy & Horror Films' Best Actor in Supporting Role and the Critics' Choice Award for Best Digital Acting Performance, in which Serkis as Gollum beat Yoda (Frank Oz) in *Star Wars: Episode II – Attack of the Clones* (George Lucas 2003) and Dobby (Toby Jones) in *Harry Potter and the Chamber of Secrets* (Chris Columbus 2003). Critics' Choice Awards is presented annually by the Broadcast Film Critics Association (BFCA) since 1995. In 2002, they established a new category of Best

Digital Acting Performance and Serkis is the first actor who received this award. However, for the following years BFCA abandoned this category, leaving Serkis as not only the first actor but also the only actor who got the award. Considering the earlier nomination campaign by New Line Cinema, presumably, BFCA created this category just to give Serkis a win. With the improvement of technology, Serkis found more opportunities with this new method of acting due to his experiences; meanwhile authorities were still debating his Gollum performance.

In the years following *LoTR*, Serkis continued utilizing the motion capture performance. Having worked with such A-list directors as Peter Jackson in *King Kong* (2005), and Steven Spielberg in *The Adventures of Tintin* (2011), Serkis provided a reassuring stability in his performances. The release of *Rise of the Planet of the Apes* (2011) and *Dawn of the Planet of the Apes* (2014) took the discussion to another level. In these films, Serkis drives the performance capture of a character named Caesar, a chimpanzee with human-like intelligence and emotions due to an experimental drug, adopted as a baby by scientist Will Rodman (James Franco). In later life, he learns how to speak and leads a rebellion against humans.

In two DVD featurettes that accompany *Rise of the Planet of the Apes*, "Mythology of the Apes" and "The Genius of Andy Serkis," Simon Clutterbuck, digital creature supervisor, states that Caesar's body is formed with the help of an in-depth study of an ape's anatomy. Even though they are not visible onscreen, digital musculature and nerve bundles were added to the skeleton of digital ape to "fill the inside of the creature with the stuff that drives it." Additionally, the character is also layered with the characteristics of ape hair, the wrinkling on faces and hands, and ocular features shaped by the muscles and surfaces of the eye. As visual effects supervisor, Joe Letteri states, the film can be considered as a major technological and aesthetic point

of departure compared to earlier films in the *Planet of the Apes* franchise. He points out that there are no actors in monkey suits and rubber masks; Caesar and other apes are digital to the bone, demonstrating the advances in animation as they work together from muscle simulation, fur and realistic lighting, to motion captured body and facial performance (Letteri, 2013).

At this point, it is possible to claim that knowledge of Caesar's digital nature challenges the audience to find the actor in the digital character. Yet promotional materials such as split-screen footage juxtaposing Serkis' image in a performance capture suit with reflective markers on his face, alongside footage of rendered image of Caesar mirroring his expressions, or promotional interviews informing us that Caesar is a combination of computer-generated flesh and actor-generated soul--- blur the line between performance and technological intervention. As Balcerzak states "The filmmakers and other supporters of [performance capture] have certainly tried to sell it as simply a new form of acting— a kind of inevitable evolution for the art of performance in cinema" (2009: 196). The response to Serkis' role as Caesar suggests that critics also have accepted this argument. In the *New Yorker*, David Denby rejects the distinction between traditional acting and performance capture:

> Digitized acting (if that's the right phrase) should be as warmly recognized as any other kind of acting. When Will arrives at the pen, intending to take Caesar home, the ape sees the leash in Will's hands and sorrowfully but firmly closes the door of cell— staying behind with his own kind forever. To register the moment, Serkis lengthens his jaw in sullen resolve, turns his back, and gives Caesar a regretful shudder— the scene is almost tragic. (2011)

Manohla Dargis, in her *New York Times* review, writes that Caesar is "given a nuance through performance-capture technology […] When Caesar scowls, as he increasingly does, you don't see just digital wizardry at its most expressive; you also see a plausible, angry, thinking character" (2011). Similarly, Roger Ebert points out

the blurred line between Serkis and performance capture technology: "One never knows exactly where the human ends and the effects begin, but Serkis and/or Caesar gives the best performance in the movie" (2011).

Along with film critics, Serkis was given credit by his fellow cast members. James Franco, his co-star in the movie, wrote an article for *Hollywood Deadline*, claiming "What is needed is recognition for him, now. Not later when this kind of acting is *de rigueur*, but now, when he has elevated this fresh mode of acting into an art form" (2012). With Hollywood divided by the prospect of awarding the first Academy Award for a performance capture role, Serkis was overlooked at the Oscars once again. However, unlike the Academy, in 2015, the Empire Awards—an annual British awards ceremony presented by the British film magazine *Empire* since 1996, with the winners voted by the readers of the magazine—found Serkis' performance as Caesar worthy of its Best Actor prize.

In a 2011 interview published in *The Guardian*, Serkis first expressed his dismay over the lack of respect and acknowledgment he receives, claiming "It should be recognized that there are two parts of the process. The first part is capturing the performance. Only later down the line do you start seeing the characters being painted over frame by frame using pixels" (as cited in Child, 2011). Additionally he stated:

> Performance-capture technology is really the only way that we could bring these characters to life, it's the way Gollum was brought to life, and King Kong, and the Na'vi in *Avatar* and so on and it's really another way of capturing an actor's performance. That's all it is, digital make-up. (2011)

The term "digital makeup" has also been used by directors such as Steven Spielberg in reference to performance capture technology. Commenting on his movie *The Adventures of Tintin* (2011), Spielberg notes: "I like to think of it as digital make-up,

not augmented animation. It's basically the actual performance of the actual actor, and what you're simply experiencing is makeup" (Abramowitz, 2011). In spite of supportive comments from directors, Serkis' controversial statement has created an uproar within the visual effects and animation community. In 2014, for an interview in *Cartoon Brew*, director of animation for the *Lord of the Ring* trilogy Randall William Cook responds to this description:

> Andy Serkis has been throwing the term 'Digital Makeup' around again, causing some pretty fervid reactions as a result […] when Andy uses the term; he asserts that on-screen depiction of Gollum is a 100% faithful representation of an Andy Serkis acting performance. This is, frankly, a misrepresentation of the facts […] Gollum was not solely an Andy Serkis performance, with Andy's every move, gesture and tic scrupulously reproduced in a new, digital character. Rather Gollum was a synthesis, a collaborative performance delivered by both Andy and a team of highly-skilled animation artists […] he really should be considered the principal author of Gollum's performance, but there's a hell of a difference between principal author and sole author […] the animators on The Lord of the Rings were most certainly not 'digital makeup artists,' and nobody has business saying that they were. (as cited in Amidi, 2014)

Correspondingly, in "Fleshing It Out" Lisa Bode examines what continuities and breaks actually exist between digital performance capture and practical prosthetic makeup (2015: 91). In order to do so, she compares John Hurt's Oscar nominated performance in *The Elephant Man* (David Lynch 1980) to Serkis' performance as Caesar. In *The Elephant Man*, Hurt portrays, inside elaborated latex appliances, a man, named John Merrick, hideously deformed by neurofibromatosis, with a bulbous forehead, an obscured eye, a useless arm and a crooked torso. Merrick's interior deformation as well as exterior, influences Hurt's performance. As Bode notes "Hurt's viscous snuffles, groans, and wheezes, his excruciating pauses and inhalations, his audible exertions to breath and speak, give a fleshy, suffering materiality to rubber, a sense of mouth and airways obstructed by wayward growths and bony protrusions" (2015: 102). In a way, when he speaks, his voice suggests that

he has spent a lifetime in this body. At this point, it is possible to claim that Hurt's successful portrayal of the character in biological and behavioral terms foreshadows the use of digital bodies and performance capture to produce coherent performances. However, in the case of Caesar, voice and gesture might be considered as present; unlike John Hurt using a mask to compensate for what his hidden face cannot show, these performance elements are a digital conveyer of Serkis' facial expression. In other words, the character rig is not considered as a mask, nor even a conveyer of the character's expressivity but, notably, as a conveyer of human performance (Bode, 2015).

In this sense, due to its physical contact with the actor, prosthetic makeup might gather part of its value from the way it transfigures actors while making them unrecognizable onscreen. Actors' images, both in and out of makeup, point to how the spectator differentiates between their real appearance and that of their characters. On the contrary, as a complete replacement of an actor's body and face, digital characters gather value from the ways they appear to retain a recognizable connection to the actor. Therefore, Serkis' split-screen footages, along with the final rendering of Caesar, emphasize the technology's ability to reflect the actor's performance, even though it is not possible to know whether the performance is directly animated from reference footage. In this sense, "Performance, then, is conceptualized in some reviews not as something 'beneath' or 'inside' the digital character, but as the actor' kinesthetic trace, through which Serkis 'invests' or 'imbues Caesar with personality, 'life' or 'soul'" (Bode, 2015: 107).

3.2.2 Serkis as Actor

The critical reaction to Serkis' performances as Gollum, King Kong and Caesar demonstrates that performance capture technology has made progress since its earliest attempts. As Bode notes, "if [Gollum] and Caesar are both so compelling on screen compared to performance-capture characters in *Beowulf* or *Avatar*, then Serkis, as the common denominator between the two, must be responsible" (2015: 106). In this sense, exploring Serkis' career along with his acting choices might help to understand the notion that credit for the computer generated characters in performance capture films belongs mainly to the actor who modeled them.

Serkis' performance capture works have garnered much attention, both popularly and scholarly, making him the most visible example of a performance capture actor and vocal advocate for this technological process. Even though Serkis regularly acts in live-action roles, including films such as *The Cottage* (Paul Andrew Williams 2008), *Sex & Drugs & Rock & Roll* (Denis Leary 2010), his fame primarily stems from his works in performance capture roles. His breakout role as Gollum in the *Lord of the Rings* trilogy, clearly, made him the most globally recognizable performance-capture performer, along with other Hollywood blockbusters such as *King Kong* (2005), *Rise of the Planet of the Apes* (2011) and *Dawn of the Planet of the Apes* (2014). In addition to his reassuring stability in terms of performance, Serkis has also contributed more directly to performance capture technology. In 2011, he and producer Jonathan Cavendish founded a performance capture company, Imaginarium Studios (Bestor, 2016). Considering the prejudice against performance capture technology, Serkis states:

> [the company is] a new performance capture facility [that Serkis] hopes will teach filmmakers not to be worried about the growing use of graphics. […] Part of the

> idea of the Imaginarium is to allay fears—across lots of different communities, not just the acting community— who have in the past wondered if they are going to be replaced by CG characters or robots or whatever. (as cited in Bestor, 2016: 185)

The company also provides a consultancy service for performance capture technology, which was employed in blockbusters such as *Rise of the Planet of the Apes* (2011), *Avengers: Age of Ultron* (Joss Whedon 2015), and *Star Wars: The Force Awakens* (J.J. Abrams 2015), all of which feature Serkis as an actor. In addition to advocating for what the technology offers the industry at a creative level, Serkis has also made attempts to increase acceptance of technology by explaining how it works and assuaging concerns that some in the industries may have. In this sense, Serkis defines the appeal of the technology largely in terms of what it offers for acting:

> Love it or hate it, we have to acknowledge that performance capture is not going away, and that it will undeniably be remembered as a valid and important component in the evolution of the ancient art, craft and tradition of acting. (as cited in Bestor, 2016: 183)

Additionally, instead of talking about performance capture as a radical departure from conventional acting, Serkis continuously connects the technological process with traditional acting. Writing about the promotional production diaries filmed for *King Kong*, Tanine Allison states: "Serkis, along with the rest of the crewmembers interviewed in diaries, straddles the line between hyping the new and relying on older, more familiar discourses of cinema acting" (2011: 333).

Correspondingly, considering Serkis' performance in *King Kong*, Balcerzak asserts:

> Andy Serkis' discussion of an 'actor's choices' driving his performance as Kong is nothing new in the popular discourse of acting. The performer's free will, to varying degrees, has been a mainstay in discussions of performance for over a century now, beginning with Constantin Stanislavsky's experiments at the Moscow Art Theatre at the turn of the previous century. (2009: 198)

By aligning his performance capture work with conventional live action performance, Serkis attempts to naturalize the technology and to neutralize its disruptive potential. For instance, Serkis even goes as far to evoke centuries-old acting traditions: “Just as the Ancient Greeks wore masks, or the Japanese performed kabuki, so Zoe Saldana dons a motion-capture suit with markers” (as cited in Bestor, 2016: 184).

Considering earlier discussion about digital prosthetics, Serkis’ mask analogy implies that performance capture represents a new phase of a pre-existing, long-accepted form of acting practice. In this sense, Bode writes: “The term ‘digital prosthetics’ has been pushed by actors and directors in the commercial film industry seeking to frame performance capture as a form of legitimate acting, by referencing selective examples from cinema’s analogue past” (2015: 90). The prosthetic analogy, due to its legitimated frameworks for understanding and critiquing actors’ performance, becomes appealing for critics. In this sense, Bode points out that “critics try to understand performance capture in relation to what is familiar, locating Serkis on screen ‘underneath’ Kong or Caesar, or providing those characters ‘soul’” (2015: 92).

For *King Kong* (2005), director Peter Jackson hired a small crew responsible for shooting and editing behind-the-scenes video diaries. Including production and post-production processes, these diaries were released onto the web in the months leading up to the theatrical release of *King Kong* in December 2005 (Allison, 2011). At this point, Jackson and the producers of *King Kong* might have felt that they needed to make additional effort to get audiences to recognize and appreciate the innovations they made in the visual effects. Although these diaries demonstrate a network of individuals working on the production and post-production, including motion capture

editors and animators, Serkis' role is emphasized in this promotional discourse. While audiences are encouraged to look at the full technological process that goes into such performance capture, the narrative presents several details that conform to prior conceptions of the craft of acting, priming them to focus on Serkis as the central creative force behind the performance. In one of the production diaries, Jackson says:

> "Kong is a character, and when you see the movie, he delivers a really powerful performance. It does not come out of thin air. It does not just pop out of the computer screen. And that's because people are actually acting and thinking his thoughts and creating a character. And that starts with Andy Serkis. Andy is responsible for defining who Kong is and what Kong is." (2005)

In other words, in these diaries, Serkis is seen as the actor who authored the performance of Kong. Instead of stressing the digital technologies used to create Kong, Jackson, Serkis and other crew members emphasize traditional values associated with theatrical performance. In this sense, Serkis constantly emphasizes acting discourse and construction of character while he explains character details of Kong. He claims that performance capture offers the chance "to learn about character" and "draw from emotional memory," terms related with method acting technique. Serkis describes motion capture as legitimate form of acting:

> In a sense, there is no difference between motion capture and proper, normal acting. Any actor could do what I'm doing, in the way I would research a role, or try to find a psychology for a character, or try to find physicality for a character. There is no difference. And I think this process will actually become part of an actor's toolkit, to be able to get up and do this kind of work. It just happens to be new at the moment. (as cited in Allison, 2011: 332)

In a 2005 *Dark Horizons* interview, Serkis describes one of the biggest challenges of *King Kong* as "convey[ing] that range of emotion with a so-called mute character like Kong" (Fischer, 2005). For this role, Serkis spent months observing actual apes and their movements, first at London Zoo and then in Rwanda with the Dian Fossey

Gorilla Fund International (Fisher, 2005). Throughout his research, Serkis "found out that they used a lexicon of vocalizations. That was big key into it. They sing, they chuckle, and they have very specific ways of communicating within a group. And just the breath, actually"(Fisher, 2005). He claims that controlling breathing especially becomes important to his characterization since "on the motion capture stage they recorded sound as well. So the sound is linked to the physicality. The chest expands and contracts" (Fisher, 2005). Serkis also comments on the technological manipulation of these recordings:

> The sound was enhanced of course. It was beefed up and very amazing things are done with the original sound I made. But it emanates from a living, breathing creature, i.e. a human being creating those sounds in sync with a physical performance. (as cited in Fisher, 2005)

In this sense, Serkis' explanation of his work relates with Stanislavsky's Method of Physical Action. In *The Art of the Actor and the Art of the Director,* stressing both internal and external techniques, Stanislavsky claims that the inner technique should correspond with the development of an external technique—the perfecting of a physical apparatus (as cited in Balcerzak, 2009: 198). Correspondingly, Jean Benedetti in *Stanislavski: An introduction* states:

> The body itself, reflected through movement's complex rhythms, dictates an avenue to emotional truth— thus, you cannot master the method of physical actions if you do not master rhythm. Each physical action is inseparably linked with the rhythm which characterizes it (as cited in Balcerzak, 2009: 199).

To return to Serkis' performance in *King Kong*, it is possible to claim that by focusing on breathing as a way of controlling rhythm, he used an important element of Stanislavsky's external technique to dictate his competence to integrate Kong character, while externalizing his performance to realistically perform like the apes he studied. In addition to Serkis' statements, contemporary media also contributes to

the idea that motion capture technology enables a form of authentic acting. For instance, Katie Kilkenny in *The Atlantic* refers to Andy Serkis as "the ultimate Method actor, who reportedly spends months observing apes in their natural habitat to play them, [and who] doesn't deserve to be seen as a mere product of studio wizardry" (2014), thus emphasizing the historical connection between Stanislavsky's system and Serkis as a digital-era Marlon Brando.

According to Mihaela Mihailova, along with actors' and directors' active promotion of motion-capture performance as a form of traditional acting; two groups' relative positions within the Hollywood industry facilitate this conception (2016). The lack of union representation of animators and visual effects artists on one hand, and the powerful lobby of the Screen Actors Guild (SAG) on the other, certainly influence this effort. In *Hollywood Reporter*, the co-founder and ex-CEO of Digital Domain Scott Ross states: "the VFX community is partially to blame because it has not valued itself. We have no trade association, no union, no common voice." (2013). Therefore, since there is no unified effort to work against it, the emphasis on acting in motion capture performance becomes a dominant narrative. Conversely, "on 22 February 2010, the SAG formed a national Performance Capture Committee whose main goals were to educate its members about motion capture and to lobby for coverage of motion-capture work under the guild's master contract" (as cited in Freedman, 2012: 44). The Committee also initiated a movement to replace the term "motion capture" with "performance capture" in order to "shed a better light on what the actors do and how these films are created" (Nestor, 2011). While the term motion capture might be described as vendor of movement which is used for a character with various authors, performance capture as a term indicates singular authorship over a coherent character. In this sense, SAG members, having renamed and redefined

motion capture as synonym of digital acting, have formed a strategic effort in order to ensure better pay and contractual benefits for motion capture performers. Correspondingly, considering Danae Clark's work on the history of SAG, Bode notes that:

> lead actors in 1930s studio system were encouraged to think of themselves as artists rather than workers and hence to think of themselves as separate from the main body of the film labor force. Their onscreen visibility was what allowed them to assume this power in as the rest of the labor force (set builders, editors, camera and sound and lighting people) were invisible on screen. (2010)

In this sense, motion-capture technology that obscures the actors' appearance with digital enhancements risks diminishing not only actors' presence but also an actors' visible claim for authorship over a character, along with leverage in pay and conditions negotiations. At this point, SAG has responded to their concern that actors would be replaced by easily manipulated electronic data by building a strategy that attempts to maintain working dynamics between actors and technicians. Meanwhile, Andy Serkis, aiming to solidify his own status as an actor in his dealings with the media, consistently foregrounds his own embodied labor and conceptualizes artistic values around performance capture. In one respect, this might be considered as the motive behind the "purest form of acting" statements emerging from this discourse.

3.2.3 Serkis as Star

Considering the critical reaction that Serkis' performance as Gollum got in *Lord of the Rings* trilogy, Mary Desjardins explores similarities in terms of labor issues between stars and what she calls "synthespians" (2016). A synthespian, a portmanteau for synthetic thespian, is a specific kind of virtual actor, a computer generated character created from the combination of various computer process including, most significantly, motion capture of a carbon based actor. Desjardins

claims that a discussion of stardom is also related with those digitally enhanced characters.

> The star performer labors to create the star image through acting, transforming the body (e.g., working out), posing for photos, giving interviews craft about craft and/or private life, and so forth, but this star performer also materially embodies the commodity, even if his or her physical presence is not necessary for the commodity's circulation. (Desjardins, 2016: 13)

In this sense, stars might be considered unique in media labor categories since they are both labor *and* commodity. Considering the earlier discussion about actors' labor, it is the star's possession of a marketable identity that gives him leverage in making deals with production companies and film studios concerning how that labor is to be expanded, used, and compensated. Since labor creates synthespians, issues about working conditions and compensation are relevant to their status in the industry.

> Stars and synthespians are also alike in that their construction and circulation are the result of collaborative labor that is structured, and often obscured, by the industry management of labor and the promotion of stars or synthespians as commodity. (Desjardins, 2016: 14)

In "Stardom as an Occupation", Barry King, examining the differences between actor and star, argues that the film actor subsumes the self —"a personal identity, operative behind all roles and settings—into a character in a limited social setting" (1986: 158). Stars may act, however they do not surrender their public personalities to the demands of characterization; rather, they "remain the same in variety of contexts, locations and environments," a status that makes stars "transfilmic entities" (1986: 169).

In this sense, the same relationship between the film industry and the press that enables the marketability of the synthespian characters as transfilmic entities can also obscure the collaborative labor involved in creating the synthespian. This elision

contributes to the relatively powerful position of actors and stars, conceived as sole authors of performance in the film industry.

The centrality of Serkis in the publicity for *King Kong* thus neglects the labor of animators and visual effects artists. In one of the behind-the-scenes video diaries of *King Kong*, Serkis (2005) states that motion capture performance is similar to "translation." In a way, he describes the animator as "translator," a discourse that emphasizes actors' position as sole author of the performance. Such an emphasis on "authenticity" helps greatly to direct audiences to perceive performance in an actor- or star-driven way.

This increasing focus on Serkis' performance also could be considered as a marketing strategy. As Barbara Flueckiger suggested, the role of the proxy actor in digital production may secure the link between a fictional character and the actor's real-life persona, bringing him the features of stardom and consolidating a well-known strategy that the industry uses to market its products. In this respect, Flueckiger states:

> Alongside narrative construction, the proxy model is a reliable technique for establishing a solid foundation for character consistency. Moreover, a proxy adds another aspect to character representation: his existence in real life. […] such existence and its related associations import extended meaning into character construction, namely, the very history that digital characters often lack. The studio and Peter Jackson were variously and justifiably criticized for placing too much emphasis on acting performance, while the tremendous achievement of the CG team, especially Raitt's team of animators, was downplayed. From the perspective of reception psychology, however, such foregrounding was a clever move, because attributing this achievement to one person, the digital character attains something akin to physical presence, which is far more concrete than the abstract and incomprehensible operations of a host of animators. (Flueckiger, 2008: 45)

Serkis' problematic position in the film industry—to be more precise, the question of whether or not he can best be considered as an actor or a star—might be better understood with the help of examining role of the stars as workers within film

industry. In this sense, it is important to consider Barry King's scholarly perspective on the changing economies of mainstream cinema. In his seminal 1991 work "Articulating Stardom," Barry King claims that stardom is a "strategy of performance that is an adaptive response to the limits and pressures exerted upon acting in the mainstream cinema" (King, 1991: 27). Establishing two types of acting, "impersonation," and "personification," King asserts that stardom emerges out of "three distinct economies: the cultural economy of the human body as a sign; the economy of signification in film; and the economy of the labor market for actors" (King, 1991: 27). According to King, acting economies correlate with rarity; actors with unique abilities and qualifications which could not be imitated by other actors therefore have a right to demand higher salaries. He attributes the term "impersonation" to stage actors, seen as highly trained and gifted actors who subsume their own identities into their characters' and display versatility in performing different type of characters. King states that cinema has tendency to desert "impersonation" in favor of "personification" so that actors promote their public identity and dominate characters that they portray with their star image. Later, in his 2003 essay "Embodying the Elastic Self: The Parametrics of Contemporary Stardom" King "replaces the terms impersonation and personification with those of 'metaphorical' and metonymic' servitude" (as cited in Shingler, 2012: 32). He argues that "'metonymic servitude' of stars results in them being narrative guests within their films, their meaning lying outside the diegetic world of the film so that they can read by audiences in terms of star persona rather than narrative character" (2012: 32). King notes that contemporary stars "are discursively challenged in their efforts to meld all the practices undertaken in their name into a coherent commercial identity" (2012: 32). In this sense, stars establish and preserve their identities with the

assistance of specialists who construct and contribute to their star profile. Thus, stars produce and promote their star image with "wardrobe of identities."

King's conception also recognizes that stars in the new century are not studio employees anymore, but "stakeholders in the enterprise that manages their career" (2012: 32). King notes that the star as an entrepreneur should be prepared for "switch[ing] roles as opportunities arise," especially "in a global market that has given rise to the constant rewriting of star image as former identities are maintained in some roles and films (particularly high-profile, very lucrative and long-running film franchises) alongside newly invented ones" (2012: 33). Referring to this phase of stardom as "autographic," King states that to be perceived as distinctive personalities, stars promote themselves in various ways and play significant role in the interpretation process. Since stars are no longer simply workers but entrepreneurs, they are compelled to construct their persona by "stretching an apparent core of personal qualities to cover all contingencies" (2012: 33). In this respect, King notes "persona is elastic rather than plastic, closer to a procedure for surviving, a heuristic self, than an essence" (2012: 33).

Serkis' image might thus be discussed in light of King's star signifiers. In *The Lord of the Rings* trilogy, for instance, in a short scene we see Serkis as Smeagol before he turns into Gollum under the influence of the Ring. Notably, in *King Kong*, Serkis also performs two roles: Kong and the ship's cook, Lumpy, who dies midway through the film. Considering the performance capture as form of legitimate acting, Serkis states that there was no difference in his approach to the two roles: "He [Lumpy] has a physicality and a way of behaving which is built up around his experiences of live and what he is, and Kong the same" (as cited in Balcerzak, 2009: 200). According to Allison, this move could be read as an attempt to redeem the

disembodied, virtual status of Kong by stressing the body of Serkis as Lumpy (2011: 337). Along with the character's name, which implies bodily deformity, his characterization also implies physical activities. With his dirty body and tattoos covering the side of his neck, he constantly chomps a cigarette and cooks foul meals such as lamb's brain with walnut sauce, which remind the viewer of the visceral process of eating and expunging waste. In this way, the character represents all of the embodied process that are lacking in the computer-generated Kong. Compared to Lumpy, Kong is just an image onscreen without a real-world referent. Serkis' role as Lumpy subtly signals the behind-the-scenes process that transforms the embodied actor into a disembodied portrayal of Kong. In this sense, Allison states:

> Casting Serkis as Lumpy delivers a wink to insiders who have paid attention to the publicity surrounding the production of *King Kong*. This secondary role provides a concrete locus for intertextual references to his performance history as Gollum and Kong. (2011: 337)

In addition to Serkis' position in the industry as an entrepreneur, Serkis' star image might be constructed with his in-depth involvement with his films providing an on-screen referent along with managing the persona in certain way as King suggests.

For an alternative formulation of Serkis' potential stardom, Christine Geraghty (2000) identifies three types of film star: celebrities, professionals, and performers. These categories are established in large part by the exposure they receive in terms of their off screen and non-professional life and also how their acting skills are promoted. While star-as-celebrity refers to film stars whose personal life circulates widely and in greatest detail, stars as professionals and performers are more closely associated with their work rather than their personal lives. Stars as professionals use experience, training, and intelligence to distinguish themselves from other stars. Geraghty explains that "the star-as professional makes sense through the

combination of a particular star image with a particular contexts," including identification with a specific genre (2000: 189). In this sense, the star-as-professional offers a precise indication that a particular film will deliver what it seems to offer. Stars-as-performers, unlike stars-as-celebrities who could become famous for "being themselves" and stars-as-professionals who "act as themselves," are distinguished by an emphasis on the work of acting, craft and talent. Especially known for their acting skills, ability to portray wide selection of character types; stars as performers legitimize their status through the craft of performance and the art of acting. Considering significance of method acting for the concepts of film stardom, Geraghty claims:

> Performance as a mark of stardom and the concept of star-as-performer has become a way of re-establishing film-star status through the film text rather than appearances in the newspaper. Method acting, in particular, claims cultural status by making the celebrity trappings part of the detritus which has to be discarded if the performance is to be understood. (2000: 192)

In this sense, Serkis' position in the film industry as pioneer of the motion capture technology and his reassuring stability in films widely using this technology might suggest Serkis can be considered a star-as-professional. However, not only his ongoing attempt to link motion capture performance with live action performance, but also the absence of his embodied presence challenges this categorization of his stardom. Marking his ability to develop a character rather than portray one, Serkis attempts to retain control over the performance as sole author, using what King describes as impersonation, which also aligns closely to Geraghty's star-as-performer category. Considering the fact that the Hollywood star system is very much associated with personification rather than impersonation, Serkis' goal seems to be to

link his performances directly to him as an actor, since the actual character on the screen does not resemble him at all.

In other words, because of his complex association with post-production technologies, Serkis' defining struggle as a performer seems to be winning credibility as an actor, and transferring this credibility to the motion-capture process as a whole, rather than parlaying his role into stardom specific to himself.

CHAPTER IV

CONCLUSION

The purpose of this study is to explore acting in performance studies through technological means and point to ongoing tensions regarding this issue of film acting mediated by technology. Considering performance in film as a multifaceted construction more than a mere recording of actors, as a synthesis of discrete elements that have been removed their original contexts, rearranged and reshaped contributes a great deal to performance through technological means. Especially, the advanced state of motion capture technology allows filmmakers to influence, reconstruct and even alter the actor's performance. My research aims to rethink performance as composited element, in this age of digital post-production and digital performance, due to the considerable number of people besides the cast of actors in the creation of performance.

The second chapter of the research mainly deals with the earlier discussions about performance. Briefly exploring the history of screen acting, the chapter focused on transition from silent film to sound film regarding influences of Constantin Stanislavsky's approach known as Method. Along with Lee Strasberg's contributions of the development of naturalistic performance in Hollywood, James Naremore's useful vocabulary is familiarized to provide further understanding of acting in the cinema. Considering the earlier experiments of Lev Kuleshov, I discussed the certain distance between performance and its consumption regarding production techniques. Particularly dealing with the relation between performance and sound, I directed my focus on changing concepts of acting. Introducing earlier use of technological enhancements such as optical compositing and rotoscoping, I examined the motion capture technology to provide further understanding of this process.

In order to analyze modes of the performance in the digital realm, three case studies were selected for the first part of chapter three. The first case study *The Polar Express* (2004), as one of the early attempts in Hollywood for full motion capture performance, provided great example of the fragmentation in terms performance demonstrating that the main character of the film is collaborative result of three different people: a 12-year-old kid's captured performance, Tom Hank's facial features and voice actor's effort, along with visual effect artists effort. The phenomenon of the uncanny valley was also discussed within this context to explore presence of the actor in performance. A second case study, *The Curious Case of Benjamin Button* (2008), compared to previous case study, was discussed as successful example of integrating live action performance and motion capture technology while providing a credible character. The last case study *Avatar* (2009) provided more valuable insights about actor's contradictory contributions to the character. Unlike *Benjamin Button*, in *Avatar* Zoe Saldana's performance created discussions about presence of the actor in digitally enhanced characters, similar to Andy Serkis'. For the last part of the chapter three, I focused on the acting career of Andy Serkis, considering his breakthrough role in *Lord of the Rings* trilogy and his later roles including *King Kong* (2005), *Rise of the Planet of the Apes* (2011) and *Dawn of the Planet of the Apes* (2014). Serkis' promotion of motion capture technology along with the concept of actors' authorship of this process has positioned him as a vocal advocate of motion capture technology in the industry. In this sense, Serkis served as a useful starting point to performance discussion in the digital age, and provided valuable insights about the ways that the technology is understood and discussed in terms of screen performance.

Andy Serkis' problematic position in the film industry raises the question of how actors' work is influenced by digital technology, and suggests the need to further explore the technological impact on the art of acting. Digital enhancements have affected the way an actor's work blends production and postproduction. In other words, technology is blurring the lines between acting and postproduction. Continuously emphasizing traditional values associated with theatrical performance, Serkis describes motion capture technology as a legitimate form of acting. Considering similarities in terms of the actor's contribution to the character between Stanislavksy's method, Meyerhold's biomechanics, and the performance capture process, Serkis can be considered as an actor. In this sense, acting might be defined as discrete art form that has adapted to the technological advances that capture and present actor's work to audience, whether framed by camera lenses or computer screens. In other words, actors are motivated to reconsider their physical attributes, psychological range, and vocal abilities due to technological advances in screen and stage performance.

However, considering acting as a rather stable process does not seem particularly helpful to exploring acting in historical perspective through the latest development of motion capture technology. As long as the technology continues to develop, with each year bringing new and unforeseen applications, physical similarities between character and actor might disappear entirely. In this sense, motion capture technology, is being pulled in various directions; while actors describe it as performance method, animators define it as visual effect. . Correspondingly, actors' position in the industry might be considered within a range of digital and live acting. In other words, actors' position interconnects with his authorship of the final interpretation of the performance. However, although the final rendering of

performance might be claimed by a single individual assuming responsibility for what is seen onscreen, the performance more likely represents a collaboration between different individuals such as actors and stunt performers, or it might be the composited element stemming from efforts of different artists such the actor, visual effects artist and animator. This challenges practitioners, academics and critics to recognize motion capture technology as an entirely new form of filmmaking and points to a crisis regarding the issue of film acting.

For future study of this crisis, the changing role of the digital human in Hollywood cinema might be discussed. Considering the possibility of entirely digital stars playing the roles of main characters in feature films, tracing the transition from real actors to synthespians in terms of performance could be used as starting point for future research.

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