

MEDIA CONVERGENCE IN ANIMATION: AN ANALYSIS OF AESTHETIC UNIFORMITY

A Master's Thesis

by

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MEDIA CONVERGENCE IN ANIMATION: AN ANALYSIS OF AESTHETIC UNIFORMITY

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of

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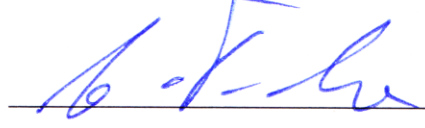
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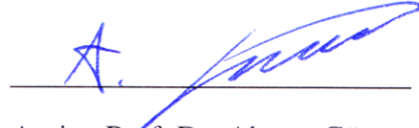
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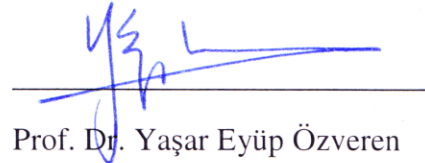
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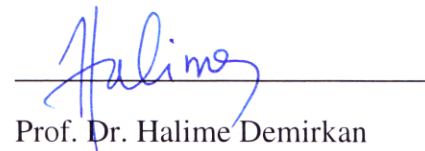
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ABSTRACT

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January, 2017

This thesis analyzes the uniformity in animation aesthetics within the framework of convergence theory. The sources of aesthetic diversity in animation art are demonstrated along with the process through which these became precarious over time as realism became an end in itself. It is suggested that the diversity is due to the independent use of such elements of the screen image as the line and the form, and such elements related to movement as the motion and the time. When these elements are harnessed to create a realistic image and movement, the diversity is lost, and there occurs uniformity. This has been aggravated with the emerging computer technology which made it possible to create highly indexical photorealistic images and videorealistic movement.

This process can be interpreted as a special case of digital and technological media convergence, which brought together previously separate design activities, and merged their aesthetic principles. The result is a hybrid aesthetics prevalent over separate domains, including animation. Due to industry related reasons, this realism based aesthetic approach became so dominant that it pushed all the others to obscurity, causing a decrease in diversity and increase in uniformity in animation aesthetics.

Keywords: Aesthetics, Animation, Convergence, Realism

ÖZET

ANİMASYONDA YAKINSAMA: ESTETİK TEKDÜZELİĞİN İNCELENMESİ

Gündeş, Feridun

Yüksek Lisans, İletişim ve Tasarım Bölümü

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Bu çalışma yakınsama kuramı bağlamında animasyondaki estetik tekdüzeliği konu edinmektedir. Animasyon estetiğindeki çeşitliliğin kaynak ve unsurları incelenmiş, gerçekçi bir görselliğin benimsenmesi neticesinde bu çeşitliliğin azalmasıyla meydana gelen tekdüzeleşme ortaya koyulmuştur. Animasyon estetiğinde çeşitliliği sağlayan dört unsur tespit edilmiştir. Bunlardan çizgi ve form resme dair, zaman ve hareket ise akışa dair unsurlardır. Çeşitliliğin, bu unsurların görece bağımsız ve kendi başlarına işlev görmesi ile meydana geldiği varsayılmıştır. Bu unsurların gerçekçi bir görsel mantıkla kullanılması neticesinde çeşitlilik azalmış, gelişen bilgisayar teknolojisinin gerçeğe oldukça yakın hareketli görüntüler üretebilmesi ile de tekdüzelik yaygınlaşmış ve derinleşmiştir.

Bütün bu durum, görsel tasarım boyutu olan ayrı alanların süreç ve estetik kâidelerini birbirine benzeştiren teknolojik ve dijital yakınsama sürecinin bir parçası olarak değerlendirilebilir. Sonuçta ortaya çıkan, bütün bu alanların görsel mantığını birleştiren ve hepsine şâmil, gerçekçi estetiğe dayalı melez bir yaklaşımdır. Piyasa koşullarından dolayı bu yaklaşım çok yaygınlık kazanarak diğerlerinin etkinlik alanını kısıtlamış ve neticede hâlihazırdaki tekdüzelik hâsıl olmuştur.

Anahtar Kelimeler: Animasyon, Estetik, Gerçekçilik, Yakınsama

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CHAPTER I

INTRODUCTION

One of my most prominent childhood memories is my mother telling me stop watching ‘those’ cartoons and get back to doing homework. Each time she gave me this warning, she added an adjective or some sort of explanatory phrase before the word ‘cartoon’. I distinctly recall how this adjective changed over time. When I was at primary school, they were ‘time consuming’ cartoons; at secondary school they became ‘useless’ cartoons; at high school, they were ‘childish’. She did not even make any comments when she saw me still watching them when I was at college and later; she only rolled eyes. Lest she would lose all her hopes on me, I have not told her that I am writing about them now. In any case, though, there are two points to make here. One is that I have been into animations for really a long time. Second point is that my mother’s perception of them has changed over time as I aged. When I was little, they were just time consuming. It was all right for me to watch them as a kid, after all they were for kids, but she would simply prefer me do something better with my time. Later, when I grew up a little, they became useless. It was still all right for me to watch them, I was not that old yet, but, now I was at that age when I should have started displaying the possession of certain skills by making use of what I learnt from life, and those cartoons were simply useless. In the high

school, now that I was close to becoming a grown person, they were simply childish for me. The assumption, though, has been the same all this time: cartoons are for kids. I am not saying this because she is my mother, but I guess she is quite innocent in thinking that. After all, not only is this the widespread thought about animation, but also according to Furniss, even the academic studies focusing on animation has an inferior status, which is not independent of its perception in the wider populace.

The denigrated status of Animation Studies in the university is largely due to the belief held in many countries that animation is not a 'real' art form because it is too popular, too commercialized or too closely associated with 'fandom' or youth audience to be taken seriously by scholars (Furniss, 1998:3).

This is one thing that disturbed me enough to motivate me to think about animation. I do not see animation as a child attraction, then why do so many people think about it that way? I do not remember ever asking it explicitly, but this question has been with me since high school, it has been implicitly implied each time I had to justify my watching cartoons to my mother since that time.

Something else happened before I started seriously asking this question, or deliberately arrived at it, though. Sometime around the latter half of the first decade of 2000s, I realized that I was not enjoying the animated films that I saw in theatres as much as I did before. These were the high years of Pixar and DreamWorks; there were up to five new releases every year; *Toy Story* and *Shrek* was still in vogue, along with *Madagascar* and *Ice Age* they had already become franchises; all kinds of animals were becoming animation characters, heroes from fairy tales and legends were being recycled, but none of these was giving me much of excitement when I sat down to watch the films. I still enjoyed myself, I was still entertained and amused, but something was missing. I simply



Figure 1. Cartoons before 3D-CGI. From left to right and top to bottom: *Tom and Jerry*, *Tweety* (Looney Tunes), *Bugs Bunny* (Looney Tunes), *Donald Duck*, *Bambi* (1942), *Astérix le Gaulois* (1967), *Aladdin* (1992), *Lion King* (1994)

did not feel like I was watching something new. This, on the other hand, was not because of my familiarity with, or the predictability of the scripts or the characters. Rather, films all ‘looked’ alike, the characters in them all ‘moved’ alike. The angles they were shown or the paths the camera followed were all alike. Shrek would be totally at home with Buzz Lightyear of *Toy Story*, who looked very much like the Mr. Incredible; all human characters had the same vacant eyes and same toy-like, plastic look, so on and so forth. Each time I watched a new film, it felt like a sequel to all the earlier ones. The automobiles in *Cars* moved over land and roads, fish in *Finding Nemo* swam in the ocean, but even they looked alike: same shiny surfaces and skins, similar eyes, similar movements. It was like a huge parallel universe made with computer graphics, and each film was shot in a different region of this universe. This universe was not making me as happy as it used to before, and I realized I was missing the old school drawn cartoons I used to watch when I was a child. I was quite disturbed by the fact that there were no new films similar to them, indeed there was almost nothing that was not made with 3D CGI. There was an almost besetting uniformity. This was another discontentment that in the end motivated this study: why were other kinds of animation not as available as the CGI ones?

My discontentment scaled up when I realized that there was an amazing diversity in the way animated films can be. Even the ones I remembered from my childhood, the hand drawn cartoon-like animations, visually represented simply one among innumerable possibilities, and even among them there was a similar uniformity. There were so many different ways of making animations, and thus, there were so many different kinds of animations, but despite this, all the cartoons I watched in my childhood were of the same



Figure 2. 3D-CGI films. From left to right, top to bottom: *Toy Story* (1995), *Shrek* (2001), *Ice Age* (2002), *Finding Nemo* (2003), *Madagascar* (2005), *Up* (2009), *Puss in Boots* (2011), *Monsters University* (2013)

kind (Figure 1), and all the 3D CGI animations I watched later were all similar to each other (Figure 2).

Comparing all the possibilities with what was available, I felt I was being divested of so many nice films. This dawned on me when I saw the short animated film *Tango* by Zbigniew Rybczyński. Only after seeing it, sometime in 2006, in a DVD collection of Oscar nominated short animated films, did I start thinking a little bit deeply about animation. Until then, my interest in animation was limited to enjoyment, entertainment, admiration, and sometimes to procrastination. *Tango*, however, was not at all like anything I knew about animation. Its look, style and execution was totally different from drawn, computer generated or stop motion animations I had seen up until that time. As such, it was a very striking example of what could be done with animation as an art form; a very clear demonstration that animation was not simply a child attraction, but could indeed be a very profound method of artistic expression.

I enjoyed *Tango* as well; however what I enjoyed was not the colorful image on the screen but the rhythm of the entire action. I was still entertained by it, however, it was not the narrative that amused me, but the minor details of how characters do not touch or overlap. I still admired it, but, what I admired was more the mathematical precision than the visual dexterity of the screen image. And yes, it, too, helped me procrastinate quite a lot, especially at that time when I set out to watch it one character at a time, as many times as there are different characters and objects in it.

Seeing *Tango* was useful in three respects. One was the realization that there may be other kinds of animations that are different from what I had seen until then. This

revelation was a very powerful instigator to motivate me for seeking out and finding more animation films with different aesthetic approaches. This, indeed, has given way to the main problematic of this study: uniformity and precarious diversity. There actually were a lot of admirable animation films with a surprisingly abundant variety of aesthetic approaches out there but, despite being an obsessive cartoon watcher in my childhood, and a curious animation aficionado later, I seldom came across anything different, at least nothing as striking as *Tango*, till my late twenties. On the other hand, as I realized when I found and watched more and more animations, the number of striking possibilities in animation was significant. There was almost a disturbing mismatch between what was possible, even what was already realized and what was available. There might be something more to this mismatch other than the simple supply-demand equation. Second was the awareness about the ontology of animation: there was more to animation than mere entertainment. I had already started finding different animation films, and thanks to this awareness I started finding out more about the animation art in general. Third, and more important, *Tango* made me question my own sense of animated film. Seeing this short film in a collection of celebrated animations, I inevitably asked: if that is an animation, then what is animation?

1.1. Organization

What is animation? This will be the very first question being discussed in this study in the following two chapters. Before an analysis of how the diversity in animations aesthetics became so precarious, it is necessary to demonstrate the sources and elements of diversity in it in the second and the third chapters respectively. For this purpose, I will try to introduce a new concept, ‘animaton’, which I think will help understanding the way

animation produce meaning. Simply put, animaton is the building block, or the atomic element, of animation. Later, I will identify image and movement based animatons, differentiated from each other depending on what is being animated in animation film. My suggestion will be that the meaning in animation film is produced by putting together animatons, and any mixture of these different types of animatons with a different weighed ratio will give us a different aesthetic. From here, it will be possible to explain both the uniformity and the loss in diversity as a result of directing all these different types of animatons to serve only one kind of aesthetic principle: realism. In the case of animation film, this aesthetic is a combination of photorealism and videorealism, former referring to images that obey the rules of perspective to create photographic effect, the latter referring to movements that obey the rules of physical motion along with a forward moving sense of time that is same as what we experience in daily life. The way the photorealistic and videorealistic animation established an almost exclusive dominance in animation art will be the subject matter of the fourth chapter. Drawing a parallel between this and the similar process via which mathematical perspective established dominance in painting will help understanding the process better.

Comparing the films analyzed to demonstrate the elements of aesthetic diversity in the third chapter with those given as examples of the thinning in it in the fourth chapter will demonstrate two intertwined processes, one about the production and consumption practices, and other about visual aesthetics, which brought about the uniformity in animation aesthetics being discussed here. Whereas the films in the third chapter, as well as the ones given as the examples of CGI being harnessed for different and diverse aesthetic principles at the end of the fourth chapter, are highly independent and individual

works envisioned and implemented primarily, sometimes single handedly, by their directors, the other works mentioned in the fourth chapter to demonstrate the uniformity in aesthetics are large studio productions. What differentiates the latter is the wide circulation they enjoyed, which is due to their marketability. Produced via efficiently designed assembly line logic with large budgets, investment made in them naturally presupposed worldwide sales, and that was indeed the case: both the cartoons of the pre-CGI era and the 3D animations of CGI era were shown on TVs and movie theatres wherever it was technically possible and financially feasible. As shall be discussed, such assembly line production, along with the need to maximize the size of consumer base, made illusionistic-realist aesthetic almost a necessity. In the end, market dominance resulted in an aesthetic dominance of illusionistic realism, and gave way to the uniformity in the mainstream animation films which pushed different aesthetic principles to obscurity.

One result of the dominance of illusionistic-realist aesthetic is that animation comes close to live action cinema. Indeed, animation and cinema are frequently analyzed with regards to each other in the literature. The convergence between animation and live-action cinema as both a result and an impetus of the uniformity in animation aesthetics can also be seen as a special case of a more general concept: technological and digital convergence. Due to the computerization of all design related activities, certain forms and formats that were distinct before have started having unmistakable similarities. All designers today work on computers using certain software, and the results of all such activity is stored in memory units as digital data. This, inevitably, has resulted in transference between the aesthetic principles of these previously distinct areas.

Underlying all these are industry related motives which aim at minimizing the costs and maximizing profit. Convergence and its influence will be the subject matter of the fifth chapter, where, as a novel approach of this study, the uniformity in animation aesthetics will be interpreted as a special case of convergence.

1.2. Perspectives and Ideas on Animation Aesthetics

Most of the academic writing about animation revolves around its relationship to the live action cinema. Lately, with the advent and the widespread use of 3D CGI animation and techniques in cinema industry, it has frequently been asserted that the cinema, having started more as a form of animation in the beginning and established prominence over it later, is now becoming again an instance of animation. As Crafton puts it, “a prevalent line of thought in contemporary film and media studies asserts that the media form that became cinema is an instance or special case of the larger encompassing entity, animation. Accordingly, the cinema of animation not only pre-dates cinema but envelops all cinema” (Crafton, 2011:94). On the other hand, Crafton is critical about this kind of comparison. Accordingly, Crafton asserts that the view which holds animation as an ancestor of cinema is based on an etymological misunderstanding of the word ‘animation’ and moreover, it does not help in understanding the animation on its own right with its own pre-cinematic sources (Crafton, 2011:93). Crafton also attributes the prevalence of this view to its being appealing, which according to Crafton is “partly because of its carnivalesque vision: king cinema is now the humble servant of jester animation” (Crafton, 2011:94). Gaudreault and Gauthier are also critical of this comparison. According to them,

a major concern for animated film scholars has been to define their own object of study, to distinguish between what should be considered 'animation' and what should not. These attempts at definition rely mostly on an opposition between live-action and animated films and tend to neglect the ontological and historical dimensions of animation per se (Gaudreault & Gauthier, 2011:88).

They look for the reasons of this attitude in the consumption practices before the cinema became industrialized. According to them, before cinema established its institutional framework, both "moving cartoons" and "moving photographs" were consumed in the form of "trick films" as what can be called a cinema of attractions, which "were closer to the principle of attraction than to narration" (Gaudreault & Gauthier, 2011:85). This, accordingly, blurred the line between cinema and animation before they became autonomous forms, and gave way afterwards to the attitude being discussed here.

Pre-cinematic methods of giving motion to inert material to create an animation-like visual affect are a common topic in discussions about animation. Some techniques from long scrolls to magic lantern and zootrope are discussed especially in relation to their connection with the later cinematographic technique, which became the technological basis of both live action film and animation (Ka-nin, 2009:84; Bloom, 2000:304).

Relationship between pre-cinematic art forms and animation is also emphasized in discussing certain kinds of animation. The general idea in these is that the animated films which are inspired by the aesthetic approach of an older art form can develop over it by utilizing the cinematographic technique while at the same time retaining the principles of the earlier art form. Mohamed and Nor, for instance, discuss the stop motion animation and the age old practice of puppetry in relation to each other. According to them, the power of puppetry lies in the fact that puppets are limited in their range of movement and expression, thus puppet masters need to convey messages through gestures, which is a

quite powerful method. When utilized in animation, as it is in stop motion films, “in the hands of a competent director and animator, a puppet’s gesture not only moves within the frame but comes to stir up our emotions as its significance touches our souls” (Mohamed & Nor, 2015:106). Similar arguments are carried out for silhouette animation and shadow theatre. According to Moen, for example, “the cultural form of the shadow play develops partly in terms of aesthetic elements that had been closely associated with animation” (Moen, 2013:18). Some even establish connections between sleigh-of-the-hand magic and animation, especially in its initial phase when animation was more a collection of ‘trickfilms’ than an art form. According to Williamson, “sleight-of-hand performance magic is a form of animation, one that casts a revealing light on the nature of encounters between illusions, animation, and the cinema” (Williamson, 2011:113).

Not only earlier art forms, but also the linguistic load of the concept of animation has influence over how animation is identified. Scholars trying to define animation film from an ontological standpoint independently of its relation to live-action cinema, often touch upon the concept of animation etymologically and philosophically. Sobchack, for instance, traces the word in Oxford English Dictionary back to late sixteenth century, and demonstrates the divine and transcendental connotations it initially had, which later were added meanings related to mechanical devices and automatons (Sobchack, 2009:381). Similarly, Williamson, in order to unearth certain connotations of the word animation, and thus the animation film, goes back to Latin words, ‘animare’ and ‘anima’, the former a verb, which means to give life, and the latter a noun, which means breath or soul (Williamson, 2011:117).

Attempts at describing animation aesthetics seems to follow two separate but related routes. One group of scholars emphasizes more the effects of the production techniques on animation aesthetics, while another group focuses more on the visual elements of animation itself. Among the first, for instance, is Furniss, who, on the book titled *Art in Motion: Animation Aesthetics*, discusses at length the effect on the animation aesthetics of the evolution of industrial practices, technical innovations, mass production procedures in large studios, marketing, different techniques of creating the image, the mise-en-scène and the sense of motion, technical peculiarities of applying color and line, and employing the sound, the legal regulations, the effects of displays, especially cinema screen versus television, and the technical novelties of computerized animation practices (Furniss, 1998).

The other groups of scholars try to focus on the elements of animation art and how these produce meaning. Ka-nin, for example, says that the “movement can define the aesthetic of animation”, and asks if it could be its essence (Ka-nin, 2009:79). From here, according to Ka-nin, movement can be the key to enhance expressive capabilities of animation: “movement is just one modal function and animation should be expanded to consider other motor–sensory modes that can enhance the illusion of life and soul” (Ka-nin, 2009:87). Similarly, Benayoun says that “animation, in principle, has no other plastic imperative than movement” (Benayoun, 1964:18).

Visual elements of animation, those that constitute the screen image, are also mentioned as sources of aesthetic expression. Sobchack, for instance, focuses on the line and how it operates in animation to produce meaning. For one thing, line has been a “production

necessity” in “traditional cel animation” for it was employed by animators in guiding “‘inbetweeners’ and painters to fill out” (Sobchack, 2008:253). More importantly,

although part of its function may be to abstract and schematize, to assist in the achievement of a certain geometric clarity by reducing the complexity of existential objects and action by marking and pointing to their minimal (or ‘essential’) formal structures, paradoxically the line as it moves also lays bare the most basic, vital, and dynamic processes of existence: energy and entropy (Sobchack, 2008:253).

This relationship with dynamism makes the line essential for animation from an ontological standpoint. The energy and entropy implicit in the line, which come from its being the result of a drawing process, are bequeathed to animation.

Castello-Branco mentions forms and their movement as a source of new aesthetic experience:

use of abstract shapes and of animation techniques as a way of exploring the different potential of speed, different possibilities of relationships between forms, and understanding the role of motion in the construction and dissolution of forms, is quite consistent with the exploration of the effects it produces: a truly perceptive shock in which ordinary speed and ordinary relationships between forms are subverted (Castello-Branco, 2010:31)

This, accordingly, offers “the audience a totally new and revolutionary aesthetic experience” (Castello-Branco, 2010:31) which makes film viewing “a liberating experience felt through physical shock or perceptive trauma” (Castello-Branco, 2010:34).

Eisenstein, writing on early Disney animation, also focuses on this liberating experience. Animation gives full command and total freedom to animator. “You tell a mountain: move, and it moves. You tell an octopus: be an elephant, and the octopus becomes an elephant. You tell the sun: ‘Stop!’—and it stops” (Eisenstein, 1988:3). Eisenstein goes so far as to say that the creative potential in animation opens up the possibility for a lyrical,

but inconsequential revolt on the part of the viewers (Eisenstein, 1988:4). Later this is attributed, more than other things, to the attraction of the instability of the form, which Eisenstein calls “plasmaticness”, and defines in passing as “possessing a ‘stable’ form, but [being] capable of assuming any form” (Eisenstein, 1988:21). Thus for Eisenstein, the fluidity of forms and their ability to transform and metamorphose is essential to create the potential for meaning in animation.

The discussion about the 3D CGI revolves mostly around realism dominating the animation aesthetics, for it seems that “realism and naturalism, ideas of art as an imitation of reality, are currently the primary ethos of 3D animation culture and technology” (Power, 2009:108). This, inevitably, has implications in the narrative context too, since “generally, illusionistic 3D attempts mimesis of an external (or cinematic) reality whereas expressive styles play more with the nature of mind and of perception, emotion, memory and imagination” (Power, 2009:109). Thus, as shall be articulated in this study, 3D CGI becomes a moment of convergence between live action film and animation, and through its prevalence, reduces the aesthetic diversity in animation, causing uniformity.

In addition, this process infuses the aesthetics of other mediums in which 3D CGI is used into animation. “There has been codevelopment and cross-over in technical advances for computer-aided design and manufacturing (CAD/CAM) and developments for use in 3D animation and entertainment” (Power, 2009:109). Since, due to understandable reasons of their employment, “most of the commercial, educational, governmental/military organizations and individuals involved in 3D research and development are driven predominantly by an ethos of realistic or naturalistic visualization” (Power, 2009:110),

and the default aesthetic principle of 3D CGI is realism when it is applied in the medium of animation film too.

Similarly, Gurevitch analyzes how the principles of advertising industry became influential in animation aesthetics. The general look of the objects, the composition based on their crowding, and the continuous, flowing movements of the virtual camera are all said to be inherited from the advertisements that the animation companies made before moving onto producing animated films. Naturally, since they used the same tools, human talent and algorithms in making these films, the advertisement aesthetics was transferred over to the films. As a result, “like a child sitting in a supermarket trolley, the CG feature spectator moves through continuous aisles viewing the dizzying array of mass-produced product lines and their enticingly designed packaging” (Gurevitch, 2012:137). On a larger social, economic and ideological context, it can be said, that “CGI is situated within a cultural and industrial context more closely integrated with, and reflective of, the operative processes of consumer capitalism” (Gurevitch, 2009:138). Another point about the computer graphics is how, integrated with interactive technologies, it has permeated the animation into daily life. Ka-nin talks about how icons on smart phone screens can be moved around and how they “start giggling and looking restless” when an iPhone user tries rearranging them on the screen (Ka-nin, 2009:80).

Transference between different design practices can be interpreted also as a moment of digital convergence. Jenkins approaches this concept as a transformation of design practices dictated by industry forces and facilitated by emerging technologies, and focuses on the cultural effects of this transformation especially in terms of consumption practices. According to Jenkins, convergence is a very encompassing process, in other

words, “media convergence is more than simply a technological shift. Convergence alters the relationship between existing technologies, industries, markets, genres and audiences”. All this is governed by the fact that “the new media conglomerates have controlling interests across the entire entertainment industry” (Jenkins, 2004:34). In short, “convergence is both a top-down corporate-driven process and a bottom-up consumer-driven process” (Jenkins, 2004:37). This means it entails to an active participation on the consumer’s side.

Manovich, on the other hand, is more interested in how this convergence affects the ontologies of the already established art forms and mediums. In this regard, two concepts are central for Manovich: software and data. According to this view, “the new ways of media access, distribution, analysis, generation, and manipulation all come from software” (Manovich, 2013:31). Thus software and algorithms become not only the basic and exclusive tools of media design, including animation, but also they dictate a certain logic that is not totally independent of the choices made by those who prepare them. Similarly, everything in the end turns into digital data, and as such “different types of digital content do not have any properties by themselves” (Manovich, 2013:32), they are not different from each other, except for when they are processed by the respective software they are prepared for. One of the key points here is a certain level of transference between the mediums, within the paradigm of convergence, “techniques developed for one purpose later migrate into another area” (Manovich, 2013:32).

CHAPTER II

SOURCES OF AESTHETIC DIVERSITY IN ANIMATION

2.1. Animaton

It is not my intention in this study to define what animation is, or to give a full description of it. Nor will I try to explore its differences and similarities with live-action cinema. However, this study is primarily about the aesthetics of animation, and that is naturally very much related to what animation is. In this regard, a description which does not aim to be comprehensive, and which accepts its own shortcomings is due, as much as an account of the relation between animation and live-action cinema, which has been one of the most elaborated points in academic writing on animation.

With this in mind, and to facilitate the discussion on the animation aesthetics and the uniformity in it, I will take the liberty to introduce the concept of ‘animaton’. The name is inspired by the concept of photon in physics. The first candidate that came to my mind was ‘animatom’, which was inspired by the atom. As the name and its first inspiration readily imply, I was trying to come up with a concept which could be the basic building block of animation that differentiates it from other ‘moving picture’ types, just like an atom is a building block of an element, and it is also chemically what differentiates an

element from the others. However, upon further thinking, the concept of atom seemed rather a poor choice for an inspiration, because its stability does not relate easily to one of the most important aspects of animation: movement, or, deploying a word used by some like Williamson and Eisenstein, its “animateness”, which is defined as being lively, displaying a quality of life (Williamson, 2011:122), or “anima-soul” (Eisenstein, 1988:54). A photon, being the particle of light, implies motion. It is both particle and wave. Just like that, the concept I was looking for as the building block of animation would be better equipped if it implied both a discreet, independent existence, and movement, as well as change from within. Thus I chose the name ‘animaton’.

What is it then? And how will it help in the way of analyzing animation aesthetics and the uniformity and the precarious diversity in it? It is always difficult to make a concise and comprehensive definition of a new concept. It is perhaps better to try understanding it through its appearances and manifestations. However, simply put, an animaton is that sequence of moments which gives the screen image a character of animateness that is not inherent in the image itself. Thus, what it spans are more than one screen images that come one after the other. A single image of an animation (an animatom?), with its inescapable stillness, will not be as useful for an analysis of animation aesthetics, though it may still be somewhat telling. To make it more concrete, one could even say that an animaton consists of more than one adjacent frames in the filmstrip, or in the data storage.

Another point is that when these images come one after the other, they should create a sense of animateness. The first image in this sequence is a still image, so are the following ones. Only when they come one after the other do they gain a new character

that is not visible or readily available independently in any of them. What makes these more than just a series of images is the animateness that comes with sequencing. The important point here is that the animateness should not be inherent within the images. This will be crucially important in comparing animation and live action cinema, since, from the point of view of this study, the main difference between the two is the difference between natural animateness in cinema and the artificial one in animation. In live-action film, the animateness is already there, what the film as a technique does is to store and restore it. In animation, though, the animateness is created and it cannot exist beyond the sequence of the images that makes it up. At the expense of saying the last thing all the way in the beginning, it can be said that the uniformity in animation aesthetics is mostly because of the search for realism, and that in return happens through blurring the lines between live-action cinema and animation. This occurs when the animateness and the animatons making up an animation converges to those elements that make up a live-action film. Finally, this tendency of convergence is not totally independent of the technological convergence we are witnessing lately. But more on that later...

2.2. Animatons in Live Action Film

Now let's go back to animatons. Live action films do have them too. They are not exclusive to animation. Indeed the way they are most frequently employed in films is quite descriptive of them: the cuts. When there is a cut in a film, when an image is preceded by another that is not its natural precursor, there happens in the film a new kind of animateness that is not inherent in either of the images. For example, the first image might be that of a dark blue sea, and the next one a scorched desert. Normally, or in other words, with regards to the normal, usual, daily animateness of the world, next image for

the first case would be another image of the sea, with slightly different configuration of the waves, ships, clouds and the seagulls. Moreover, the difference would be imperceptibly small. Similarly, for the desert, the previous image would be another image with the same desert, with small perturbations on the dunes and palm leaves due to the wind. Here, however, in the cut there is something else: one image shows a sea, the very next one shows a desert. The level and nature of animateness in passing from one to the other is different from what we experience in daily life. More importantly, depending on the context and the scenario, this animateness may be full of meaning which could not have been conveyed otherwise. It may be the case that the protagonist in the movie started a sea journey in the first image, and ended up in the desert in the second image. Only way for the viewer to surmise this is through the animateness provided by the cut. Thus, a cut in a film is an animaton. It adds to the films a new level of animateness that is not inherent in either of the animaton's images. And, this new animateness can be, and usually is, full of meaning.

What is being animated in a film cut? How does that animaton function? The most straight forward answer is: space-time in the narrative. A cut is usually a jump in the space-time continuum: from one place to another, or from one time to another, or, both. Following the example above, the protagonist's arrival in the desert may take place days, weeks, months, or years after embarking on a sea journey. The cut here becomes a narrative vehicle which moves the spectator through that time period in an instant. All this entails also to a jump in the narrative from one point to another. Depending on how they are used, cuts may be a major vehicle through which the meaning is created, or they may simply be invisible, or transparent, only helping the narrative move through. In any

case, though, it is clearly a very useful tool for filmmakers. However, cinematic effect and the meaning created by the cuts is not the most prevalent and prominent technical means in live-action cinema. The shots in between the cuts where the animateness on the screen image is the same as that in real life are the major source of meaning in many conventional films.

However, cuts are not the only animatons that can be included in live-action cinema. It is possible also to have them within the shots. Scenes with slow motion are one example. Compared to the screen image before the slow motion starts or after it ends, the screen image during slow motion has a different level of animateness than it is in real life. The rate of change within the image with time is not the same as what it is in real life; it is different from what is inherent, or implicitly implied in the screen image. This, again, comes with a new meaning, or, possibilities of meaning. Bullets, for example, are usually invisible in live-action films when they are shown moving in their normal real life speed. But when in slow motion, in other words, when their level of animateness is changed, they do become visible, and depending on the context in the narrative, they, their trajectory, the way their shape change over time as they move through air or other medium, may become new sources of meaning over which the narrative is built. What is animated in the case of slow motion is time, and differently from a cut, time is being animated not via a sudden jump, but via a gradual shift that makes it flow slower.

2.3. Live Action Film vs Animation in Terms of Animatons

This brings us to a major distinction between live-action film and animation: animation is that kind of film in which the meaning and filmic effect is produced and generated

mostly, if not exclusively, through animatons. In terms of the methods and techniques of storing and displaying, the end products in both the animation and the live-action film are the same. A film, regardless of whether it is an animation or live-action, is stored on photochemical film or as digital data, and displayed via projection or on various device screens. Thus the distinction between the two is primarily about the way they are made. As the name implies, the animation pertains to giving motion to that which is fixed, stable and immobile, in other words, it pertains to creating animatons. The raw material of animation film is still images, which, when displayed one after the other, create a sensation of movement. That movement, as seen in the animation, does not correspond to anything in the real world. On the other hand, when it comes to cinema, the raw material is the live action being filmed, which is already naturally animated. What the camera does is storing it in a way that it can be restored on the screen later. Thus, while animation creates the movement, live-action film registers it. The logic of production flow in animation is from naturally discrete images to an illusion of movement, whereas that in live-action film is from naturally continuous movement to discrete images, and from discrete images to an illusion of —restored— movement. Thus the indexical nature of the image projected onto the screen in live-action cinema and animation are substantially different.

In this regard Power, for example, establishes a relation between animation and painting which corresponds to the relation between live-action cinema and photography (Power, 2009:108). Defined this way, animation is essentially the motion of the painted image whereas cinema is that of the photographic image. Accordingly, non-photographic quality of the screen image is a distinctive feature of animation. Indeed what most people

would understand of animation is those films with drawn or painted screen image. But this is not enough to cover all animation art, especially those animations which use filmed or photographed footage; nor does it help with a deeper understanding of animation. Thinking in terms of animatons may help at this point. As indicated above, in cinema films, animatons are only one of the many vehicles through which the meaning is created. On the other hand, to the extent that an animation film is a continuous cluster of animatons, differently from live-action films, meaning in them is created and conveyed mainly utilizing animatons.

This comparison between live-action cinema and animation is quite fruitful in defining further the concept of animaton. It was mentioned just above that they are ‘created’. This is another way of saying what is already said, that they correspond to a different level of animateness that is ‘not inherent’ in the screen image itself. If it is not inherent in the image, then it must be created from scratch. Animateness in cinema films can also be deliberately created, but only to a certain extent, when every detail of the film is painstakingly designed. Any single item in the mise-en-scène can be arranged and placed to the millimeter, the way the actors move, speak, act can be dictated to the minute detail, but in the end, change from one frame to the next, or one image to the next, is determined more by the way the scene unfolds than how everything is designed. It may be possible to determine where everything in the scene will be and how they will move, but the same cannot be said of how the very next screen image will look like.

If, in the scene, a man in a white suit dances toward the left of the screen, the speed, the moves, the rhythm of the dance, can all be dictated, but after that point, the position of the white area making up man’s suit in any frame depends totally on the movement of the

man; it is not possible to interfere in it, that, of course, if the intention is to have a 'real' looking dancing man in the film. The position and the size of the white area in a particular frame depend totally on what part of the dance the frame shows. If it is, say, the third second after the man started moving towards the left, that white area can only be at one location in the frame: wherever the man arrives in his dance three seconds after he starts moving. Thus the movement in live-action film must obey, and replicates, the movement in real life.

2.4. Movement in Animation

The example given above about the screen image is important, because that is how animation came to being in the first place: as trick films in which the conventionally and supposedly immutable elements of the screen image like the lines or points moved around the screen, seemingly by themselves. Thus, the main element was the change in the level of animateness in the screen image. Normally, a drawing on a piece of paper does not change; it is fixed to the surface. Thus the level of animateness is at the zero level. When that drawing starts moving around on the screen, it becomes animate, thus, compared to zero, there happens a substantial change in its level of animateness. This certainly is where the 'trick' effect comes from, and along with it all the excitement. After all, it has always been an excitement for humans when an inanimate object started moving, or as Bloom puts it, there has been a "longstanding human desire for the animation of the inanimate" (Bloom, 2000:292).

It is possible to find several reasons, some evolutionary, some cultural or religious, as to why humans react to inanimate objects when they become animated. One is the fact that

movement can be an alert for danger. In nature, a sudden movement of some normally inanimate object, a rock, the leaves of a plant, can be a sign of an approaching predator. This would normally cause an increase in the attention level, in addition to creating alertness. Such a reaction hardwired into human brain through evolution would explain much of the attraction of early cinema and animation. Seeing an unexpected animated behavior in an unexpected time and place probably causes an uncalled for excitement and a concentration of the senses that focuses attention on what is moving: the images on the screen. Such a concentration level that is above its normal daily dose will lead to more attentive perception of the stimuli, and as it is usual in such cases, to a profound sensation.

Another point is that, to move things, to make them present, to make them 'real' is attributed to spiritual, divine or supernatural phenomena, and that always has been an attraction. Having experienced such an event in which a movement happens in a place and time that it usually does not happen, and without the usual consequences, it is all but plausible that people would feel the same way as what they would feel in the presence of a supernatural phenomenon. That probably adds another level of excitement to watching a film. It might be conjectured that as the distance between the anticipation and the perception increase, the excitement would increase too. In the case of an animated film, what is perceived is totally strange to any possible real life experience; the anticipation and the perception differ substantially. Lines, patches, dark and light areas on the screen are not supposed to be moving at all, but they do!

2.5. Creativity in Animation and the Sources of Stylistic Diversity

Thus the false reality effect is even more pronounced in the case of animation, and by the same token, it can be said that the sense of 'supernatural' in the case of animated film is even more prevalent. "Animation might be called a 'fantastic phenomenon,' since in the genre called the fantastic, inanimate objects often come to life, or are imagined to do so" (Bloom, 2000:317). The role of creativity in animation is at its utmost, since something that did not exist at all is created from scratch. While writing on early animations of Disney, Eisenstein hails this aspect with quite an excitement: "How much (imaginary!) divine omnipotence there is in this! What magic of reconstructing the world according to one's fantasy and will! A fictitious world. A world of lines and colours which subjugates and alters itself to your command" (Eisenstein, 1988:3). Thus, according to Eisenstein, the creative command over the work that animation provides to the artist is full of potential for freedom. So much so that, Eisenstein claims that the freedom of human creative potential in the animation of "Disney is a marvelous lullaby for the suffering and unfortunate, the oppressed and deprived. For those who are shackled by hours of work and regulated moments of rest, by a mathematical precision of time, whose lives are graphed by the cent and dollar" (Eisenstein, 1988:3). Thus, so far as they open up an opportunity for an escape, albeit a transient one, from the strict life capitalism forces on people, "Disney's films are a revolt against partitioning and legislating, against spiritual stagnation and greyness. But the revolt is lyrical. The revolt is a daydream. Fruitless and lacking consequences" (Eisenstein, 1988:4).

It might be argued that the creative freedom of animator is also limited, and animator, like live-action film director, is not a hundred percent free in making each of the screen

images. Following the example above, just like there may be a dancing man in a white suit in a scene of a live-action film, there may as well be a white dancing figure in an animation. If that figure moves towards the left of the screen, then inevitably the white area making it up will move towards the left, and its position on the screen at a certain frame is not totally up to the animator, but it depends also on the movement itself.

However, there are two important points to take into account. First, in live-action film the movement of the image is exterior to the image itself. The movement is not of the image, but of a man whom the image represents. It is a movement that happens externally, image only emulates it. Second, when a figure in an animation film moves, its movement is not dictated totally by the physical rules of the real world, and animator still has more freedom in where to place what. In addition, unless the animator tries to emulate the real life and recreate it on the screen with all the rules and laws of the Newtonian time, space and dynamics, the animator can always change things at will. Only when animation tries to mimic physical reality, does the animator lose this freedom, and that is when the diversity in animation aesthetics becomes precarious anyway.

This means that the freedom of the animator in manipulating the screen image at will is an important source of diversity in animation aesthetics. This is true in two related respects. One is the case of the style. After all, when there is freedom for such manipulation, there opens the possibility for individual style. Different styles means different aesthetic approaches, and resultantly, diversity. And the other is the case of the visual elements of animation like the line and the form that constitute the screen image, and how they operate. Indeed visual styles differ from each other mostly through their emphasis on this or that visual element, or how they mix these elements.

In addition, these elements, by being animated, give birth to animatons and create meaning and filmic effect. At this point, it is possible to identify different ways that animatons function. It was already mentioned that a cut in a film works mostly through changing the level of animateness in the narrative by jumping from one point in the story to another. Another is the animaton which is created by changing the level of animateness in the screen image itself, by moving lines, forms etc. Lastly, there are time based animatons which operate by changing the level of animateness in time and motion. Slow motion in live-action cinema was already mentioned as a time based animaton. Stop motion in animation is another example. However, there again is a substantial difference between slow motion and stop motion: in the former, time already exists, the change in the level of animateness happens by changing its speed. In stop motion, however, time does not exist, it is created and constructed. This indeed goes back to that major difference between live-action cinema and animation: cinema replicates what already exists, animation creates it. It is noteworthy to add that these different ways animatons work can coexist in one film together.

CHAPTER III

ELEMENTS OF AESTHETIC DIVERSITY IN ANIMATION

3.1. Animating the Screen Image: Line and Form

3.1.1. Line

The very first animations were called the animated cartoons. They were basically drawings given motion and life. Just like any other drawing, in these animations too, line was the main element of the screen image. Before that, however, starting with the cave paintings, line has always been very prominent in image making. Indeed the act of drawing is almost synonymous with making a linear trace. An image is initiated with a line. The very first visual design a human has in their mind before they start drawing, is a line. Regardless of the medium, whether it is the wall of a cave, or a canvas, image is given form first and foremost through lines.

Although point is the most basic visual sign that can be created on a surface, in its unidimensionality, it is not as meaningful and useful by itself as line is. It will have more potential of meaning when it is placed next to other visual elements. The difference in the potential for meaning between a single point and a group consisting of only two points is crucial. A single point is just a point after all. However, a group of only two points

potentially indicate, hence implicitly imply, a line that passes through them, and have the potential of signifying infinitely many points in between and beyond them that are on the same fictitious line; the difference is as large as the difference between one and infinity.

Thus, simply put, a point is a point, but two points has the potential to create the meaning inherent in infinitely many points. Therefore, contrary to a single point, a single line is already meaningful by itself. Even when it does not signify anything, it can still delineate an area, or the borders of the image that will take shape with the addition of succeeding lines. Furthermore, a single line can be full of meaning depending on the context: it can signify a direction, or orientation, or spatial limitation. Thus it can be conjectured that the line is the simplest and most basic visual trace that has a meaning all by itself.

3.1.1.1. Line as the Basis of Drawing in Cave Paintings

It is not a coincidence that one of the earliest drawings humans ever made, the cave paintings, are first and foremost line based. “The *stroke drawing*, as a line, with only one contour, is the very earliest type of drawing —cave drawings” (Eisenstein, 1988:43). They all may have differences depending on the material used to make them, what they depict, or the regional style, but one thing common in many of the cave paintings is that they all have the line as the main pictorial element. Indeed, the freedom in using the line and the fluidity of the drawing is quite remarkable.

There are different theories as to why people spent all that time and effort to make these paintings, but one thing that is widely accepted is that the paintings were attributed magic values (Janson, 1969:19). It is probable that, unaware of the details of reproduction, humans thought that the animals and plants on which they subsisted sprang forth

miraculously from the earth. Making an analogy between childbirth and this, they drew these images in the caves, deep under the ground, in the 'belly' of the earth, to make sure that the animals kept coming (Janson, 1969:20). In a way, they thought they were impregnating the 'mother' earth this way.

The choice of line as the major tool of depiction may seem obvious and all but natural due to lack of other techniques. However, it is not too far-fetched to think that, apart from such obligation, there may be more to this choice. First of all, regardless of why they did line based drawings, it is very probable that once the drawing was complete, the image and its constituents, i.e. the lines, gained sanctity. After all, they believed that their survival, the source of their subsistence, depended on these. In addition, some of the figures in the drawings might as well be the images of gods or goddesses and these images, just like thousands other images made and venerated throughout history afterwards, may well be objects of worship. Thus, the line itself probably gained certain sanctity.

Secondly, line is a visual design element that amply occurs out in nature. Cracks on a wall, patterns on animals, veins of leaves and uncountable other lines in nature are a significant part of visual-scape of humans. Being so, line is an important element in how the world is perceived and interpreted visually. Not only that, but also naturally occurring lines has the power to evoke imagination, and be a guideline as to how a drawing can be made. It will not be too far-fetched to think that the contours of protrusions or indentations on rocks, or cracks on the cave walls might have looked like something that people already knew; a curve might have reminded them of the belly of a bison, a straight line the trunk of a tree, serpentine lines the snakes, so on and so forth.

From that point on, adding their own lines using charcoal or other devices to complete these to a bison, a tree or a snake was only a matter of audacity, which, as attested by the will to survive of such a relatively weak creature in its physical evolution as Homo Sapiens, those first humans amply had. Thus, such naturally occurring lines may have served as a trigger for early humans to start making their own drawings.

Thirdly, although the eye, as a mechanical, biological apparatus, is quite objective in the sense that when working properly, it does not alter the visual content of the light it receives before transmitting it to the brain, seeing, after all, happens in the brain, and it is very much cultural as well as psychological. This point will be elaborated later but suffice it to say at this point that the way people see things and the way they visualize things are interrelated. The dependency of visualization on the sight is quite obvious, but there is a dependency in the other direction too. The way things are visualized also influences the way they are seen. Once visualization gains solid form, then it becomes a parameter of how things are seen. To put it in more concrete terms, once the image of a bison becomes a solid painting on a wall, the way that painting is perceived inevitably becomes a factor in how a real bison is perceived. Humans beholding that painting will not see a bison in the same way they used to see before.

The important thing at this point is that the people, who made these paintings, saw the world around them, and made sense of it visually in terms of lines. The choice of lines in their paintings cannot be solely the result of obligation. The line probably gave them a certain expressive capability that they were looking for. This is most apparent in the hunting scenes. The lines are quite fluid and moving that they almost signify motion. “These paintings, in particular, seem to imply movement within the depicted figures.

Some of these figures, for example, are shown with extra limbs in various positions of locomotion, which can imply an accurate sense of movement” (Torre, 2015:151).

In addition to that, they sometimes appear to be signifying movement, it can even be added that these paintings were animated in a way. While discussing the Plato’s cave metaphor in conjunction with shadow play, El Khachab, for instance, suggests that shadow play “is reminiscent of an older practice: a sacred ritual by virtue of which ‘archaic’ humans gathered in particular caves to gaze at murals or to watch shadow plays” (El Khachab, 2013:42). It can be assumed that the cave paintings were probably ‘animated’ by light and shadow, since in the darkness of the cave, people had to light a fire to be able to see the murals, and both due to the flickering of the flames and also the play of shadows, walls and murals must have looked like an animated projection surface. Thus, the line might have been the very first human made trace that was animated.

3.1.1.2. Line in Painting

The prominence of line in visual arts and design did not stay there. For a very long time, in very different parts of the world, line was one the most important and basic element used in painting, either by itself by constituting drawings, or as an element to mark the divisions between different areas in a painting. Almost all ritualistic, ornamental or decorative paintings and geometric designs in very different parts of the world, whether inscribed in stone, or painted on bodies of vessels, tools, even humans, were line based. Asian landscape and figural paintings, and miniature style paintings in different parts of the world from illuminated manuscripts of the European Christianity to the miniatures of the Ottoman and Mughal traditions, all utilized line as a prominent element. One

exception to this was the Renaissance when line, along with other such elements, lost its independent character as a visual design element. Only by the 18th century, when the initial zeal of illusionism in painting waned in the West, did line become important again.

In all these painting traditions, very different styles were developed. The freedom and the flexibility of the line in drawings differ a lot in a range from very minimalist loose likenesses to strictly structured drawings and geometric designs. Although similar in many respects, different miniature traditions, for instance, are very different from each other in terms of composition, coloring and themes. However, excluding the perspective based illusionistic painting, in all these styles, there are two common points about the way line is employed that are crucial for the discussion here.

One is the self-awareness of the line. In all these paintings, painters and designers did not try to hide the line from the beholder; rather line is conspicuously visible even when such lines do not exist naturally in the objects drawn in the painting. An example for this is the contour lines in miniature. Animals, humans, plants or objects do not have contour lines in nature, but they do have a line circumventing their respective shapes in miniature paintings. Second and more important point is the fact that all these styles and traditions are in peace with the two dimensional surface on which they are applied. They accept their own flatness, and make the best use of this. Line is quite important in that, because it is what defines the flatness of the surface: line defines surface's orientation, its limits and its different areas, the divisions inside it.

3.1.1.3. Line in Animation

It is not surprising, therefore, that the very first animations were mostly line based. This is due as much to the tradition of drawing that goes back to very first humans, as to the qualities of line discussed above. If a line based drawing is the simplest possible meaningful visual composition that can be made on a two dimensional surface, then it is all but natural that the first application of the new cinematographic technology to give motion to inert visual material would be applied to the line also. When animated, the line now defines not only a surface, but also the movement on it. According to Sobchack, animated line, “graphically created and put into motion”, is “creative” in the sense that its power of expression which comes from its abstraction is amplified because, when animated, the abstraction is “qualified and thickened with the generative power of movement”. In other words, “movement transforms the quantitatively abstract and geometric essence of the line into its provisional existence as qualitatively particular and lived” (Sobchack, 2008:253).

Indeed, movement is already immanent even in a single, stationary linear trace on a surface, since, the “line still carries with it the movement immanent to its own production”, and the “gestural movement of the artist [...] is retained to some degree in the completed image” (Atkinson, 2009:269). That is perhaps why in the earliest examples of animation, such as the works of Emile Cohl and Winsor McCay, the animated film starts with the animator’s hand drawing the initial lines on the screen image (Atkinson, 2009:269). It is as if the animator tries to create a genesis story for the work. Atkinson ponders on the existence of the animator’s hand in these animations, and suggests that the animated “movement of the artist’s hand is a prelude to the movement of the drawn

characters”, but goes on to say that only when the drawing is complete, in other words, when the line gains its final meaning and independence, does the animation start (Atkinson, 2009:269).

Thus the starting point of the animation is when the line becomes independently alive. Sobchack, for instance, goes a step further and suggests that the line is a “sufficient condition” of animation; that line is that important but overlooked item in animation that distinguishes it from cinema, “for there are no lines inherent to the perceptible world of live-action, photoreal cinema”. Sobchack goes on to add that “...the animated line — particularly the single line— is not concerned with photoreal cinema at all. Rather, it foregrounds animation’s own internal metaphysics and paradoxes...” (Sobchack, 2008:252). This is because there never occurs a single animated line out in the nature. Thus live-action cinema, which is based on recording the reality, do not have animated single lines. Such lines exist only when they are deliberately created in animation film, becoming a distinguishing ontological element of animation.

3.1.1.4. *La Linea*

An example that is similar to early animations in the existence of the animator’s hand as an entity initiating the movement, one that is quite remarkable in its emphasis on the animated line, is Osvaldo Cavandoli’s *La Linea* (1972-1991), literally ‘The Line’. There are slight stylistic differences in different seasons of the series, but more or less, each episode starts with a horizontal line. A figure, the nasty, ill-tempered main character of the series, is formed out of this line by the animator’s hand, and we watch his adventures. These include his reactions to and interactions with some other characters and objects

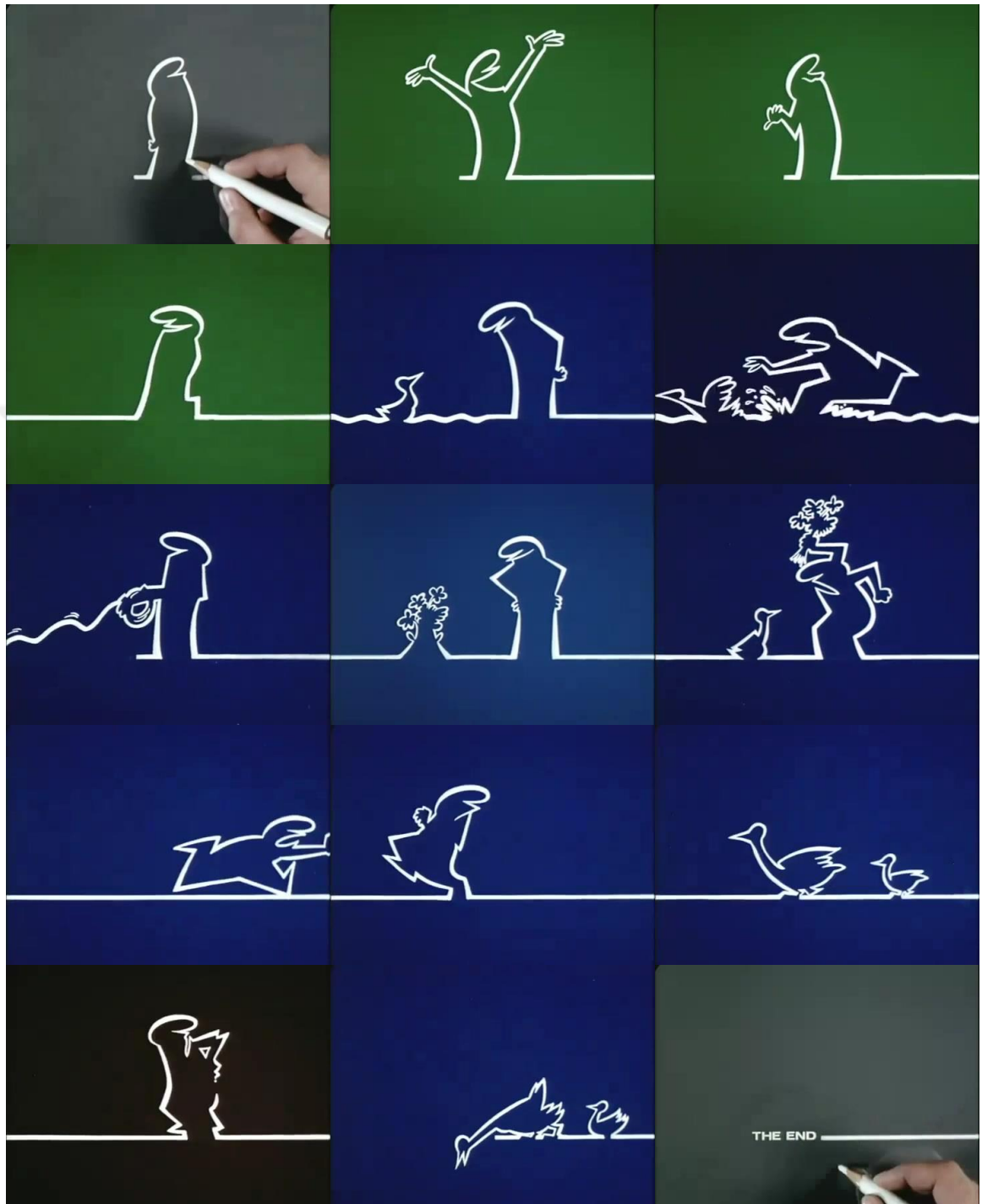


Figure 3. *La Linea*, Episode 108 (1978) by Osvaldo Cavandoli (follows from left to right, top to bottom)

formed out of the same horizontal line: a ball, various animals, sometimes other men and women. However, no matter what it transforms into, the horizontal line, at least at the points where it touches the edges of the screen, always stays there. The entire action takes place in its middle section; the main character and all other characters and objects are placed there, but the existence of the horizontal line as a dividing element always keeps it prominence (Figure 3).

This gives certain durability to the line, which is even more emphasized when, at the end of each episode, everything is reduced back to the single horizontal line. Indeed whatever happens from beginning to end, from the initial, immutable looking horizontal line which comes to life by the action of the animator, to the final calm looking one which contains in itself all that happened during the episode, all that has been on the screen, is simply the line. Entire action is its function, comes to being through its continuous re-formation and transformation. At points, shapes it takes may evoke in spectator's mind a human like creature, a ball, an animal, but in the end it is simply a line.

The important point is, despite its irrefutable simplicity, line does have the potential to be all that, all action and objects are in a sense compressed in it. Even when it is not 'bulged' out to be made into a character, even when it stays horizontal, by simply changing its texture, it can signify many things: sea when rippled regularly, grassland when rippled irregularly, unkempt country road when rippled with soft edges. This potential, or the ability to be able to signify everything is indeed the feeling left for the spectator at the end of the episode. Sobchack, in discussing the operativeness of line in Hilton Ads made by Krumme, formulates this as a feeling of

a certain nostalgia at the loss not only of the line's freedom but also the loss of these highly expressive figures. As they dissolve back into the line, I miss their simplicity, their existential mobility, their exuberance, their brief moments of happy resolution... (Sobchack, 2008:255).

One of the mechanisms the line aesthetically becomes operative is through its power of division. The action in *La Linea* takes place through the metamorphosis of the line. That, in turn, is on the one hand a give and take relationship between the regions below and above the line, and on the other, it is what Sobchack calls a continuous "figuration and dissolution" (Sobchack, 2008:259). Indeed, these are just slightly different ways of saying the same thing. The region below the line bulges up to take from the region above a piece of surface to create the figure of a man. Later, that region, or part of it, is given back to the region below when the figure of that man dissolves, for example, as he jumps in a lake. Sobchack quite poignantly describes this as an "entropic process whereby the line moves from the quantitative to the qualitative" (Sobchack, 2008:259).

This entropy of the line does not even require the figures that the drawings constitute to move or change form. For instance a technique called boiling provides the means whereby it is possible to have an animated character without that character change shape or move around.

In order to create the boiling effect, an original drawing is made and then a number of tracings (normally somewhere between three and eight) are prepared. These tracings are then played back cyclically for as long as necessary and, depending upon how carefully the images are traced, the resulting animation will have either less or more quivering movement (Torre, 2015:149).

Thus, due to the expressive qualities of the line, it possible to achieve an effect of animateness with very few lines and drawings. "Quite often the contemporary independent animators have used this process as an economical means of adding 'life' to their drawn animations" (Torre, 2015:149). This is a totally different kind of animateness,

since, “the boiled image materializes a unique dichotomy of movement and stillness” (Torre, 2015:150). Thus expanding our common understanding of being mobile, or being animated, boiling gives us images that are both still and animated.

3.1.1.5. Line vs Form

Although the line seems to be the first and natural choice when it comes to drawing, there still is a tension between its being one dimensional and the two dimensions of the surface on which it is drawn. Line is a ‘stranger’ to the surface. It exist not as a part of the surface, but as an ontologically extraneous element ‘on’ or ‘in’ it. When a line is closed upon itself, though, the area that is confined in it becomes rather an independent part of the surface. Thus, line, despite its extraneity to the surface, defines the pieces of the surface by delimiting them. This is rather like a thesis-antithesis relationship. In *La Linea*, for instance, what is not line on the screen image is all parts of the surface. The perception of animateness is attributed to the line, not only because how the animation is designed with the hand drawing the line in its beginning, but also because the line is differentiated from the surface. Moreover, the surface obeys the line in transforming its shape. The movement is driven by the line; parts of the surface above, under and sometimes inside the line change shape only because of the line; in other words, line is the active agent and surface is the passive one. Put in another way, animatons of *La Linea* operate through changing the level of animateness of the line. From one screen image to the next, what seems to have moved and transformed is the line.

There are certain moments in it, however, when a piece of the surface gains an independent character, a form, and seems to be moving by itself. Only when the line is

closed around a piece of surface can surface gain such independence. In this transformation, line encompassing the surface loses its active agency, and all of a sudden, the surface—or the figurative object represented by the surface—becomes active by itself. Thus, there is a dialectic relationship between the line and the surface: line, by identifying a part of the surface, gives agency to it at the expense of losing its own agency. This way the surface, or at least a part if, takes on a ‘form’ and can move on its own accord. In this case, the animatons operating on the screen image work by changing the level of animateness of these forms, or surface pieces.

This distinction which happens through a transformation of the line from open to closed is formulized as a distinction between *la ligne-contour* (contour lines) and *la ligne-expression* (expression lines) by Phillippe Marion (as cited by Atkinson, 2009:274). Expression line is more or less the line that operates through its own agency. Spectator concentrates more on the line itself. Contour line, on the other hand, operates through the plasticity of the area it delimits; spectator concentrates on reading the “recognizable and legible figures” (Atkinson, 2009:277). Atkinson argues that the action in two dimensional animation arises from an ‘oscillation’ between the movements created by these two types of lines. In this vein, the continuous existence of the horizontal line in *La Linea* ensures that the expression line is always present, no matter how much the contour line gains the upper hand at some parts (Atkinson, 2009:277). Indeed, starting from an expression line and ending in it again, each episode is one period of such an oscillation populated by smaller oscillations.

3.1.2. Surface and Form

As discussed before, when it comes to drawing, line seems to be not only the choice of preference, but also the natural one. When it comes to animation, though, forms on a surface seem to be preceding the line. Whenever a part of any flat or curved surface takes a shape and becomes a form, it gains an independent identity and can start moving on its own course over the surface, thereby achieving a sense of animateness, and creating an animated surface. Just like the line in the case of drawing, animated surface is both naturally occurring and can independently exist. Just like there are surfaces populated with naturally occurring lines, there also are naturally animated surfaces. What is meant by this are the surfaces that have a naturally occurring state with a different level of animateness than their inanimate, still state.

Surface of a lake on a windless calm day, for instance, is flat and still as the surface of a marble block. All it takes to animate this surface is a soft breeze or a pebble. Even when it is still, due to reflection, surface of water can be as animated as the world around it, just like a mirror, a glass pane or any flat, shiny surface is animated. Sometimes, when it is very clear and the clouds are light and far with no depth, the sky appears like an animated surface. This is even more pronounced at night when full moon, for example, appears as a circular disc gliding over a dark blue canvas, or a lightening appears as a sudden crack on it. Light is a good source of animateness, especially when it comes from a fire or a flame. After all, “the attractiveness of fire lies in its infinite changeability, modulation, transitivity and the continuous coming into being of images” (Eisenstein, 1988:45). When lightened with fire, since all these traits of fire will be transferred to them, surfaces will become animated, so much so that, as already mentioned, the paintings on cave walls

might have looked like they were moving. Indeed, light is the antithetical source of the most conspicuous, puzzling and mind occupying surficial animated element: shadow.

3.1.2.1. Shadow

Shadow carries in itself the seeds of some ideas that are essential to animation. First of all, it is naturally animated, as animated as the world outside. Second, differently from other naturally animated surfaces, it can be manipulated easily and with a greater degree of control. True, it is possible to create ripples on water surface, but all one can do on it with pebbles is to create concentric circles. On the other hand, the way the shadows move on a surface can even be designed. Humans moving about a light source will have shadows on the wall, and by acting or posing, these shadows can be made to do whatever humans want. Third, these shadows do not necessarily look exactly like humans, after all depending on the distance from the light source and the flickering, shadow appears different. Thus, the shadow has a certain level of plasticity; it can be ‘shaped’. Moreover, with certain configurations, it can be made to look like something other than the object of which it is the shadow, as what is called the hand shadow puppetry attests. The shadow may belong to a hand, but it might look like, or signify, for instance, a bird, or a snake, or an elephant.

Therefore, shadow, as a potential, does have all that is needed to arrive at the idea of animation. First, the sense that a surface can be animated, i.e. can be given a level of animateness that is different from its still state and that is not inherent in it; in other words, the sense that a surface can be applied with animatons. Second, the sense that the animateness can be controlled, that it can be changed at will deliberately. And lastly, the

sense that the change in the level of animateness on the surface can have meanings or signify things that are not readily available in its immediate source. This is where the shadow comes together with the idea of play and puppetry, and from here arises one of the most ancient and sophisticated pre-cinematic surficial animation techniques: shadow play, or shadow puppetry.

3.1.2.2. Shadow Play

Some important cinematic ideas and techniques that have made the animation possible, or became prevalent in it, were already heralded in shadow plays. In Javanese shadow play, Wayang Kulit, and its variants, for instance, both the front and the back of the screen are used (Figure 4). Most of the action takes place through the colorful elaborate puppets in the front. The puppeteer, or as they are called, the ‘dalang’, who controls these puppets in the front, sits with his back to the audience. Most of the background of this action consisting of mountains, forests or houses is created with puppets that are at the backside of the screen, and only their shadows are visible to the audience. Thus these shadows create the ambiance and the environment over which the action takes place. This idea is very similar to the cel-animation technique in which the still background and moving figures are painted on separate celluloid transparent surfaces, so that there is no need to do the background for the each frame of the movement.

The animation-like tricks of master dalangs do not stop there though. When, for example, the action figure puppet is riding a horse, normally the longest course of its path would only be from one end of the screen to the other, which could be covered in a very short time. If the narrative or the accompanying song requires a longer ride, this course may

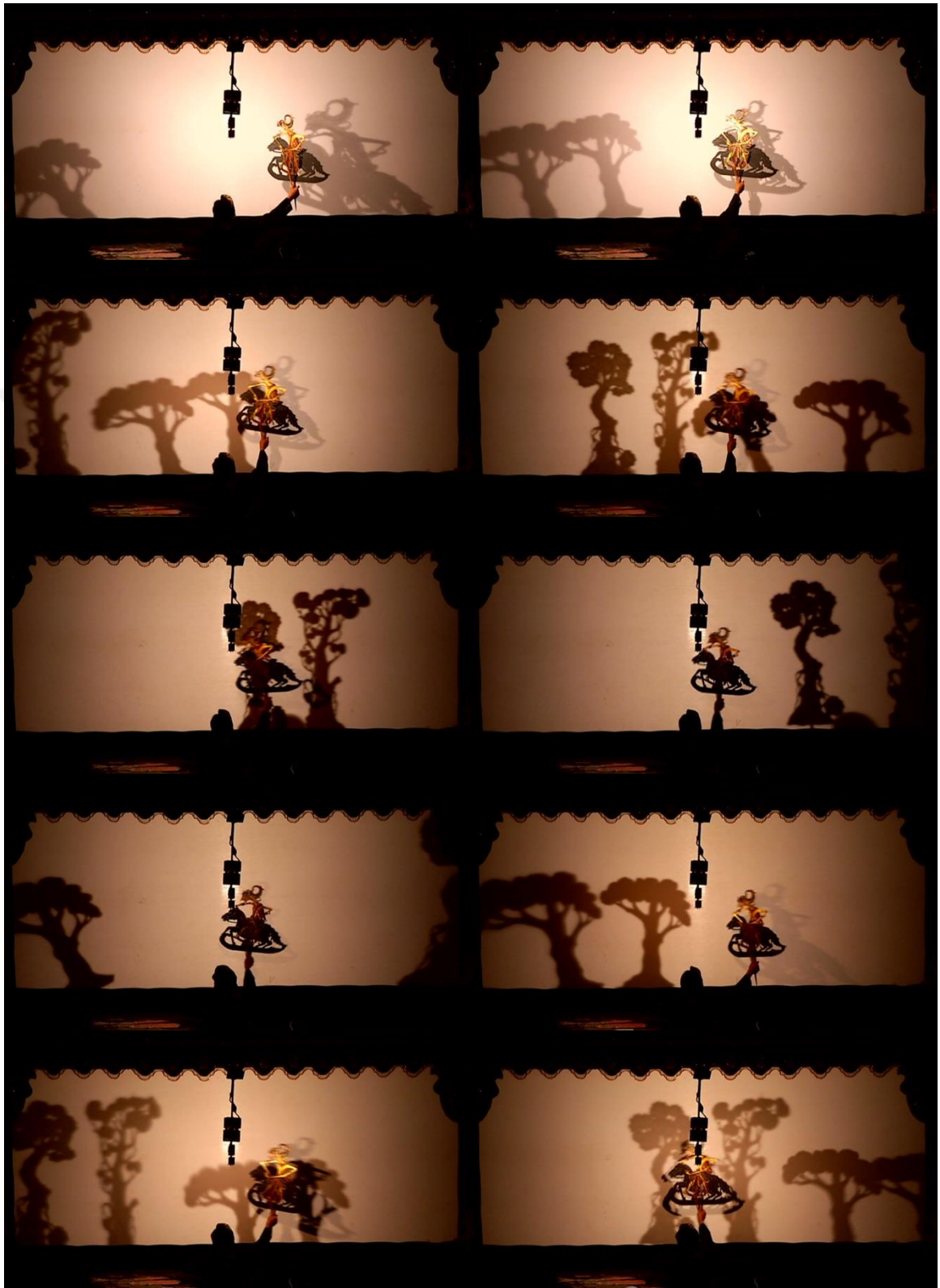


Figure 4. Animateness in Javanese Shadow Theatre. Images two seconds apart, ordered from top left to bottom right. Video from 13th Konya Mystic Music Festival, 2016.

not be long enough. To overcome this, dalang in the front just moves the figure with the horse up and down to create the effect of a horse ride. At the same time, dalang's assistants or the other dalang in the back moves the shadows of the trees, houses, animals and passersby through the back of the screen in the opposite direction (Figure 4). This way, the audience is not only 'tricked' to think that the rider is moving forward, but they are also placed in a position so that they will have the viewpoint of a beholder moving with the rider. This way the rider in the play can ride as long the dalang wants. Idea of moving different layers of animation surface painted on separate celluloids to create three dimensional depth or a sense of movement is widely used again in cel-animation technique.

In addition, shadow play intrinsically utilizes the idea of telling a narrative through an animated surface. Moreover, the screen in Wayang Kulit has depth, not only is it the shadow of the real world, but the world of the puppets in its front also has an inferior colorless shadow of their own in its back. Thus, despite it is placed only in two dimensions, not only the image on the screen, but also the narrative can be multi layered. For instance, the distinction between the puppets in the front and the shadows in the back is elaborated at times as a distinction between different worlds, earth and heaven, or living and dead. The idea of layers and overlapping between them is a major source of meaning here. Wayang Kulit is a ceremonial play performed with ritual purposes, thus it has a spiritual side to it. In many shadow theatre traditions, the screen is interpreted as a universe in itself which is the reflection of the universe we live in. Similarly most shadow theatre traditions has a legendary genesis story in which the initiator of the tradition tries to recreate a lost time or a dead beloved person on the screen. Therefore, similar to the

line based drawings on the walls, animated shadows in the shadow play also gains sanctity, a magic quality, later emulated by animation.

3.1.2.2.1. Aesthetics of Shadow Play

Shadow theatre, especially with a strictly two dimensional display, depends on principles which are at contrast with those of the illusionistic-realist visualization. Due to its very nature which denies the sensation of depth, aesthetics of shadow play defies perspective, volume and photorealistic illusion. The world established on the screen is bounded by its surface. As such, the surface itself becomes a new universe with its own rules upon which the narrative is placed. Thus, the surface which is a vehicle of the artificial transparency in illusionistic approach, gains a topographic existence in shadow play. The frame, which, in illusionistic approach, is designed and perceived as a window through which a scene is viewed, becomes the limits of the universe created on the surface. Therefore, as opposed to the artificial spatial infinity aimed by the depiction of horizon and converging lines in illusionistic approach, the universe of shadow play establishes itself as bounded. Thus the overall visual experience is not one of 'looking through' as in the illusionistic depiction, but rather 'looking at'.

The image in illusionistic approach refers to something external to it, a tree, a bird, or this or that person. Thus the spectator looks not at the image but at what the image denotes in the real world. On the other hand, image in shadow play is more self-referential, its relation to the external reality is more of a connotation than denotation. It may still refer to something external, it clearly is not fully abstract, but since it is less indexical, this external reference does not try to be one-to-one and there is room for image to gain its

own identity independent of what it connotes. Consequently, in shadow play, the spectator is not given a familiar world of three dimensions, but rather forced to adapt themselves to the new two dimensional one created on the surface and within the frame. This is explained by Power through the concept of being incomplete. In terms of indexicality, the created image of animation is less complete than the photo-realistic image of cinema. According to Power, “‘notions of incompleteness, imperfection, and subjectivity’ invite interactive participation and have an expressive value that can surpass [the] explicitness” of photorealistic image (Power, 2009:110). Eisenstein, while discussing early Disney animation, formulates the same idea about incompleteness as the “trait of all-possible diversity of form”, and recounts “changeability, fluidity, suddenness of formation” (Eisenstein, 1988:21) as its aspects.

Visual illusion strives for imitating a transparent everyday experience like looking out of a window, while shadow establishes itself somewhere outside the everyday, it becomes a new world by itself. As such, everything the spectator is used to in their own Euclidian world is modified, and new codes of existence are created. For example, in the real world, when a figure facing toward the left and seen from the profile turns to the right, the beholder sees a continuous change in the angle, in the middle of which the face becomes visible from the front. In shadow play, even this very simple daily act has a different progression. To turn the figure, puppeteer first moves it away from the screen, which to the spectator appears as an expansion and blurring of the shadow. Then, as the puppet is turned, the shadow is compressed around its own vertical axes, becomes a line and then is turned to the other side. Still away from the screen, finally when the puppeteer puts the puppet back on, the shadow shrinks and gets focused. Thus, not a change in the

angle of view but an expansion on the size of the shadow is a signal to the spectator that the character is about to turn the other way.

Similarly, in the Euclidian world, receding away of an object is perceived by the spectator as a proportionate reduction in its size, whereas in shadow play, to tell the spectator that the character is going away, the puppet is either pulled out of the frame, or if puppeteer instead moves it away from the screen, its shadow first expands and blurs, then gradually disappears, or, when the shadow finally is larger than the frame and not very intense in hue, rather dissolves into the screen. In addition, emotions that are apparent through facial expressions in daily life gain new identity in body gestures of the puppets in shadow play, where the “emotion is conveyed through the entire movement of the figure” (Swiderski, 1984:262).

Watching a shadow play becomes a constant challenge of decoding the new codes, and, as such, it pertains to an active spectatorial experience. What is shown outright in illusionistic depiction of the world, is often times only suggested in shadow play and the rest is left for the spectator to fill in. Lastly, in shadow play, reduction in the number of visual stimuli emanating from the screen leaves more processing power to the brain to create, imagine and contemplate, and consequently facilitates a more focused experience for the spectator. On the other hand, the “realistic imagery has a poor signal-to-noise ratio that can distract attention” (Power, 2009:116).

3.1.2.3. *The Adventures of Prince Achmed*

Thus, among several pre-cinematic methods of giving motion to inert materials to create a sense of movement which were mature enough to have a style of their own, and which



Figure 5-1. *Adventures of Prince Achmed* (1926) by Lotte Reiniger



Figure 5-2. *Adventures of Prince Achmed* (1926) by Lotte Reiniger

could have been a basis to be adopted into film to make animations in a style different from the one dictated by illusionistic animation, shadow play was arguably very promising in terms of resources and antiquity. After all, as already mentioned, it would not be far-fetched to assume that the shadow was the very first manifestation of a moving image being displayed or projected on a flat surface. Therefore, with its antiquity and close affinity to two dimensional display of animated image, it is probably not a coincidence that the shadow play became an inspiration for the earliest feature length animation film that is available today. *The Adventures of Prince Achmed* (*Die Abenteuer des Prinzen Achmed*, 1926) by Lotte Reiniger was fashioned, not only in its production technique, but also in its aesthetic appeal, after the shadow play. Reiniger herself was an avid admirer of the art of shadow theatre. She even constructed a shadow play in her home to stage Shakespeare plays when she was a child (Reiniger, 1936:2). A natural talent in creating cutouts with scissors, Reiniger made by hand all the figures used in the film herself.

3.1.2.3.1. Silhouette Animation

While sharing some basic aesthetic principles with the shadow theatre, Reiniger's film, made in a technique classified as 'silhouette animation', also has important differences. At the time Reiniger made *Prince Achmed* and her other shorts, silhouette was already a component of graphic art and not a stranger to the visual culture of Europe. So much so that, a silhouette portrait, made by drawing the contours of one's shadow on paper, enjoyed some popularity as a tool to create one's own likeness until it was replaced by photography (Cowan, 2013:793). It is possible to say that the style of *Prince Achmed* is constructed upon the tradition of the shadow theatre and the silhouette cutouts, but at the

same time modified their principles according to the requirements and possibilities of emergent medium of animation film.

First of all, Reiniger, although she uses paper cut figurines, does not have some of the limitations of the shadow puppets. For instance, in the shadow theatre, those parts of the puppets between the joints are stiff. In the medium of animation, however, images can be more flexible. This opens the door to more and varied action in the narrative. One of the most important differences with the shadow play is the fact that Reiniger's characters and figures are all black in color. The background color changes throughout the film, there may be objects, landscapes or patterns in the background, but it is mostly monochrome and somewhat uniform within each frame. This means that the frame is divided into two parts: the black region, which is composed of all the figures, and the background. Since the main figures and characters are all made of the same screen material, black patches, they tend to fuse into each other. Thus, differently from shadow theatre, what characterizes the universe created within Reiniger's frames is unity (Figure 5).

Everything in the screen is unified into clusters of black areas and there always is a large area of black acting as a context of all the motion in the screen image. In this regard, if, as El Khachab suggests, "in cinema, all beings are equally flattened on the screen's surface and are equally submitted to the oppositional intensity of light and darkness. The act of filming renders the multiplicity of beings in a unified flattened form" (El Khachab, 2013:43), this find its ultimate expression in Reiniger's frames. Thus, what is displayed on the screen as action is basically a change in the shape and composition of the black clusters. Indeed, it is possible to say that the entire action is provided by the movement of the contours, thus line is a major syntactical element.

3.1.2.3.2. *La Linea* vs *Prince Achmed*

In regards to the employment of the line as an operative element, the affinity between *Prince Achmed* and Oscar Cavandoli's *La Linea* is significant. In both, what are perceived as movements are the successive changes in the shape of the contour lines. However, while in the latter, line is the primary operative element, in the former, forms, in other words, the areas delimited by the lines, are more prominent. In addition, the sense of unity between the figures achieved by the conglomeration of the black clusters on a monochrome background in *Prince Achmed* is not as prevalent in *La Linea*, in which the partitioning capability of the line is more underlined than the unity: the screen is divided by the line into segments, and the action takes place as a transaction, or a give-and-take relationship between these segments. Finally, In Reiniger's film, both the screen and the image are two dimensional, thus the tension between the two is less than that in *La Linea*, in which the uni-dimensionality of the line is the main characteristic. On the other hand, Cavandoli uses this tension ingeniously as a means of expression. Depending on the narrative, the line can be something to dive into, just like when it is the surface of water, or just the floor upon which the action takes place.

Still, due to the employment of line as a major actor of the movement, the technical and aesthetic principles characterizing Reiniger's film are for the most part valid for Cavandoli's too. In both, the action which arises as a function of the line entails a certain degree of continuity in the movement. Each scene is a series of morphological mutations in the shape of the lines, which may expand, contract, curve, curl, bend, twist or fold, but rarely break apart or disappear, thus remain uninterrupted on the screen for the duration of the scene, creating the aforementioned sense of continuity. As quoted by Cowan,

Reiniger formulates this by saying that the images “aspire to become endlessly mobile” (Cowan, 2013:790). Due to the unity of the screen image in *Prince Achmed*, which differentiates Reiniger’s style from Cavandoli’s, no matter which individual object or character is moving, that movement appears as a transfiguration of a unified cluster to which that object or character is attached. Thus, as Reiniger also points out, the clusters become endlessly mobile. It may be Prince Achmed or the magic horse that is moving in the film, but in the final analysis, as long as they are protrusions of the same cluster, this movement will appear as a transfiguration of that cluster. “Good or bad, demons or benign spirits, all her creatures evince the same capacity for infectious crossing of boundaries and exist in a state of becoming, of metamorphosis, pouring across the screen like a solid-liquid volcanic eruption, or like a seething mass of insects” (Palfreyman, 2013:19).

3.1.2.3.3. Metamorphosis & Depth

Thus, metamorphosis becomes a prominent element, and the entire action arises from the mutations of the black clusters, which are simply black patches on the screen. In accordance with Reiniger’s own assessment that “film is motion...just pure and simple motion on the screen” (Asher, 2011:5), this pertains to a more unmediated, direct filmic expression. After all, any frame of any film, as projected on the screen, is a composition of patches with different hues and colors, and the film is the perceived sum total of the motion and transformation of those patches. In live-action cinema or illusionistic animation, both the patches and their transformation are vehicles for creating an illusion of the real physical world. In silhouette animation, on the other hand, the narrative itself and the animateness of the image on the screen come from this very motion of the

patches; in other words, the film is the motion itself. It is possible to see that Raimond Krumme, the director of the Hilton Ads which are used as the case example in Sobchack's analysis of line in animation, has an attitude similar to Reiniger's. According to Sobchack, "Krumme himself has pointed out that the very 'simplicity of the drawing lets you concentrate on movement', on continual change, transformation"(Shobchack, 2008:255).

Accordingly, in *La Linea* and *Prince Achmed*, both of which are based on image based animatons, the individual objects or characters in the film can fuse into each other or change shape easily. Therefore, metamorphosis becomes a very prominent element also of the narrative, and indeed these animators utilize this very well. According the Palfreyman, "the graceful fluidity of metamorphosing animal bodies represents one of the key areas in which Reiniger unites the humble and simple with the conceptual and sophisticated" (Palfreyman, 2013:4). The plot is amply decorated with sections in which figures fuse into each other or change shape. For instance when Peri Banu and her maids arrive in the lake, they are in fusion with their bird feathers and look like fairies. After they land, they take off their feathers, which appear as birds (Figure 5). The scene in which the witch and the magician fight is a long duel of successive metamorphoses.

Despite its strict adherence to two dimensions, in silhouette animation it is still possible to create a sensation depth. This does not happen through perspective drawing where all parallel lines merge, but rather by creating layers within the background (Figure 5).

These layers give the spectator an opportunity to experience another kind of feeling of depth. This is not infinite like in the illusionistic painting, because there are always a limited number of layers placed on top of each other. According to Asher, in order to

achieve this, Reiniger invented a forerunner to what Disney patented as multi plane camera later (Asher, 2011:35). Hence, just like it “celebrates both embodiedness and a kind of liberation from the fixed and discrete body” in terms of creating a likeness to reality (Palfreyman, 2013:6), in terms of spatial depth too, silhouette has a creative ambivalence. This dual nature of silhouette not only becomes a fertile area for artistic expression and creativity, but also presents an opportunity to think of the very logic of photorealism and three-dimensional depth in a different way. In the film, “characters and their environments were shown in profile only. Yet, they are so intricately detailed and move in such a graceful way that they seem to be fully three-dimensional, and even real, in respect to the worlds that they inhabit” (Asher, 2011:10).

3.1.2.3.4. Narration

From the spectators’ point of view, all this implies, first and foremost, an active film experience. Since everything is fused into one black cluster, the individual objects are not delineated clearly for the spectator; instead the spectator needs to figure out what is what. Thus the spectator concentrates not on the various individual objects signified by the images on the screen, but rather on the screen itself, on the “nature of mind and of perception, emotion, memory and imagination” (Power, 2009:109). All this pertains to a more focused, meditative film experience characterized by a richness of discovery rather than exemplification and reproduction of the familiar. This is due mostly to what can be called a ‘denial of realism’. Indeed, all the visual aspects of the film mentioned above, the uniformity of color, unity of the image, boundedness of the frame inherited from shadow play, and the lack of three dimensional depth, all help establishing this denial. Curiously enough, these are the very virtues of film medium listed by Arnheim that help denying

such realism in general: “By the absence of colors, of three-dimensional depth, by being sharply limited by the margins on the screen, and so forth, film is most satisfactorily denuded of its realism” (Arnheim, 1957:26).

This, naturally, has implications on the narrative. Not all the details of the events are told explicitly in the usual sense of the word, but some of them are rather implied. Similarly, since facial expressions cannot be explicitly depicted, emotions which would otherwise be indicated with facial expressions are loaded into symbolic gestures. Thus the narrative operates through suggestion. This may at first appear as a handicap, since there are a lot of restrictions in the movements, but, as Mohamad and Nor assert in discussing the gestures of the puppets, “it is their restriction that engenders us to experience this smallest gesture and be enthralled by how it can still speak volumes in the context of the filmmaker’s aesthetics, narrative and setting” (Mohamad & Nor, 2015:103).

Symbolic narration through gestures has some implications. For instance the gaps left for the spectator in the narrative to fill in give the spectator an opportunity to be —more— creative. This is so in other mediums too. As quoted by Atkinson from Bongco, even in comic strip, the readers “are at their most productive in the space between panels where they ‘fill in gaps in information’” (Atkinson, 2009:266). Indeed this act of “filling in the gaps” is crucial for animation, since, ontologically speaking, the perception of animation by the spectator is, after all, such an act. Following this idea, Atkinson goes on to say that, “animation is contingent upon the viewer’s capacity to interpolate frames and thus bring continuity to phases of a movement” (Atkinson, 2009:266). Thus, as already suggested in defining the animaton, the continuity, or the animateness, is not inherent in the screen image itself, but is ‘created’ by the spectator by turning the sequence of still

images into perceivable motion. The same happens while watching live-action films too, and it is automatically done by the brain, so it may be suggested that creativity is neither deliberate nor very prominent. However, in animation film, differently from live-action, the perceived animateness does not have to be the natural animateness of the world the spectator is accustomed to. In such a case, as it is in *Prince Achmed*, the animateness perceived is novel and being so it is to some extent created. In such cases where narrative operates through implications, this is even more emphasized.

3.1.2.3.5. Perception and ‘Essential Realism’

Symbolic narration creates a universe in which not the individual actions but the essences are emphasized, and the silhouette is a very convenient medium for this (Cowan, 2013:797). A bird flying in *Prince Achmed*, for instance, does not look like any of the birds people see in the skies every day. Thus the film emphasizes not a bird flying through the air but the act of flying itself. This means, in general, not the animal but the ‘animality’ is explored; not the movement, but the feeling of movement is communicated; and for this, in Reiniger’s own words, one must “know...how to catch the rhythm of the movements” (Raganelli, 1999). After all, it is not for nothing that she spent endless hours at the Berlin Zoo for observing the animals, about which she says “when you will have to animate an animal you must be that animal, moving as it does” (Palfreyman, 2013:7).

Reiniger’s attitude toward this does not exclude the sense of real movement, for she says “study of natural movement is very important, so that the little figures appear to move just as men and women and animals do”, but then she immediately adds: “but this is not a

technical problem” (Reiniger, 1936:3). In other words, as she understands it, creating the sense of natural movement is not a matter that can be reduced to a prescribed technique just like the perspective drawing or Disney’s animation methods are summarized into a set of predetermined rules, it is rather a matter of apprehending the movement and its essence, so that it will be possible to relate it later in the medium of the film. This comment of hers also implies that the natural movement is not an end in itself for which a technique should be devised, but it is itself a technique in the service of something else: expressive narration.

Symbolic depiction can often times relate the essence of actions, or emotions attached to them, more accurately, i.e. it may achieve a better ‘essential realism’ or ‘emotional realism’ than a photorealist image can do. Therefore, if we accept that the reality is not limited only to what is readily observed in nature, then there is a certain kind of reality which symbolic depiction can communicate better. After all, the idea of flight is not limited to flying act of any one bird. However, what illusionistic-realist style strives for is exactly this: depicting a bird, much like any bird that would appear in nature, flying. As Power puts it, “the standard by which we judge visual realism remains conventionally understood naturalism, that is photorealism” (Power, 2009:108), but as discussed above, this is only one kind of realism, the kind which depicts the ‘reality’ of only one quality: the immediate visual appearance in nature. Furthermore, its success in depicting the visual appearance is not a proof of its ability in portraying the ‘reality’ of the essence of various other qualities. Different kinds of visualization can be, and actually are, more helpful in expressing the nature, reality and essence of these other qualities.

This is another way of saying “while the film records what we see, the drawing can record also what we know” (Hubley & Schwartz, 1946:361), which Hubley & Schwartz asserts while comparing the range of expression in photograph with that in a drawing. Accordingly, a photograph, or a live-action film, records only a particular aspect from a single angle, whereas, a drawing can represent more than what it readily depicts, can be particular as well as general. This seems to have created some excitement in 1946 since, due to it, they hail animation as having the “possibility of a new visual language” (Hubley & Schwartz, 1946:361). They even have a practical use for this feature of animation: the communication of ideas and the thought processes (Hubley & Schwartz, 1946:361), which, due to their abstract and very individual nature, cannot be easily given visual form with photographic images. According to them, “the significance of the animated film as a means of communication is best realized in terms of its flexibility and scope of expression. It places no limitations upon ideas” (Hubley & Schwartz, 1946:363).

Due to these aesthetic principles, the narration in *Prince Achmed* is more diegetic than mimetic. Mimetic narration is implosive, it is limited to animal form and the rules of this universe in which the real life goes on, whereas “lying flat on a surface rather than inhabiting three-dimensional space, Reiniger’s puppets were not limited, in their range of movement, by any centring instance or earthly principle” (Cowan, 2013:790). Creativity in mimetic narration is an option and in its absence, the narrative can go only deeper and deeper within itself. On the other hand, diegetic narration is more explosive. This, in alliance and alignment with the minimalist aesthetic freeing the spectator of the burden of an overload of stimuli, forces both the artist and spectator to be creative, and in

Reiniger's own words, gives the spectator "more imaginative stimulus" (Raganelli, 1999).

A new universe with its own rules and laws is created, thus everything in it must be made anew. Possibilities are varied and many, and thus the feeling is one of an expansion. This, again, supports an active spectatorship. Indeed, this kind of uprooting of reality and substitution of it with another new one might as well be where the potential of animated film mainly lies. Buchan, for instance, borrows Roger Cardinal's view that "the whole ideal of animated film is to suppress the categories of normal perception' ... and the logic of animation, 'might even be to suppress all differential categories, and annihilate the very conditions of rationality'" (Buchan, 2010:178). This can be thought of in conjunction with the sanctity attributed to line and shadow which was mentioned above in the discussion about the shadow play and the cave paintings. As Crafton puts it, "animation is more than a technique. Owing to the vestiges of its semantic past as a word bound up with the mysteries of life, the breath of God and such, it carries a lot of transcendental baggage" (Crafton, 2011:106). This transcendental baggage is partly what helps breaking the codes of the known universe and create its own anew.

3.2. Animating the movement

3.2.1. Time: *Tango*

Zbigniew Rybczyński's *Tango* defies almost every convention about traditional animations with drawn images and a usual narrative. On the other hand, it is accepted in general as an animation, and a celebrated one in that. Why is *Tango* an animation? More importantly, what is being animated in it? Thinking in terms of animations might be



Figure 6. *Tango* (1981) by Zbigniew Rybczyński

helpful to answer these questions, and the answer lies in yet another question: what changes from one screen image to the next? True, the characters and objects in the image change locations, thus there is a change in the screen image. However, that change, at least for each of the characters, is inherent in the image itself. The old lady or the kid with the ball moves in accordance with their natural movement, not differently from live-action film. Moreover, when reduced to the feeling of change in the screen image, or in other words to the action of the image based animations, the way the element of time operates in *Tango* cannot be fully comprehended. For this, it is necessary to think more in terms of the particularities of time itself.

What is not inherent in the image is the overlapping of all the different characters and objects. That is actually how the film functions to create meaning. However, this overlapping is not a spatial one, indeed there is no spatial overlapping, everything is placed in the film so ingeniously that despite at times there is quite a crowd on the screen, they never occupy the same space. The overlapping is rather in the time dimension. The action of each character, which involves interaction with objects and other characters in the film, is repeated periodically. There is no hint that each of these actions takes place at the same time, or at any specific time for that matter. Each is cyclical, and timeless. Each has its own time consisting of a duration and frequency. The crux of the film is the way all these are put together in a tightly packed formation, each over the other; in other words, the way the 'times' of each of the characters are interlocked with all the others (Figure 6).

The animation here operates by changing the level of animateness of time, and this is what the animator intervenes in. The screen image, too, changes, of course, but it moves

according to the change applied in the time dimension. Indeed, a very important part of the screen image, the space depicted in it, the room, is conspicuously fixed, for the camera never moves for the duration of the film. Such fixedness in the dimension of space also helps concentrating the changes onto the dimension of time. Thus, what changes from one screen image to the next are all the deliberately accumulated concurrences in it. This is also what moves the film forward. In each repetition, a new character enters the stage, or an existing one leaves; thus one more 'periodic time' is added to the cluster. There are only a few moments in the film in which the combination of the characters on the screen is the same as the combination in another moment. Thus the film progresses by changing the number of characters, in other words, the number of overlapped 'times'. This, of course, is not the only way to animate time, or, in other words, to create time based animations. Slow motion in cinema films was already mentioned. By the same token, fast forwarded actions can also be counted as moments when time is being animated. Similarly, events happening at different times can be put together in a divided screen. However, in *Tango*, differently from these, the meaning of the film is generated totally through animating the time.

3.2.2. Motion: Stop Motion Animation and Puppetry

Stop motion can be considered as a hybrid form between cinema and animation. Similar to cinema, what is in the screen image has an existence outside the screen image. This is not the case in hand drawn animation. Mickey Mouse, despite all its clumsy avatars in Disneylands all around the world, is only an image. His universe is the universe created by the animators on the screen. In stop motion, on the contrary, all that is in the screen image has an independent existence. The puppets, figurines, and their environments are

placed somewhere in a room, or in a film set, on the planet earth. Therefore, it is not needed to draw them or make their paintings to create their images. Their image can simply be reproduced as an exact likeness through photography, just like any other thing that exists independently of its image. This is another point it comes close to cinema: it is filmed moment by moment in small increments, and when these moments are added one after the other, and shown successively, the figures in the screen image appears to be moving.

The same effect can be achieved without filming. Puppetry is an age old practice in which inanimate figures are animated by a puppeteer in real time. What the stop motion does is to remove the puppeteer from the image. Puppeteer in stop motion film, the animation maker, is active only when the camera is off, when he or she rearranges the figures in the image for the next increment of motion. In a real time puppet show, though, puppeteer, or at least the connection between the puppeteer and the puppet, a piece of stick, strings tied to puppets' limbs, or simply the puppeteers hands, are always visible; puppeteer's existence is always inescapable. By using the cinema technology, stop motion animation gives a more independent existence to the puppet. This creates a more direct, unmediated sense of animateness. Kermit of the *Muppet Show*, no matter how much he tries, can never be free of the two sticks tied to his hands. Grommit, on the other hand, is as free as any dog is free.

Thus while removing the traces of puppet master, stop motion animation at the same time has the chance to utilize the advantages of this age old art form. This, according to Mohamed and Nor, is quite important since, according to them, "there is a kind of totemic power in statues and dolls that just cannot be replicated in 3D modeling, 2D

drawings or computer-generated imagery” (Mohamed & Nor, 2015:102). What is emulated in stop motion animation is what the puppet master does in real time: to give life to the puppets. The most remarkable indication of life is motion, and this is what the stop motion animation animates. What changes from one screen image to the next is the position or the configuration of the figures, thus the animatons in such films are motion based. Although similar to live-action cinema in its technique which uses photography as opposed to hand drawn images, stop motion animation differs from it in terms of the ontology of movement. Live-action cinema records and reproduces a movement that already exists. Thus the movement is inherent in the image. Stop motion, though, creates the movement. At each take, the figures are stationary, they are dead. Only thorough the intervention of animator with motion based animatons, do they become alive.

3.2.2.1. Food

Stop motion has always been a very popular strain of animation art. It is possible to find examples of it in almost all the eras of cinema history. Indeed, some of the films which are shown among the very first examples of cinema, in part resemble more stop motion animation than cinematic films. Georges Méliès’ *A Trip To The Moon* (1902), for example, is one of the most memorable examples. Similarly, “some Méliès films are close to being animation, with a camera stoppage every 4 or 5 frames, without pushing the technique to one of its logical ends —the ultimate goal of which is stopping the camera with each frame” (Gaudreault & Gauthier, 2011:88).

Since that time, the potential of the stop motion animation was explored by many animators animating a number of different objects from traditional puppets to clay



Figure 7. *Food* (1992) by Jan Švankmajer

figures. It is possible to find both animated shorts and some feature length examples. A rather curious form a stop motion animation which is more telling for the analysis here though is that in which human actors are treated as puppets. Jan Švankmajer's 1992 short film *Food* uses a technique called pixilation to create a stop motion feeling with the live action footage, "and through this technique, the director 'object-ifies' the actors, paradoxically taking away much of their human agency even as he so often grants agency to non-living objects through stop motion" (Ivins-Hulley, 2013:268). Normally, stop motion gives agency and animateness to inanimate physical material. In this case though, live action footage is sampled and regenerated in a way that it does not look natural anymore (Figure 7). This is more exemplary in showing how the motion based animatons work. In stop motion films which use puppets, unless intended otherwise, the movements of the puppets or the figures try more or less to emulate the motion in real life. Here, in *Food*, though, the codes of the real life movement are broken down to be made into the material out of which a whole new code can be created. Motion based animatons become vehicles of creating a whole new sense of motion.

CHAPTER IV

VANISHING DIVERSITY, INCREASING UNIFORMITY

4.1. Illusionistic Animation

The methods of creating animations listed in the previous chapter, namely, animating the line, the form, the time and the motion, (which, by the way, I can hardly claim to be an exhaustive list) can also be interpreted as the methods of employing the line, the form, the time and the motion as the basic elements of animation. Usually, any piece of animated film is a mixture of these. Indeed, these rarely exist by themselves. The examples or the cases analyzed in the previous chapter are quite exceptional in that each employs only one of these almost exclusively. These examples were chosen here on purpose; first, to make clear the way these methods operate to create animateness, and second to demonstrate the possibilities of aesthetic diversity in animation. Not only do animations created using any one of these almost exclusively have a very distinctive aesthetic approach, but also any mixture of these with a different weighed ratio has the potential to have a new, different aesthetic feeling. This potential increases as the operative freedom of these elements within the animation increase. In other words, when either one of the line, the form, the time, or the motion can operate by itself without any

dependence on some other element or motive, it has a better chance of creating an aesthetic novelty, and thus increasing the aesthetic diversity. On the opposite side, the more these elements lose independence, the more they are harnessed for a specific aesthetic principle, and when that principle becomes very dominant, their losing independence becomes a symptom of vanishing diversity and increasing uniformity. In historical hindsight, the overriding aesthetic principle in animation which gave way to the uniformity is realism, which, naturally, is the main aesthetics of live-action cinema.

Despite the substantial ontological differences between live action cinema and animation that were discussed previously, the two were mostly considered by both the public and the academia in relation to each other —rather than being two separate strains, more as slightly different accents of the audiovisual art. Both the daily life usage and also many academic arguments implicitly have this preconception. According to Crafton, this is partly due to the meanings and etymological sources of the word ‘animation’. Same word can refer both to ‘movement’ and also to ‘becoming alive’ (Crafton, 2011:97). Here the former one, a moving image, is a prerequisite for both live-action cinema and animation, whereas the latter is peculiar to animation since the movement in animation is created whereas in cinema it is only restored from live action.

The similarities between the consumption practices also help understanding this type of attitude which evaluates live-action cinema and animation in relation to each other. It also explains one of the reasons why animation was subsumed under cinema. After all, for a long time, especially in the form of feature films hitting the movie theatres almost invariably at school holidays or series shown on TV at time slots reserved especially for children, it was consumed more of a child attraction —or distraction— than a serious

adult product. However, what is overlooked when such an hierarchical affinity is assumed or established between live-action cinema and animation is the fact that what is meant by animation here does not really cover the entire span of animation art: it is merely a strain of it; the strain which strives not for creative expression but mainly for realism. Referred to here as the ‘illusionistic animation’, this strain represents merely one of the paths animation art can take. Nevertheless, looking back at the animation history, it is clearly the main, dominant form of animation, especially in terms of financial backing, number of products and market penetration. This explains both the alleged inferiority of animation to cinema in earlier times, and also its recent (re)enthronement. So long as animation strove for what cinema is already and naturally doing, realism, and to the extent that it could not achieve this, it was only too natural to consider animation as an unsuccessful aspirer of cinema. By the same token, as soon as it came close to achieving that goal, and for various reasons became indispensable within cinema to provide the intended photorealism, it gained the upper hand.

Dominant position of the illusionistic animation in the market led to its standing for the animation art in general, as is the case in the arguments mentioned above. Although this dominance is taken for granted and natural for most of the time, in reality, it is all but circumstantial, and indeed happened at the expense of the other forms of animation art. It is a common, and may be natural, shortcoming of the human mind to mistake the contemporaneous state or form of an object, a concept or an entity as its ultimate or optimum, and overlook the historicity inherent in that state or form. In the cases where the life span of the entity in question is longer than or close to an average human life time, this perception is aggrandized to the extent of attributing and attaching everlasting

and eternal existence to what is only transitory. However, anything, at any time is simply an accumulation of changes done on it over the course of its history. At each modification, often times there are several possible paths to follow and the final decision does not always reflect the most objective or the best choice. It is rather shaped under the restrictions of the circumstances, and the influence of competing interests and subjective viewpoints. This is the case with the relation between ‘illusionistic animation’ and ‘animation art’ too. At each milestone on the way to the prominence and the dominance of illusionistic animation, a path led primarily and sometimes singlehandedly by The Disney Company, market forces and financial conditions were more decisive than aesthetic concerns.

4.2. Disney and Industrial Animation

At the beginning, Disney, too, had a distinctive style that was mostly a mixture of line and surface based animations. The figure of Mickey Mouse, for instance, especially in its early stages, consisted of large black areas and lines connecting them. Most of his movements were basically the movements of the lines. The freedom in the way the lines were used in general in Disney films was reflected in the narratives of the films too.

Writing in 1941, Eisenstein celebrates the early Disney animation by saying that “Walt Disney’s work the most omni-appealing I’ve ever met” (Eisenstein, 1988:41). However, over time, this active, operative line in Disney films increasingly lost its own identity and became an apparatus in the service of photorealistic depiction, until later, when it totally disappeared and was replaced by computation with the advent of CGI.

At the time Disney started producing animations, its style based on animating line-based caricature like images was neither the dominant nor widely accepted mode of animation making; it was merely one among many. However, as it turned out, it was best suited for being adapted to a Taylorist mass production process. After all, uncreative talent for such drawing and painting was amply available. Furthermore, innovations, some of which were pioneered by Disney specifically to this end, such as cel-animation technique, which dispenses of the need to redraw immobile background in every frame, and later the multi-plane camera, which makes it possible to have a more layered animation surface in which each layer can move independently creating a more illusionistic sense of depth, helped this process too.

4.2.1. Disney's Aesthetics of the 'Assembly Line'

In streamlining the animation production, especially the cel-animation technique was very important. In this technique the unchanging background and the animated figures are all drawn on separate transparent-celluloid panels. When placed on top of each other, these produce a single frame. This way, it becomes possible to produce animations with minimal effort, because the parts that do not change from one frame to the next need not be drawn again. Only the moving figures are drawn, and placed one after the other on non-changing panels, these create the feeling of animateness. Utilized mainly by Disney and other companies following Disney's lead, this technique was developed to streamline the process, increase the output and decrease the creative labor, with an overall decrease in production costs. Thus, cel-animation technique is the key to industrializing animation production, which used to be more of a creative, artistic craftwork before that.

Due to its efficiency, in a very short time span, cel-animation technique became the dominant technique in animation making. Although certain other techniques like stop motion still existed, most of TV cartoons and feature length animation films were made using cel-animation technique. Along with the technique itself, a certain aesthetic approach based on 3D illusion and realism was developed almost as a necessity of the production process itself. In the division of labor, the scenes were planned by the script writers and a couple of so called ‘key frames’, mostly corresponding to temporal or spatial extreme ends of the scene (like the beginning or the end, or the entrance of a character into the frame and its departure out of it) were drawn by animators. Later, the frames in between those key frames were drawn by so called ‘in betweeners’ (Tai, 2013:114). In order to secure a consistent art work throughout the film, in which more than one animators and many in-betweeners draw images, both the animators and in-betweeners had to abide with certain rules in their drawings. Especially, what was expected from in-betweeners was a total absence of any kind of artistic creativity, and an absolute adherence to the rules put forward by the animators and the studio. This was only possible if the drawing of the frames was done according to certain criteria, and the least resistant path to follow was to apply and adhere to the rules and methods that most people were already accustomed to: a style based on mathematical perspective which has been the dominant method of visual and graphic arts in the West since the Renaissance. Inevitably, this choice was accompanied by an aspiration to realism and 3D illusion in its aesthetics.

The result was “a streamlined industrial production process, making the individual artisan largely obsolete” (McKenna, 2014:4). Lowering costs, increasing efficiency and speeding

up the production process, Disney was able to produce on a mass scale, and in a short time filled the market with its products, while at the same time becoming an inspiration and role model for its competitors. In the meantime, the heavy investment made on technical equipment and staff talent made it, if not impossible, highly unprofitable for the company to explore different aesthetic expressions other than realism. This way, illusionistic animation was ossified as the main aesthetic principle of the company, and due to its market dominance, of the mainstream animation art too. To give this a solid form, and as a guideline for its animators, company even issued some twelve basic principles defining its aesthetic and technical attitude towards animation. These principles have gained wide acceptance and became the basic set of rules for the practice of animation-making in a wide spectrum. As a result, animation-making in general started evolving in a realistic, illusionistic direction dictated by these principles. After a while, this direction almost singularly determined the state-of-the-art methods, and whatever came from Disney and its auxiliaries and competitors was copied and followed by animation makers widely.

This way, Disney became the spearhead of the movement which resulted in the uniformity and impoverishment of diversity in animation aesthetics. The starting point for that can roughly be dated to the time Disney made *Snow White and the Seven Dwarfs* in 1939. This film was “was widely embraced, both for its landmark status as a feature and for its realistic effects, achieved with the new multiplane camera” (Telotte, 2007:247). By the time *Bambi* was released in 1942, this aesthetic approach was quite matured. The backgrounds in *Bambi* were designed to emulate depth of three dimensional space as much as possible, and movements in it was created to look as realistic as possible. As

Pallant quotes from Schickel, the company even kept a small zoo in its precincts for this end (as cited in Pallant, 2010:348), but the purpose here was to recreate those animals exactly as they appear in nature. Following the example used above in the analysis of *Prince Achmed*, in the case of a bird, for instance, such realism admittedly produces images more faithful to and correct about the anatomy of the animal or physical mechanics of its flying, but the same can hardly be said of the feeling of flight. In addition, due to the industrial process which expected animators, drawers and painters to be mere technicians, creating the sense of real movements was a matter of animation technique for Disney.

Criticizing *Bambi* for its aspiration to naturalism, Eisenstein, who so wholeheartedly welcomes earlier works of Disney, says he “was especially distressed by it —by its complete failure, its absolute non-musicality of landscape and colour” (Eisenstein, 1988:98). Eisenstein is especially disappointed, because “the possibilities of the art in which [Disney] works provide absolutely unrestricted possibilities for elements of landscape”, but in *Bambi* all that is utilized are “a dull pan or simple retreat of the camera from a crude naturalistic blur of background”. Eisenstein adds moreover that, “this isn’t the worst: this is further accompanied by a total rupture of stylistic manner between flat drawing of *conventional volume* in the figures and *false three-dimensionality of the surroundings*, copied with all the precision of a cheap popular print of the worst mould” (Eisenstein, 1988:99).

Before, as White says, Disney was “almost universally praised . . . by the public, popular journalists and critics, and even academics and ‘serious’ artists” (as cited in Telotte, 2007: 246). With the development and adoption of illusionistic realism as the main

aesthetic principle, however, “as Disney moved towards the development of what has been termed an ‘illusion of life’ aesthetic ... critical opinion began to change” (Telotte, 2007: 246). Kraucer, for instance, “criticized the Disney films for the way they had begun to ‘imitate the technique of the realistic films’ (p. 463) by emphasizing three-dimensional space, camera movement, and characterization.” (as cited in Telotte, 2007: 247).

According to Pallant, this so called “hyperrealist” style “has come to signify the studio’s work as a whole, is both standardized and mechanically measured, and has sacrificed the ‘plasmaticness’ of the early shorts and some of the ‘package features’, for realism” (Pallant, 2010: 347). Telotte, on the other hand, claims that the “break” in Disney style is not as definitive as suggested, and the studio continued searching for different possibilities, and tried “to regain some balance between” them and the “realistic” tendency. However, Teolette supports this claim based only on the fact that Disney repeatedly invested in making “hybrid” films featuring animation and live-action figures together (Telotte, 2007: 247). In summary then, Disney set out to do in animation what the camera was already and naturally doing in live-action cinema. This was not a completely aesthetic preference though; market forces were as much, if not more, influential in it. After a while, the aesthetic approach championed by Disney became dominant in animation, and pushed all others to obscurity.

4.3. A Retrospective Parallel: Perspective Painting

Indeed, this is very similar to the process whereby perspective painting gained dominance in the West, and the hegemony of illusionistic animation can be understood better when it is considered in conjunction with it. The appearance of perspective and its becoming the dominant mode of painting in the West starts with the Renaissance. Apart from the

positivistic and scientific ideology of the time, there were also some needs, not all of them concerned with artistic expression, which helped give birth to perspective painting. Drawings which required a high level indexical verisimilitude were amply used in military technology and medical-anatomical research, as exemplified most conspicuously by the career of Da Vinci. This created a certain method of seeing and visualizing. Finding itself a wide array of applications within the developing western capitalism, this method became the dominant mode of visualizing for a long time, until people became disillusioned by the outcomes of that very socio-economic system after millions died on the battlefields. At that point, a new ideology of opposition became dominant in art, and perspective painting lost its hold even in its motherland. It is at that point that the painters started looking for different ways of visualizing, which resulted in the succession of genres from Impressionism to Dadaism in the West.

Perspective painting and illusionistic animation, with their incessant search for methods to re-create what the eye sees, exactly as it sees, represent the same tradition in visual arts. Similarly, behind their rise to dominance, utilitarian and commercial rather than aesthetic values and motivations are found. Their widespread use, providing efficiency and precision required within capitalist production, helped development of the techniques and technologies utilizing their basic principles. Inevitably, these technologies found their way into the daily life, and made a place for themselves in everyday objects. Over time, through these everyday objects and technologies, people inevitably got exposed to 'the way of seeing and visualizing' dictated by the illusionistic-realist tradition. Such unconscious, everyday exposition always had far reaching effects, since it transforms the

aesthetic values, expectations and tastes, which in the end have repercussions in what people visually produce and prefer to consume.

The influence of such exposition operates through an avalanche effect. As the perspective painting and illusionistic aesthetics establish themselves firmly as the dominant mode, both artists and consumers go through a lifelong exposition to the products of this tradition. Then, when an artist takes up paper and pen, or any other tool, to draw, the default image in their mind is unavoidably the one which obeys the rules of perspective and strives for illusion. Similarly, through inertia of habits, common people will be more apt to enjoy products of illusionistic-realist tradition since this is what they unwittingly experience all the time; this is what composes their visual experience. In both cases, either producing or enjoying works that defy the aesthetics of illusion and perspective requires acquiring skills and tastes, which, in the absence of widespread circulation of non-mainstream works, is possible only through deliberate and directed effort. In the end, the more the number of people exposed to the works of illusionistic-perspective tradition, the more the number of works produced in this way, the higher the circulation and coverage for these works, and finally, the more the number of people who get exposed. Result is an almost relentless, highly consolidated hegemony which does not give any life chance to what it pushes to margins.

Thus, as much as need, efficiency and utility value, the habitual inclination and exposition also explain how illusionistic-realist tradition gained dominance in visual arts in Europe. For the case of animation film, there are some who see this as a natural process due to the nature of the content of animation art. According to this view,

the relationship of animation works to the reality-indexed aesthetic is reinforced by the fact that they contain movement and time-based narrative. When images or iconic elements move and participate in time-based narratives, they acquire a particular lifelike quality and a semiotic link to reality that static images cannot possess (Cook, 1995:107).

This view, however, is far from explaining the monopoly of what it calls the 'reality-indexed aesthetics' in animation. More importantly, it reduces animation to those works which have linear time based narrative. The implicit assumption here is that any movement in the animation will be in congruence the real life movements, which is not necessarily always the case.

4.4. Dominance of Photorealism and Videorealism in Animation

The immediate result of the rise to power of illusionistic animation was that in the end, the other strains of animation art were sidelined and silenced, and as discussed above, the animation in general was relegated to children's domain and deemed inferior to cinema. As is evident from the historicity in the evolution of the illusionistic animation, the unfolding of events that finally led to this result was more about circumstances than the inherent aesthetic qualities of these other strains.

Indeed, a glance back at the history of early animation is more than enough to see the misconception in the perceived and alleged inferiority of animation to live-action cinema. In the late 19th and early 20th century, animation was closely related to Avant Garde art movements (Pikkov, 2013:29), an affinity which made it a very serious art form of the time. This is attested by the fact that in its first screening in Berlin in 1926, the *Adventures of Prince Achmed* was shown to an audience of about two thousand people, and such prominent figures as Bertolt Brecht and Fritz Lang were in attendance (Asher, 2011:41). Writing on the question of how film can become an art form in 1938, Arnheim

claims that it will fulfill this ideal in the form of animation: “film will be able to reach the heights of the other arts only when it frees itself from the bonds of photographic reproduction and becomes a pure work of man, namely, as animated cartoon or painting” (Arnheim, 1957:213). The idea that there is more to animation than a simple child attraction is supported further by Buchan with references to the ideological, functional and visual aspects of it as a multi-layered phenomenon:

Animation occupies and informs many public and private spaces; it has long had a constitutive role in disseminating ideologies. As a technique that can combine a wide variety of graphics, abstract forms, indexical photography, text and other visual materials within a single frame, animation can create a density of juxtaposition, visual metaphor, satire and other effects to support and visually underpin political agendas (Buchan, 2010:174).

Only later, when illusionistic animation became dominant and sidelined the other strains that animation, which, according to Power, is traditionally “one of the most expressive of the visual arts” (Power, 2009:109), became a child attraction. This is why, for instance, in 1964, Benayoun asks “who can tell if animation is an adult mode of expression which has been turned into baby-food, or a new language created by children (of genius) exclusively for intelligent adults?” (Benayoun, 1964:18).

The other, sidelined strains of animation never died out. Even such an industry based institution as the Academy of Motion Picture Arts and Sciences of USA preferred mostly non-illusionistic films to give its Best Animated Short Oscar. Best Animated Feature award which was initiated in 2001 was almost exclusively given to more main stream films, but that may simply be because of the rarity of feature length animation films made with an aesthetic principle different from the illusionistic realism. Writing about the more authentic and avant-garde artists of animation art in 1964, Benayoun observes that

“unfortunately the lack of publicity and distribution of their works condemns them to a narrow audience of cinephiles and to the film museums, isolating them from the rest of the public” (Benayoun, 1964:19). In the absence of the financial backing and the market power of distribution and circulation, the other strains of animation survived mostly in the realm of short films. The recognition and appreciation they received, even from the Academy, in this only realm they had opportunity to make an appearance, is a witness to the aesthetic quality they possessed. Therefore, as indicated above, what was deemed as inferior to cinema was not as much ‘animation art’ as the ‘illusionistic animation’. Only because illusionistic animation was more in the limelight due to its market dominance established to the extent of pushing other strains of animation to obscurity, that this inferiority attributed to it was generalized to the entire span of the animation art.

4.5. Animation in the Age of Computing

Facilitated by the developments in computer technology, the logical culmination of the aesthetic approach championed by Disney were the animations based totally on artificial images that emulate the mechanical visual reproduction of reality. Thanks to the highly increased computing power, it was now theoretically possible to calculate every single aspect of an image from light and shadow to color and shade, and to create it pixel by pixel, a process called the Computer Generated Imagery (CGI).

One of the distinctive features of photography is said to be its objectiveness. Until it was invented, the only way to create a visual likeness of reality was through the subjective intervention of a human being. No matter how much determined on creating an exact replica of what they see, the painters or the drawers inevitably added something of their

own to the images they created. Photography, on the other hand, was thoroughly mechanical. There was very limited human intervention. CGI is very similar to photography in this respect. Once the algorithm is created and the parameters of light, shadow, transparency etc. are entered in it, there is little need for any human intervention.

Perspective painting, due to its mathematical nature, was very well suited to be performed by computers. All the way from the beginning, the perspective was developed as a highly algorithmic method. There were step by step guidelines of creating a convincing likeness of three dimensional nature on two dimensional surfaces, and create an illusion of the depth of field. It was only needed now to rearrange the algorithms so that they could be programmed into software. In addition, the mathematical laws governing the physics of motion, speed and inertia were as well suited to be algorithmically programmed. Once these were added, it was now possible to generate with a high degree of credibility the successive images of any motion, or any still image depicting a given moment of a continuous movement. When shown one after the other as a video, these images could emulate motion. Thus, as Gurevitch puts it, with the CG, it is possible not only “to fabricate a photorealistic image”, but also “fabricate Renaissance perspective on an automated, industrial level” (Gurevitch, 2012:134). With CG, an animation film was essentially no longer a collection of images, but data and algorithm. The images that made up the film were produced only when the algorithm processed and rendered the data.

Shortly after it was introduced, 3D CGI flooded the animation world by ever more realistic films. Not only that, but also the realism achieved by CGI animation, called by some hyperrealism (Pallant, 2010:345), has matured to a level that now it is used

extensively and sometimes unavoidably in live-action cinema films too. Not surprisingly, the commercial powerhouse of this was an auxiliary of Disney, Pixar. Year after year, with increasing CPU power and data storage capabilities, Pixar created animated films which were praised as better mimicking the real world. Each time, people were amazed by a novelty which made it possible to create something else of the reality in animation. The ultimate goal, the Holy Grail of CGI, was to produce still images that looked like photographs, and to produce videos that looked as if they were filmed with a camera, in short to emulate live-action film. Each new development, each new algorithm, each new technology was celebrated if it made this goal closer or more realizable. All discussion revolved around this and the technical details of how to achieve it. Moreover, the aesthetic standards that came with illusionism like the “smoothness of image and complexity of motion” became status symbols among animation makers “thus serving as the tools of competition within the industry” (Manovich, 1991:18). The content, the aesthetics, the art in animation was not even mentioned. If a dog in the film looked more like a real dog than the one in the previous film, if the image was sharper, if more intricate movements were achieved, that was the achievement.

4.5.1. Aesthetics of CG

Since it was not really the concern, aesthetic approach followed in these films, rather than being designed specifically for them, was borrowed from the existing aesthetics of the CGI. According to Gurevitch, before it was used extensively in animation films, the main field of application of CGI was the advertisement industry. The companies and film makers found recruitment in making advertisements. Tools, software, algorithms and the overall design practices they used to make animated films later, were all developed



Figure 8-1. Mise-en-scène and camera movement in 3D-CGI Animation. From top to bottom: *Angry Birds* (2016), *Bee Movie* (2007), *Cars* (2006), *Finding Dora* (2016), *The Incredibles* (2004).



Figure 8-2. Mise-en-scène and camera movement in 3D-CGI Animation. From top to bottom: *Sausage Party* (2016), *Secret Lives of Animals* (2016), *Toy Story 2* (1999), *Zootopia* (2016), *Game of Thrones* (2016).

earlier with the advertisements in mind. Thus, the aesthetic outlook of the animated films made by the same people using the same tools was inevitably similar to that of the advertisements (Gurevitch, 2012:131) and it was based mainly on illusionistic realism. According to Manovich, “the distinguishing feature of this design practice is its overdetermining concern with illusionism” (Manovich, 1991:18). Quoting from Cook and Carpenter, who, according to Manovich, are among “the pioneers of computer animation technology, this technology aims to provide simulations of visual reality, ‘virtually indistinguishable from live action motion picture photography’ and ‘visually rich as real scenes’” (Manovich, 1991:18).

In addition, both the logic and the practicalities of the advertising industry and marketing were very much infused in these films. According to Gurevitch, these films “do not simply showcase marketable characters, they showcase a new spatial logic whose foundation, resting as it does upon visual nominalism, draws far broader processes of manufacture and engineering into a new union” (Gurevitch, 2012:133). One aspect of this logic is that it is based on those things that CGI makes it immensely easy to do. For instance, once the visual features of an object is designed and created, it is relatively easy to replicate it in software. Thus, animations and still images created with CGI have a very high population of objects, and are “filled with a level of detail common to film but impossible in animation constructed by hand” (Gurevitch, 2012:134). In addition, once a space and objects in it are created algorithmically, it is possible to place a virtual camera anywhere in this space, it is possible to move this camera through any trajectory in this space, and it is possible to take shots with as long durations as wanted. Thus, these animations are full of long shots in which the virtual camera, and with it the spectator,

travels through paths that would be impossible with a real camera, or very difficult with traditional animation, like a path that starts at the Galaxy Andromeda and ends up under the skin of a human being on planet Earth (Figure 8).

To demonstrate the case of overabundance, Gurevitch gives the example of how in *Finding Nemo* (2003) “thousands of different shaped and coloured fish swim in the dappled and constantly changing light of a seemingly endlessly detailed coral reef”, how *A Shark’s Tale* (2004) “is marked by layers of complexity as thousands of fish and other sea creatures swim around a reef constructed from the built-up urban environment of central New York”, and how “Both *Antz* (1998) and *A Bug’s Life* (1998) take place in the multilayered, multidimensional spaces of insect nests teeming with life so detailed and plentiful it is difficult to take in” (Gurevitch, 2012:134). Similarly, the trip through the “multidimensional space of an airport’s automated baggage handling system” in *Toy Story 2* (1999), the roller-coaster like door ride in *Monsters Inc* (2001), frequent drives in the motorway networks in *Cars* (2006) are examples of continuous trajectories that would have been impossible to take with an actual camera (Gurevitch, 2012:135). Similar trajectories are abundant in films narrating lives of swimming or flying animals, like *A Bug’s Life* (1998) and *Bee Movie* (2007).

Looking at the output of the major production studios at the time of writing shows that for the feature length films shown in theatres the same trend is still in motion. Films produced in 2016 and released in theatres worldwide are exclusively done with 3D CGI, and adopt illusionistic aesthetic with the same principles detailed above. Three films focus on animals. *Sing* is peopled by humanoid animals. The way characters look is unmistakably similar to the characters in similar older films like *Monsters Inc*,

Madagascar and *Ice Age*. The camera glides through the streets of an overpopulated urban environment teeming with vehicles, objects and animals. *Zootopia* looks almost the same, except for the more futuristic and colorful city. In *Secret Lives of Pets*, animals are not anthropomorphized, and the urban environment is identified as Manhattan, but overall feeling is similar. Animals have a prevalent place in *Storks* as well, and they look and move very similar to the animals in other movies. In *Trolls* city is replaced with a forest, but it is almost as detailed, and characters instead are tiny creatures not unlike monsters in other films. *Angry Birds* is inspired by the famous game app. A comparison with Pixar's 2000 animated short *For the Birds* betrays certain affinity. In *Sausage Party*, which was rated R in the US, and which targets adult audiences, creatures are replaced with humanoid commercial products. Camera moving through supermarket aisles and shelves, and product packages carry traces of advertisements. *Moana* is the most recent of Disney princesses. The tropical island environment and stylized human characters are not too unfamiliar. *Ballerina* appears to be the most realistic in terms of narrative: there are no talking animals or creatures, and humans are depicted realistically. They cannot help but appear creepy at times though. *Finding Dora* is a spin off from *Finding Nemo*. *Ice Age* and *Kung Fu Panda* made comebacks with new episodes.

4.5.2. Automation and Fabrication in CG Animation

Thus, in the realm of animation film, visual uniformity still reigns supreme. Regardless whether it is a drive through roads or a glide through air or water, the movement of both the objects and the virtual camera are very similar in different films, so are the environments through which trajectory passes. "Consequently, the experience of the spectator is that of viewing an impossibly continuous, impossibly complex world that

nevertheless appears to adhere to the laws of physics” very much as a “continuous perspective of” an “industrially fabricated roller-coaster ride” (Gurevitch, 2012:134).

According to Gurevitch, such level of complexity and detail “betray a certain industrial, mass produced nature” (Gurevitch, 2012:134) and

in many of the CG features, this relationship between industrial automation and computerised perspectival imagery manifests itself through both the narrative and the formal construction. In most cases, the dénouement of the stories takes place in vast and complex environments. The complexity of these spaces, with the thousands of individual components, conveys the force of industrial automation that the computer has brought to the process,

very much in alignment with a “philosophical shift towards industrial consumerism” in the broader social, economic and ideological context (Gurevitch, 2012:135). Sobchack interprets this as animation production becoming automated (Sobchack, 2009:375).

Indeed, the way the overabundance of detail and continuous trajectories occur in so many CGI films with such striking similarity evokes a feeling of automatic fabrication in the assembly line. In addition, “aesthetics of all CG features betray the way in which the objects and characters that populate them are deeply embedded within contemporary processes of industrial product fabrication” (Gurevitch, 2012: 140), and “the logic of industrial fabrication permeates the animation process” (Gurevitch, 2012: 141), bringing closer together the previously rather distinct practices of animation making and advertising. In the same vein, just like an advertisement operates largely through by showing the products and not by artistic effect, these films, for the most part, rely more on showing unbounded number of things for unbounded durations and moving through unbounded trajectories. Incidentally, such denial of the limitations can be counted among the reasons of artistic effect being neglected. According to Arnheim, for instance, such unboundedness “is the wish of people who do not know that artistic effect is bound up

with the limitations of the medium and who want quantity rather than quality” (Arnheim, 1957:75).

Indeed, the relationship between the advertising industry and animation film making is not a very surprising one. Just like the perspective developed more as an engineering tool than an artistic one, CGI was also more a practical tool used in various industries. Just like the dominance of perspective in the visual culture of the 17th century was part of the dominance of the western capitalism, the prevalence and diffusiveness of the CGI in the first few decades of the 21st century was also very much related to and part of the dominance of the same power. CGI was used in all kinds of simulations, advertisements, movies, games etc. There was a huge knowledge base and human resources, and a lot of investment made in the research and development. It was only natural that the industry wanted a return for all this investment, and thus CGI was harnessed in any way possible to produce any commercial commodity possible, including animation films.

This is the supply side of the equation. On the demand side, the feeling was one of a perplexity and amazement. First of all, there was a perplexity of seeing something which did not look like anything they had seen before. Images they saw on the screen contained shiny, voluminous objects, and these objects moved like real ones. However, the image itself was not like a photograph, it was too perfect, its artificiality was very clear. Second, on the side of consumers, there was an amazement and admiration for the technology which achieved creating such a close likeness of three dimensional reality. With every new film produced by Pixar, or many other producers following Pixar’s lead, humans looked more like real humans, animals looked more like real animals, objects looked

more like real objects and dinosaurs looked more like what real dinosaurs were imagined to look like. But not quite...

The reality out there was way too complicated, way too detailed to emulate it in its entirety. A simple tree has thousands of leaves each of which might react to a breeze differently depending on its location, how it is tied to its branch and many other parameters. All it takes to film a real tree and regenerate its true likeness on screen is a video camera. No matter how harsh the breeze is, the amount of storage will be more or less the same, it is either a certain length of photochemical film, or a certain amount of data storage. Creating the same tree with all the leaves and the same breeze with CGI will require quite a lot of CPU power and storage, and the end result will never be hundred percent the same. It can come very close, can look like very real, but any CGI animation will always be an approximation. For some cases, this approximation will look all right, sometimes nice, more often than not amazing, for the most part cute, but in many cases, when something is too much or some other thing is too little, when certain things are not as they should be, it becomes too artificial. This, indeed, is a direct result of the motives behind CGI, which was highly demanded as an advertisement tool. As mentioned, the goal was more to demonstrate the technical capabilities than to create images with a certain aesthetic preference. Thus, “the images incorporate a tremendous amount of detail, yet the ‘nature’ in them looks too clean, too airbrushed, too unnatural” (Manovich, 1991:22).

When the motivation is to perfect the algorithms rendering all the light and shadow and geometry, the result inevitably is an unnaturally perfect image. For Manovich, for instance, this kind of artificial perfection that is signified by the smoothness and the

sharpness of the image, and the complexity of the movement, developed more as a sign and a tool of Bourdieuesque social privilege among animation makers than a result of preference based on visual pleasure and beauty (Manovich, 1991:19). Utilized mainly in advertisement industry previously, the connotation of being classy attributed to these images were transferred to the brands of the companies ordering the advertisements. Thus, as clients, companies were demanding images with such properties, and as a result the logos, the product images all followed this trend (Manovich, 1991:22), to be inherited later when it came to make animation films. Requiring high investment in computer technology and software development especially in its initial phase when the processors were not as strong and easily available as they are today, such artificial perfection in images was achieved only by industrial powerhouses with financial backing. Thus, animation making process, requiring professionalism in utilizing the emerging tools and algorithms, became a mechanism whereby not only amateur animation makers, but also those working with different aesthetic principles were excluded from the privileged summits of animation making (Manovich, 1991:22). Manovich even suggests that the artificiality coming from perfection was intentional, since, if looked exactly like a photograph, these images would have lost their value as status symbols for the companies ordering them, thus “commercial three-dimensional designs incorporate various strategies that accentuate their artificiality” (Manovich, 1991:24). Such artificiality, especially when it comes to animating the human characters, may also appear creepy, falling into what is called the ‘uncanny valley’.

4.5.3. The Uncanny Valley

The seminal work on the uncanny valley is the 1970 article written by Mori focusing on people's reaction to robots as robots become more human like. Mori reports "that, in climbing toward the goal of making robots appear like a human, our affinity for them increases until we come to a valley, which" Mori called the uncanny valley (Mori, 2012:98). Before reaching this level, when the robots are relatively less human-like, they appear rather sympathetic. Beyond it, when they are exactly like humans, it is surmised that they will be perceived like ordinary humans. However, within this region, in the uncanny valley, where they look very much like humans but not exactly, they create a feeling described as creepy or eerie. In an effort to explain this phenomenon, Mori suggests that the human like robots falling in the uncanny valley create a sensation similar to dead bodies (Mori, 2012:100).

In its aspiration to create photorealistic and videorealistic animations that looks exactly like live-action footage, especially when it comes to animating human characters, animations films and video games using 3D CGI inevitably hit the uncanny valley (Figure 9). This becomes much emphasized in the case of, for instance, what is called the *synthespian*, the human like animation characters created using the data from performance capture of real life actors. For this, not only the body but also the facial expressions are digitized using motion capture technology, and later that data is used to create the movements and the facial expressions of the animation character. One case where this was used was the 2004 film *Polar Express*, in which one of the animated characters also looked like Tom Hanks, the actor from whom the performance capture data of several characters were collected. According to Aldred, human characters driven



Figure 9. The Uncanny Valley. From top to bottom, *Polar Express* (2004), *Beowulf* (2007), *Ballerina* (2016).

by performance capture was an attempt to ease the uncanniness of animated human character, however, looking at the *Polar Express*, they turn out to be “only the most recent ‘uncanny’ players in a long history of uneasy reception when it comes to how new moving image technologies ‘animate’ or ‘give life to’ the human form” (Aldred, 2012:2). *Polar Express*, in which, unsurprisingly, spectators “find themselves hurtled and hurled through a variety of immersive, thrill-ride sequences”, was criticized for its characters being “faulted for being eerie, zombie-like, and emotionally vacant” (Aldred, 2012:9), in short uncanny. Interestingly enough, such adjectives as ‘zombie-like’ and ‘emotionally vacant’ which are reminiscent of death share an affinity with Mori’s own attempt to explain the uncanny valley.

Another film which could not escape the uncanny valley is *Boewulf* (2007). The human characters in it are said to be “soulless” (Brown, 2009: 164), another remarkable association with death. In an analysis of the film, Brown calls the kind of cinema which is based on 3D CGI monstrous. According to this argument, the typical blockbuster monster movies rely on an excitement on the side of the spectator that comes from seeing a monster; thus the visual logic in them is based on ‘showing’ the monsters as much as possible and as whole as possible. In a similar vein, 3D CGI relies on showing time and space as a whole, or as already mentioned, continuous. Moreover, it can show impossible scenes in a realistic way, thus offers a monstrous perspective “transcending the limits of what is physically possible”, just like a monster does (Brown, 2009:157). Finally, Brown, by looking at how the human characters in *Boewulf* appear, remarks that this cinema is monstrous not only because it “show us digital monsters, it also renders monstrous everything that it depicts” (Brown, 2009:158), like the animated human characters which

fall into the uncanny valley. Looking at the 3D CGI films which were not criticized for falling in the uncanny valley, it is possible to see an avoidance of realistic human like characters. Hence all the toys, creatures, animals and stylized humans populating the films mentioned before.

4.5.4. Different Aesthetics with CGI

As discussed above, 3D CGI in animation has been harnessed for the most part with an illusionistic-realist aesthetic approach. This however, as elaborated, is neither a requirement of the 3D CGI technology nor because this aesthetic suits better the animation art. Nor is illusionistic aesthetic is the only one that can be adopted while making animations with CGI. This is attested by the examples where the computer technology is harnessed for different visual aesthetics. Michel Ocelot's film *Princess and Princesses* (2000), for instance, demonstrates how modern animation techniques can contribute to animation making with Reiniger's style. It basically has the same aesthetic principles, but due to the fluidity provided by using computer generated images instead of paper cutouts, the movement is smoother, which enhance the aesthetic effects of silhouette discussed above. Similarly, *Love & Theft* (2010) by Andreas Hykade is almost a celebration of the independence of line, form, color and metamorphosis; a hypnotizing demonstration of the immense diversity in animation aesthetics. Starting with simple lines that stretch out from a central point and melt into the whiteness of the background, the screen image slowly evolves into very complex designs and figures through metamorphosis. In a mere eight minutes, the film demonstrates all the expressive strength of animation art very succinctly, and it is all done through computer graphics. Nina Paley's *Sita Sings the Blues* (2008) demonstrates very successfully in a single film how

very different aesthetic approaches can be achieved using CGI tools. The film has different parts and each is told with a different style. Main narrative inspired by Ramayana is animated with images reminding Indian miniatures. Commentaries on the main narrative are done in silhouette animation with figures reminiscent of the puppets of Indonesian Wayang shadow theatre. Finally, Paley's own story of making of the film is narrated through traditional drawings with boiling lines. All these parts are made using computer tools, and all by Paley herself. This reminds earlier, non-industrial, in a way 'artisanal', method of animation making which was prevalent before the realist aesthetics and streamlined processes established dominance. Just like Reiniger cut all her figurines herself, and made her film with the help of only a few assistants, Paley designed and animated her entire film all by herself. Thus CGI, which currently is the most important reason behind the uniformity in animation aesthetics, opens up new opportunities for a creativity which can surpass all that has been done so far in animation art.

CHAPTER V

CONVERGENCE

5.1. Digital, Technological Media Convergence

With the advent of computer technology, there has been a trend in all kinds of design related activities, whereby both the process itself and the end result have become digitized. Due to this trend, every process now is an algorithm that can be coded as software to be run by strong computers, and every end result is a chunk of digital data stored somewhere in a storage unit. In conjunction with this is the result that now all kinds of design activities, no matter what the end product is, are very similar. A person might be in front of a computer, looking at a screen, moving the mouse, typing on the keyboard, and by looking from afar, it will not be possible to know exactly what that person is doing. They might be an architect designing a building, an engineer designing a machine, a graphic designer working on a poster, a photographer editing the images, or an animator trying to make the cat in the animation lift its left hind leg. In all cases, that person will be using a software package, that package will have a bunch of commands and menu items, sometimes a text based, sometimes a more graphical user interface, and lots of short cut buttons. No matter whether the end result is the blueprint of a concert hall, diagram of a time machine, poster of the Godfather part IV, photographs of a cat, or

the successive images of the animated cat lifting its hind legs which, when come together, makes up an animation of about sixty seconds, it will always be stored somewhere in the memory as digital data. With the all likelihood, there will be large chunks of data segments consisting of long series of open or closed states, or 1s and 0s as they are called, that are the same in two or more of these designs when saved in computer. With a long shot, it may even be possible that the data stored in the memory that represents the time machine and the photograph of the cat are exactly the same, that they differ only in how the respective software packages interpret them. All in all, what happens is a convergence. The activities converge, and become similar to each other; the way the end results are stored converge and becomes, not only similar, but almost the same.

The convergence can be thought to be happening in a couple of related fronts. One is that the technic of doing different things is converging. Previously, a poster designer worked with paints and pencils whereas an engineer used rulers and calculators. Each craft had its own way of doing things. Now, they both use computers, the same physical tool. The menu items in their respective software packages might serve different functions which emulate the functions of the tools they used earlier, but in the end what they physically do is the same. The convergence is in the actual material being manipulated too.

Unbeknownst to them, all designers mentioned above are moving around large or small chunks of data between different memory locations according to the inputs they enter into the algorithms. They may perceive what they do differently, but what their actions manipulate in the background is the same.

5.1.1. Industrial Ownership & Consumption

Underlying all these trends is a convergence within the media industry. Increasingly, international conglomerates own more and varied types of media outlets. A film company, a newspaper, a magazine, a book publisher, a computer game brand might all be owned by the same corporation. “What emerged are new strategies of content development and distribution designed to increase the ‘synergy’ between the different divisions of the same company” (Jenkins, 2006:552). Thus a product which starts its life in any one branch of this division will be replicated in all the other divisions so far as it is profitable to replicate it. A character in an animation film will take its rightful place in the video games; it may have a magazine or books of its own; it will most probably be seen in the shelves of toy stores, blurring the line between imaginary and real even further; thus in the end it will become quite “pervasive within the culture at large” (Jenkins, 2006:553).

All these require a certain level of technological convergence, especially at the consumption side, hence the “increasing pressure toward the technological integration of the various content delivery systems” (Jenkins, 2006:553). This will enable consumers to move between different manifestations of the same product in different mediums. “One may be able to move from watching a television drama to ordering the soundtrack, purchasing videos, or buying products that have been effectively ‘placed’ within the narrative universe” (Jenkins, 2006:553). All these pertain to a “prolonged relationship” between the consumers and the “narrative universe” of the products, ensuring “a succession of consumer choices”, while at the same time changing the status of consumers to that of participatory co-producers (Jenkins, 2006:553).

This means two things; first, to motivate consumers to establish a continued affinity with different manifestations of the products, it is necessary to make them active participants. This in turn requires these different manifestations to have currency in each other's domains. It should be possible for any consumer to access and mobilize a character regardless whether it is in a game, a film or an online magazine. To facilitate easy flow across all these channels for the consumer, they all should function with the same basic logic. Thus, all these different media types should converge with one another. Second, despite this participatory culture is profitable for the industry, it has some unwanted side effects in terms of intellectual property rights. Thus, corporations want to make sure that they can apply necessary safety measures and protection in all these channels, subduing them all to similar restrictions. This again brings all the different media outlets closer together.

5.1.2. Aesthetics of Convergence & Convergence of Aesthetics

This eventually and inevitably results in a convergence between the aesthetic principles of all the different media types. In other words, since “everything in the realm of new media is ‘remediated’; the aesthetic strategies from one medium are recycled into another” (Cossar, 2009:7). Transference of aesthetic preferences between different media is accompanied with, sometimes motivated by, the transference of the values attributed to those preferences. Cossar gives the example of cinematic aspect ratio. When broadcast on 4:3 TV screen, films with widescreen cinematic aspect ratio need to be either letterboxed, i.e. added black strips above and below, or be cropped to fit the screen. Between these two, letterboxing preserves the original aspect ratio of the cinema and evokes a cinematic experience, whereas cropping is more related to TV; former corresponding to a

Bourdieu-esque cultural capital with a higher status than the latter. Then, when the letterboxing is remediated into advertisements, it is employed to transfer its association with cultural capital to the products being advertised. As Cossar puts it, “through poaching this cinematic visual style, the ads are equated with cinematic formats, and by association the advertisers create the visual link between their products and previous consumption of other media (cinema) with similar aesthetic characteristics” (Cossar, 2009:8).

5.2. Convergence Animated

The tendency for achieving as faithful a realism as possible shaped not only the aesthetic aspect of production and consumer expectation, but also the developments in animation technology too. New technologies were employed either to reach higher levels of labor-time efficiency in the animation making process, or better realism. The advent of CGI technologies was, for instance, quite promising in increasing the capabilities of animation makers working with different aesthetic principles, but due to the market dominance and by now long and rich tradition of illusionistic-realist style, forces of CGI have for the most part been mobilized towards realism. As remarked by Power, “realism and naturalism, ideas of art as an imitation of reality, are currently the primary ethos of 3D animation culture and technology” (Power, 2009:108) and this is, more than other things, because CGI is in high demand in other industries where such realism comes handy, including live-action cinema production.

In some cases, it is more costly or may be impossible to create the *mise-en-scène* in real world, and in such situations computer graphics becomes indispensable for cinema.

However, when used to this end, through the mechanisms discussed above about how general practice leads to monopoly, photorealism starts becoming the exclusive mode of the technique. When anyone uses CGI to create an image, since it is the customary mode of image making with this tool for most of the time, they, by default, lean towards realism. In addition, the algorithms and the software packages using them intends achieving higher efficiency or better realism, rather than providing better tools to animation artists in general to extend and expand their expressive capabilities in realizing their imaginations on the screen. In the end, animation becomes an arena where the latest technologies in the computer graphics are showcased, and the films are appreciated for their use of these technologies, rather than for their ability to narrate a story or represent the human life and expression (Wagner & Jang, 2015:134). This leads to aesthetic principles being dictated more by tools than artists' preferences or inclinations, a situation conceptualized in linguistics as the Whorfian effect (Power, 2009:124). Thus, the inevitable rise of Pixar and thousands of animations which, in their inevitable uniformity, look up to Pixar films for an inspiration for visual aesthetics.

On this vein, it is possible, again, to see a resemblance between emergence of perspective painting and 3D CGI. Just like perspective was invented for technical rather than artistic purposes, like recording architectural and structural features of ancient sites, or making anatomical drawings, 3D CGI also first came to being as, not an artistic, but an industrial tool. And in the same way the perspective painting became the exclusively dominant method of image making as a response to photorealist tendency, 3D CGI too has established a monopoly in animation art. To make it clear, there is nothing wrong with a realist aesthetic. In fact it is even quite successful in picturing those things that do not

exist or are extinct in naturalistic terms. Thanks to CGI, we have a pretty good idea of how prehistoric animals looked like or how it would be to behold a dragon flying over us. Moreover, to some extent it is understandable that the immediate application of any technology would be through what is already familiar. Still, though, these are not sufficient to explain the monopoly.

The monopoly of the realist aesthetic in animation can be interpreted as the result of a convergence, very similar to the technological-digital convergence discussed above. One aspect of the convergence was already mentioned: the practicalities of different crafts converge each other. An animation maker's tools of the craft today are not that much different from what an architect or a graphic designer uses. It was discussed before, for instance, how due to the use of tools developed for advertisements, not only the aesthetics but also the narrative and overall visual design of animated feature length films also converge towards the logic and aesthetics of advertisements. To the extent that the tools and methods of marketing determine the logic and the mindset in animation-making while preparing animations for advertisements, later it is inevitable that this mindset will be influential in making animated films too. As Gurevitch puts it, in the

highly rendered images of industrially manufactured objects, we start to see an intriguing convergence between the aesthetics of the animated feature and the aesthetics of the advertising industry. CG features overflow with scenes in which perfect, industrially manufactured forms are fetishistically lingered over” (Gurevitch, 2012:142).

5.2.1. Hybridization Between Animation and Other Media

Another aspect of convergence in animation is the one between live-action and animated film. More and more, especially with the CGI, due to a “tendency towards an apparently more ‘film like’ animated image form” (Gurevitch, 2012:134), animation tries to achieve

what the live-action film is already and naturally doing: photorealism and videorealism. With such an approach, the frames of animation film are expected to look as real as the photographic frames of live-action film; its motion is expected to flow just like the motion in the live-action film flows. The screen image is still not a mechanical copy of the optical reality, it is still fabricated. What changes from one screen image to the next is still a creation that does not exist outside the image. In this regard the animation still consists of visual animatons, but now these animatons appear as if they are inherent in the screen images. Other than that, the animatons are employed only to the extent that they are employed in cinema: in cuts, in slow motion scenes etc. Thus, the use of animatons in animation converges to that in live-action cinema.

The convergence between live-action film and animation affects not only animation, but cinema too. Manovich, for instance, goes so far as to say that “cinema can no longer be clearly distinguished from animation. It is no longer an indexical media technology but, rather, a sub-genre of painting” (Manovich, 1995:3). Furthermore, in the same article, Manovich defines the digital cinema, which can as well be the cinema in the digital age, as “a particular case of animation which uses live action footage as one of its many elements” (Manovich, 1995:9).

Not only are the frames of live-action cinema films populated more and more with images created using CGI, but also, with the advent of digital cameras and computerized editing tools, the film production approaches that of animation making. “Film-makers today storyboard, shoot, and edit their films in conjunction with the computer manipulation of images” (Prince, 1996:27). In the old days, animator drew, cinema directors dealt with magnetic tapes, but today they both deal with the computer. The

special effects and articulation of recorded photographic film which was peripheral to the alteration of the reality in front of the camera are now central to film making practice; “shot footage is no longer the final point but just raw material to be manipulated in a computer where the real construction of a scene will take place. In short, the production becomes just the first stage of post-production” (Manovich, 1995:9).

All these bring closer together the experience of watching live-action and animation films too. As detailed above, the aesthetics of CGI created films is based mostly on smooth, detailed images and complex movements. Thus, from the point of view of the spectator, not the film, the image or the narrative, but the experience becomes more important. The experience of seeing a large image populated with innumerable large number of objects with unnaturally smooth shiny surfaces; the experience of travelling through trajectories which may start at the macro level in some far away galaxy and end up inside a single atom, revolving around the nucleus with the electrons; the experience of seeing objects or creatures that never existed or do not exist anymore as if they were real... All in all, an “audio-visual experience of the three-dimensional space”, based on a “perceptual realism” achieved through the realistic rendering of such visual cues as light, shadow and gradation, creating “referentially fictional”, “unreal images that nevertheless seem credible” (Prince, 1996:34). Thus, not only production processes, but also the consumption of animation and live-action film converge. This is not limited to these two either, all media types that somehow include a kind of moving image converge indeed. After all, “computerization of all areas of moving image production created a common pool of techniques, which can be used regardless of whether one is creating motion graphics for television, a narrative feature, an animated feature, or a music video”

(Manovich, 2006:25). Emphasizing the role of software in its composition, this ‘common pool’ is conceptualized as ‘codescape’, and it is suggested that

an animated codescape adheres to the augmented worlds of digital cinema, gaming and now 3-D computer animation culture in their porous interconnectivity as media; each becomes a creative space of immersion and thus moves beyond a simple imitation of styles as each is its own hypertext of sorts (Wagner & Jang, 2016:131).

As suggested by the concepts ‘augmentation’ and ‘porous interconnectivity’, inevitably, there exist a lot of interference and transference between the aesthetic principles, preferences, and the overall visual language of all these separate domains. Animations are like computer games, cinema films are like advertisements, TV series are like cinema films, and advertisements are like music videos.

Extent of convergence concerning animation is not limited to the convergence between different media types. Analyzing performance capture technology in the case of *Polar Express*, Aldred, for instance, suggests that the film “strives to positively re-configure our perception of the union between the organic and the technological by invoking an increasingly dominant discourse of human mastery over the digital image” (Aldred, 2012:2), and extends the coverage of convergence to a fusion of human and machine. This, on the other hand, according to Aldred, is inherited from the games where the gamer controls, in a way acts as, their avatar in the game. Recounting several other points where the film approaches the video games and the negative response *Polar Express* received mostly due to the uncanniness of its human characters, Aldred says that “the *Polar Express* grapples with the spectacularity of digital media convergence, and the challenges of putting forth characters and spaces designed to be ported across media in a growing climate of transmedia consumption and connoisseurship” (Aldred, 2012:2).

Similarly, Ayers, establishing an affinity between performance capture and remote robotic surgery, extends the limits of digital convergence to the medical field.

Accordingly, although “these technologies might initially seem quite dissimilar, they each produce a human–machine assemblage that enacts itself across different scales” and the corporeality of human being is called into question (Ayers, 2014:212).

The result of the convergence is “a new hybrid aesthetics that quickly became the norm” (Manovich, 2006:26) of moving image production and consumption. Moreover, within itself, this implicitly pertains to another kind of convergence: that of “previously distinct visual languages of different media”, namely “hand-drawn elements, photographic cutouts, video, type, 3D elements” which “are not simply placed next to each other” but “juxtaposed” in a way that makes them “interwoven” (Manovich, 2006:26). In the end, the logic of this juxtaposition and hybridization based on combining “the languages of design, typography, cell animation, 3D computer animation, painting, and cinematography” becomes a “meta-language” overriding all visual aesthetics (Manovich, 2006:26).

From an ideological point of view, our visual landscape is populated more with images in which photographed entities exist side by side with the realistic looking artificial ones.

Such a convergence between the real and the ‘spectacularly real’, between the actual and the simulated, talks, more than anything else, to a sensibility which mixes the real and the imaginary, making it possible to draw parallels to Debord’s *Society of Spectacle* and Baudrillard’s *Simulacra*. Thus, in a wider context, the convergence within the field of visual aesthetics and moving image culture can be connected to a larger process of convergence between real and artificial.

5.2.2. Visual Aesthetics of Uniformity: Convergence of Animatons

As elaborated above, illusionistic animation was only one of the paths that could be taken to create animations. The industry related reasons of its becoming dominant is already mentioned. This dominance, however, was established through a certain aesthetic approach, and the process is similar to how the perspective painting dominated the visual arts through the Renaissance on. What happened from an aesthetic point of view in painting was that all the elements of painting that were employed with relative freedom before merged to serve one purpose only: creating a sense of three dimensional illusion. In this process, these elements lost their own independent character which was a source of aesthetic diversity in painting.

Lines that were used to demarcate different areas in miniature painting, or the lines the play of which create haiku like sensation in Asian painting styles, are almost invisible in Renaissance painting. One cannot see any lines in those, what one sees are the vistas, humans, animals and other objects populating the painting surface which itself emulates a window through which all those are seen. Lines are reduced to the purpose of creating those vistas, humans, and objects. A line can be in one and only one place in the image: wherever it is needed to emulate three dimensional illusion. There is no way the painter can decide drawing a line somewhere in the image just because the painter thinks it would simply look good there, or out of aesthetic preference. Same goes for the forms and areas. Large monochrome or patterned areas the size of which signifies importance in miniature painting is almost absent in the Renaissance. It is replaced with areas the color of which change gradually to obey the rules of optical light and shadow. Surface, or areas, as a determining element of composition still exists; paintings still take into

account the balance between different areas of the composition, but the finished painting betrays no clues about this. Instead, all it displays the beholder is whatever is depicted in it. Similar argument can be carried out for the color too. Once the theme, the design and the composition of the painting is determined, the color, and/or the shade of any point on the canvas is determined as well. The painter can still choose to clothe a certain figure with a red or blue robe, but at that point the area covered by the robe on the canvas surface and any point in that area have to obey the rules of perspective. The painter will not have an option to add a couple of brushstrokes of green here and some patches of purple there. The painter cannot even decide with any remarkable degree of freedom what shade of a color to use.

This motivation to create more and more realistic looking paintings inevitably diminished the aesthetic diversity. Painters were able to make portraits that reflected the personality of the person better; they were able to make paintings that conveyed the feeling of the people better; they created paintings that made the beholder feel like the beholder was really there, in a room with a window looking out to the green valley and lush pasturelands depicted in the painting. But from the point of view of visual aesthetics, all these were more or less the same. If there was any diversity, it was in the way the reality was recreated or about the subject matter. That is why when, for instance, Da Vinci started using sfumato to create the hazy looking atmosphere, it was quite an innovation (Janson, 1969:349). After countless paintings with classical themes from Greek mythology, Roman history or Christian iconography, when, for example, Courbet started painting common people, it was quite a sensation (Janson, 1969:489). But the aesthetic style in terms of the use of visual elements in all these was very similar: creating as

realistic depictions as possible. This must be the reason why the myriad of successive styles that became prevalent in the post Renaissance era all put forward their visual claim, among other things, mostly in terms of the use of such elements.

The way the aesthetic diversity diminished, and later almost vanished, from animation follows a similar logic. In a movement started and pioneered by Disney, the main goal in animation for a long time was creating as realistic animations as possible. This inevitably first reduced, then almost destroyed, the freedom with which the basic elements of animation could be used. Line, form, time and motion, all were employed in the service of photorealism and videorealism. Lines and forms were dissolved into the image to create a Newtonian space; time and motion were used to recreate the real time and motion of the Newtonian physics. All these elements lost their independent character; they were all dependent on and almost pre-determined by the rules of perspective and the expectations of realism.

This, among other things, can be interpreted as a convergence between all the different types of animatons. The argument developed by Atkinson with an inspiration from Paul Klee for the case of line applies here to these elements of animation. According to Atkinson, Klee, in his book “Notebooks Vol. 2: The Nature of Nature” published in 1973,

argues, with reference to artistic creation, that we should look to the ‘act of forming rather than the form itself, form in the process of growth, as genesis, rather than as the ultimate appearance’ (p. 43). This animation of the line will remain active unless it is rendered subordinate to the telos of the finished form, in which case the image will acquire the lifelessness of ‘aestheticism’ and ‘formalism’ (p. 67) (Atkinson, 2009:273).

Similarly, with photorealism set as the ultimate goal, line, form, motion and time based animatons are all ‘rendered subordinate’ to the ‘telos of finished form’, which is basically



Figure 10. Mise-en-scène and camera movement in video games. *Beowulf the Game* (2007)

an artificial, photorealistic and videorealistic imagery. This in turn will make them ‘lifeless’ in a sense. Animation adopting such realism and trying to emulate cinema, indeed, divested itself of its most important strength: its power to put images on screen which can move with no constraints whatsoever. Simply put, “in the quest for three-

dimensional verisimilitude there is a loss of the graphic movement found on the two-dimensional surface of the image” (Atkinson, 2009:272).

Indeed, the very essence of the animations also changes when subordinated to the logic of realism. Manovich, in an analysis of CGI animations and computer games, puts this quite succinctly by saying with CGI aesthetic “narrative and time itself are equated with the movement through space” (Manovich, 1996:5). The prominence of camera movement through long and varied trajectories in CGI was already mentioned before. Manovich emphasizes that this is similar to the “ancient forms of narrative” which established the story through a “spatial movement of the hero.” This might as well be the prominent logic of computer games due to its nature (Figure 10), but when it comes to CGI animation, which, recently is also defined by “similar spatialization of narrative”, it does not make as much sense all the time.

Numerous computer animations are organized around a single, uninterrupted camera move through a complex and extensive set. A camera flies over mountain terrain, moves through a series of rooms, maneuvers past geometric shapes, zooms out into open space, and so on. In contrast to ancient myths and computer games, this journey has no goal, no purpose. It is an ultimate ‘road movie’ where the navigation through the space is sufficient in itself (Manovich, 1996:5).

Thus the animations here are not image, motion or time based, but all these converged into one type, which can be called a ‘spatial animation’. What changes from one screen image to the next is not as much the image, time or motion, as the position of the virtual camera. Moreover, as already stated, the continuity of the algorithm makes it as if the change is inherent in the image. After all, the change from one screen image to the next is dictated by the first image and the algorithm. The software generates the parameters of each image in a succession via the same logic. This can as well be interpreted as a

process in which the computer takes in the parameters of the first image as an initial condition, and depending on the trajectory of the virtual camera, calculates the parameters of the next one. Thus the change from one image to the next can be calculated from the first image itself, thus it is inherent to it. It is as if the software takes the role of a technician with a camera that shoots the CGI images, just like a real technician with a camera shoots the footage for the live action film. It is as if the CGI footage is recorded from the virtual eyes of the software instead of being constructed as it was done in traditional animation-making.

CHAPTER VI

CONCLUSION

This study was conducted with the goal of unearthing the reasons of uniformity and diminishing diversity in animation aesthetics, and relating them to digital convergence. The first step in doing this is displaying the sources and elements of aesthetic diversity. This was done with a novel approach by introducing the concept of ‘animaton’ as the basic building block of animation film, which is responsible of creating meaning in it. This approach becomes instrumental in explaining the sources of diversity in animation aesthetics by referring to certain elements of animation, namely, the elements of the screen image, which are line and form, and the elements that are related to movement, which are motion and time. This, of course, cannot be an exhaustive list, but it serves the purpose here by proposing that the aesthetic diversity in animation is due to the employment of these elements independently on their own without making them subservient to an overriding visual logic. To demonstrate how each of these elements become operative independently in creating meaning in animation, films that predominantly, or almost exclusively, employ them were used as case examples. Oscar Cavandoli’s *La Linea* is significant for its employment of line, while Lotte Reiniger’s *Adventures of Prince Achmed* is an example of how forms become operative. *Tango* by

Zbigniew Rybczyński and *Food* by Jan Švankmajer demonstrate respectively how time and motion can be used as the basic principle of animation. The basic premise here is that any mixture of these elements where they can exist independently will produce a different aesthetic outlook, hence creating diversity in animation aesthetics.

From here, the aesthetic uniformity and the impoverishment of diversity in animation is explained as a process whereby photorealism and videorealism became the dominant visual logic of animation film, and all these elements mentioned above were constricted to creating realism. Thus, line and form lost their independence and became mere tools of creating photorealist images, and by the same token, motion and time lost their independence and became the tools of creating videorealism. This can be interpreted as different kind of animatons, each of which is capable of creating meaning on its own, being rendered meaningless so that they can be put into use to achieve intended realism. Lines and forms melt into the photorealistic image, thus become invisible and lose their active agency; and the image based animatons disappear along with them. Similarly, movement mimics the real life and becomes invisible as such, and along with it disappear the motion and time based animatons, which are utilized now to make the flow exactly as it is in a live action film. As analyzed, however, the capacity of animatons to create meaning comes from their being both independent and different from live-action. Thus, animatons based on both image and movement lose their power and agency.

All this is the result mostly of not artistic but industry related reasons. Realist aesthetic lent itself easily to a more streamlined production process which lowered costs. This is discussed here mostly through the practices of Disney, which was the spearhead of this tendency. With the advent of 3D CGI, and again due to the reasons related more to the

market forces than artistic considerations, illusionistic realism consolidated its position as the dominant aesthetic of animation film, pushing all others to obscurity, thus diminishing the diversity in animation aesthetics, and causing uniformity.

In the last part of the thesis, this process through which realism became the dominant aesthetic mode in animation is discussed in the framework of convergence theory. Fast processors and computer technology has made it possible to perform all kinds of design activities with specialized software. This means that, regardless of the end result or the product, people doing different things perform similar activities in front of a computer to do their work, and the products of their efforts are stored as digital data in storage units. This inevitably results in a certain amount of transference between different fields, which causes a convergence in their basic visual logic. Those working in animation industry find employment in advertising, graphic design, game design etc. Since they use the same tools and a similar mindset while making animation films, inevitably, the aesthetics of animation becomes similar to that of advertisements, games etc. Indeed, the aesthetics of all these different realms converge each other to generate a hybrid aesthetic. Because the main principle of all those other fields is realism, that of animation becomes realism too.

Applying the logic of convergence to the animatons, it can be said that, from the viewpoint of visual aesthetics, what happens is a convergence of the animatons. As mentioned above, all animaton types identified in this study, line and form, the image based animatons, and time and motion, the movement based animatons, lose their independence, and become tools of creating realism. In a sense, it can be said that they all converge each other, and melt into a mixture out of which a realist film is emerges. Since the main characteristics of the 3D CGI animations are highly crowded screen image and

continuous trajectory of virtual camera, evoking very much the aesthetics of advertisements and video games, it is possible to say that all the animations in 3D CGI animation merge to create a single kind: spatial animation. After all, both of these characteristics depend on spatiality. An immensely detailed screen image overabundant with objects means filling the two dimensional spatial field of the image with as much detail as possible. Similarly, the continuous trajectory of the virtual camera is all about its spatial movement through the virtual 3D space.

As already mentioned, the reasons why the CGI technology became a spearhead of the uniformity in animation aesthetics are related more to the conjectural and market related forces than to the inherent qualities of technology itself. After all, CGI is just a tool and what is being done with it can only to a certain extent be determined by what it can do. The capabilities of the tool only draw a limit, but they do not dictate what can be done within those boundaries. Indeed, in terms of visual design and animation production, CGI is quite a powerful tool, and, as Manovich also stresses, “illusionism should not be taken for granted as the natural and inevitable goal of computer animation” (Manovich, 1991:18). Anything can be done with CG with any given aesthetic approach and without many of the requirements and limitations of earlier animation making techniques. A film like *Prince Achmed* was not possible at the time it was made without Reiniger’s special talents with the paper and scissors, but today the same can be easily achieved using the CGI tools. Disney needed a well-organized studio with special equipment along with a large crew to make its films, but today those can be done a lot more easily. The fact that CGI is used almost exclusively to create films aspiring for realism has almost nothing to do with its capabilities.

According to Cook, for instance, “a digitally produced videotape differs little from an analog work; only occasionally is it of relevance that its images are digital” (Cook, 1995:105). Going a step further, Manovich interprets the photorealism dominated history of CGI through the first two decades of the 21st century almost as a transition phase. According to Manovich, “like a virus, a photograph turned out to be an incredibly resilient representational code” (Manovich, 2006:27), surviving eras with different technological capabilities and aesthetic preferences. Manovich attributes this persistence more to its flexibility in being mixed with all other visual forms than its indexicality with the real world (Manovich, 2006:27). The crux of the argument states that this resilience established a “visual superstructure” dominated by the photograph and photoindexicality. Although today the “infrastructure” or the “base” of visual culture is computerized, this photographic superstructure has not caught up with it yet (Manovich, 2006:28). That is why most of the visual works made with the computer technology still aspire for and try to emulate photographic reality. Inevitable question that comes to mind is, as Manovich asked it: “What kinds of images will we see when the superstructure finally catches up with the infrastructure?” (Manovich, 2006:42).

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