Beyond Vision – Sergei M. Eisenstein's Aesthetic Theory and Modernity in the Early Twentieth Century

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Introduction

Modernity is a fascinating multiplicity of history, economics, sociology, science, technology, philosophy and art, all of which interacts with each other through both collaboration and confrontation. On the other hand, philosophical schools of thought, primitive and occult traditions, science and technologies, and artistic styles and genres, all experienced their autonomous transformation. As Carl E. Schorske expressed it, "modern architecture, modern music, modern philosophy and modern science – all these define themselves not *out* of the past, indeed scarcely *against* the past, but in independence of the past."[1] This fragmentation of Intellectualism in *fin-de-siècle* Vienna suggests a less definitive attitude and method towards the modernity thesis, which was disintegrated and scattered into multiple disciplines of their own developments and mutual influences, and thus to research on modernity is to research the respective pieces rather than under an integrated Hegelian *Zeitgeist*.

According to Schorske, one *fin-de-siècle* tremor was that "rational man whose scientific domination of nature and whose moral control of himself were expected to create the good society" gave place to "that richer but more dangerous and mercurial creature, psychological man" who defined new man "not merely a rational animal, but a creature of feeling and instinct."[2] At the turn of twentieth century, rational man believed by Eurocentric liberal culture tend to measure psychological man, just as primitive civilization for anthropology and ethnography, subconsciousness for psychoanalysis, affect for experimental psychology, *Klangfarbe* for physics and psychology, mimesis faculty for sociology. Rational man attempt to make these psychological or physiological intuitions traceable and visible to be analyzed.

Both cinema and Sergei M. Eisenstein were born in this *fin-de-siècle* tremor related to all fields of art and science. The content, form, style and mechanism of cinema consist of scientific principles and instinctive experience. Eisenstein's aesthetic theories of film also centered upon this paradoxical co-existences in cinema: the cinesthetic body is the ecstasy and pathos of psychological man as well as the mathematic and empirical method of rational man. However, it is necessary to point out that Eisenstein was limited to his infatuation of primitiveness in aboriginal cultures from a westernized perspective just as the nineteenth-century anthropologists and ethnologists that he admired.

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[1] Carl E. Schorske, *Fin-de-Siècle Vienna: Politics and Culture* (Cambridge: University of Cambridge, 1981), xvii.
[2] Ibid., 4.

Situated in a period of modern times with the intense engagement of mass media, what did Eisenstein think of cinematic content and forms within the modernity thesis? How did he associate other artistic *fin-de-siècle* fragments with cinema? How did he mediate the rational and psychological man in the processes of production and projection? This dissertation thus selects one of *fin-de-siècle* fragments, the polemics of cinematic vision, to embrace the modernity thesis, the episteme of cinema and Eisenstein' aesthetic theories. Rather simply see what happens in a film, cinematic experience is a process of comprehending the remediated magic and a physiologically-initiated multi-sensorium. This experience triggered by vision is a conceptual and sensorial matrix beyond vision, which Eisenstein persistently pondered throughout his life. The study of this matrix of "beyond vision" designates Eisenstein as not only a film artist who centered upon cinematic aesthetics, but also a media theorist who associated cinema with the both collective and individual activities of human beings in the modern times.

This dissertation thus tend to explore the idea of "beyond vision" - a conceptual movement and a multisensory experience reflected in Sergei M. Eisenstein's aesthetic theories and film practices, which are immersed in the artistic trends and social-scientific background of the early twentieth century. It aims to broaden and clarify Eisenstein's query of vision as the primary attribute and specificity of cinema, and interlinks with present-day film theories and relative philosophical schools of thought.

"Beyond vision" entails two layers of meaning and this dissertation is likewise divided twofold: first, the negation of the exclusively visual movement. The synthesis of movement is considered to be the specificity of cinema. If situated within the dialectical principle, this synthesis is the compound and the resolution of the conflict between stillness and movement. At the turn of twentieth century, Étienne-Jules Marey's chronophotography inspired modernist artists to manifest the dynamism in easel paintings initiated by physiological initiative. Stemming from the physiological mechanism, Eisenstein's theory of movement evolved from an affective motion-triggered montage for the purpose of attraction, to a conceptual phenomenon of becoming and being, leading the montage to an intellectual and mental process reflecting a structure of an organic nature of both rationality and sensuality. The process of thought has been structured and embedded into the montage, not to be visually perceived in the abstract, as in early modernist art or

animation, but to be affectively identified by spectators.

Second, "beyond vision" suggests a multisensory or multimodal film experience, as phenomenologists encourage the off-screen senses, especially sound and the manner in which it corresponds with vision. Eisenstein's later theoretical focus has been identified by phenomenologists as the origin of this emotional or sensorial "intelligence" of cinema, which generates a regressive and primitive ecstasy as a complex thought ascribing a form and pattern to the general principles of the arts. Elements of sound and music, such as timbre, overtones, and polyphonic structures, provide visual images with arithmetical precision, which all have been implemented by Eisenstein in an audiovisual construction of cinema. In spite of his initial reluctance to welcome sound and color film, Eisenstein later shifted his technique to reduce the dominance of vision and advocated the symbolic function of color and the multisensory film experience. Both vision and sound equally affect the spectators. That is how Eisenstein understood the perception of film: not merely to see. Rather, cinematic experience is released from a subject-object relation of spectator and screen, and extends to a phenomenological field of wholeness in sense and space.

Rather than focus on politics and cultural studies, this dissertation will frame Eisenstein's aesthetic thoughts into modernity and modern time. This is an explosive era of media, technology, art and music, described by Jean-Louis Comolli as the "frenzy of the visible" since the second half of the nineteenth century, and the effect of "social multiplication," a visual expansion of industrialism. These were centered on the issue of seeing as a proof of movement and seeing as a metaphor for hearing, respectively.[3] On the other hand, modernity as a historical and cultural continuum of cinematic discussion and theory has been the inevitable context and the object of analysis in today's institution of film studies. Artistic innovation and theorization is stimulated not only by the contribution of experimental science and technology, but also primitive nature and occult culture as the modern magic of this time. As in Eisenstein's context, metamorphoses and animism as a literary motif and philosophical concept have been largely re-mediated in various art forms, and simultaneously represent Eisenstein's conceptualization of movement rooted in his assessment and evaluation of the primitive in the modern time.

This thesis will also distance itself from the idea of authorship and the

[3] Jean-Louis Comolli, "Machines of the Visible," in *The Cinematic Apparatus*, ed. Teresa de Lauretis and Stephen Heath. (New York: St. Martin's Press, 1980), 122.

geopolitical biography of Eisenstein in the prevailing work- or author-oriented art studies. Rather, it will follow Friedrich A. Kittler's advocacy of media-specific research as a historical underpinning: The historical and technological evolution of medium or media as the primary factor that drives the author and the theorist, modifying their thoughts and causing them to innovate artistic practices accordingly.[4] Using the idea of "beyond vision," this dissertation aims to connect Eisenstein with the current focuses of film and media studies: media archaeology and genealogy, time and movement, phenomenology, affect and intermediality. All of these focuses define Eisenstein as a film-centered media theorist of an emerging viewpoint, who did not pursue the aesthetic wholeness of his films as his only purpose. Rather, what was more intriguing to him was conceiving of cinema that differs from previous art forms such as music, theater and painting, or what cinema inherits from others with respect to the aspects of representation and reception. To a larger extent, Eisenstein intended to extract and develop concepts, motifs, symbols and senses from cinema and cinematic experience as an autonomous whole that transcends the limits of media, such as vision as a specificity of cinema. This intention persistently influenced Eisenstein's entire cinematic and theoretical life.

Eisenstein admired the plasmatic dynamism of Disney animation, which has been similarly manifested in Emilie Cohl's *Fantasmagorie* (*Fantasmagorie*, Emilie Cohl, 1908) and the rotoscoping of the Fleisher brothers as a form of popular "antirealism". Animation has actively explored the essence of lifelike time flow and motion, which is reflected in its material and perception. This is similar to German Absolute Film, which externalized the dynamism of early avant-garde painting with synthetic movement. Thus, the first three chapters of this dissertation, in addition to analyzing Eisenstein's film works, also refer to the representation of metamorphoses and animism of animation in the early twentieth century. Having emerged alongside cinema in the late nineteenth century, animation — one type of moving images — has not been brought into theoretical and philosophical consideration. Concerns of the aesthetic purpose and strategy of early animation will meanwhile stimulate analysis of the question of the tendency to pursue motion and gesture mimesis of humans in today's animation and Computer-Graphic effect industry.

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[4] See Friedrich A. Kittler, *Gramophone, Film, Typewriter*, trans. and introduction by Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999).

Theoretical Perspective and Delimitation

The Multiplicity and Paradox of Modernity

Anthony Giddens provides a tentative definition of the origin of "modernity" on the first page of his book, entitled *The Consequence of Modernity*: "modes of social life or organization which emerged in Europe from about seventeenth century onwards and which subsequently became more or less worldwide in their influence."[5] He situates modernity specifically at the beginning of this period of time and in a geographical location, while he was embroiled in the polemics concerning the demarcation of the end of the modern period. Lyotard and Baudrillard define the period beginning in the mid- to late twentieth century until the present time as "postmodernity," which has been negated by Zygmunt Bauman, Ulrich Beck and Anthony Giddens, however, who all consider it as remaining within the pattern of modernity.[6] Modernity advocates novelty and disrupts the old, but it becomes "the modern past" in the view of the postmodernist. This conflict with respect to modernity is very similar to the modernists' opposition to pre-modern society and culture.

Marshall Berman divides modern times into three phases based on the human experience of modernity. The first phase begins at the outset of the sixteenth century and extends to the end of eighteenth century, when people had little awareness or clear understanding of the gradual emergence of modernity in their lives. The second phase begins with the French Revolution in the 1790s and continues to the end of nineteenth century, when the public sharing of feelings increased in the revolutionary age, being further enhanced through the later innovation of mass media. The third phase encompasses the entire twentieth century until the present day. Modern arts and thoughts, which demonstrate individualistic and fragmentary traits, marked the beginning of this age and have virtually expanded to the developing world.[7]

To constrain the time frame of modernity for the purposes of this dissertation, the period has been limited having reference to Berman's classification into three phases, from the time of emergence of cinema in the late nineteenth century until the

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[5] Anthony Giddens, *The Consequences of Modernity* (Cambridge: Polity Press, 1990), 1.

[6] See Zygmunt Bauman, *Liquid Modernity* (Cambridge: Polity Press, 2000); Ulrich Beck, *Risk Society: Towards a New Modernity* (London: Sage Publications, 1992) and Anthony Giddens, *The Consequence of Modernity* (Cambridge: Polity Press, 1990).

[7] Marshall Berman, *All that is Solid Melts Into Air: The Experience of Modernity* (London, New York: Verso, 1983), 16–17.

first half of twentieth century, which also encompasses Eisenstein's entire lifetime (1898–1948). This demarcation of the beginning and the end of the period is rooted in the attempt to explore how Eisenstein, as a representative filmmaker and theorist, has been influenced by the previous and present period of social change, art and cinema, and, conversely, created his own films and aesthetic theories which contribute to later cinematic methods and academic tendencies.

The notion of modern art is primarily situated in Berman's third phase of modernity, including the birth of cinema. A few years before the twentieth century, cinema and other forms of art undoubtedly have been influenced by the development of science, technology and media in the second time phase. The commencement of this time frame is chosen as the era when social-scientific and artistic groundings have matured and have been prepared for the birth and the innovation of cinema. Eisenstein's theoretical and aesthetic formation absorbed both cinematic and "extra-cinematic" sources. The end of the period is based on the prevailing dichotomy of classical and modern cinema, "a genuinely postwar creation," which confines the realm of discussion within the so-called "classical cinema."[8] However, a strict division of time from beginning to end is plausible in order to embrace the intact phenomena and persons within a certain period of time, since they contributed to the formation of periodic traits after their lives. Some of them, such as Eisenstein, crossed the boundary of classical–modern division, as will be explained in the following chapters.

At the beginning of the chosen period, it is important to note some scientists and scholars who made important achievements in the second half of the nineteenth century. Edward B. Tylor began his anthropologic research in Mexico in 1850 and published his two-volume *Primitive Culture* in 1871. Hermann von Helmholtz published *On the Sensations of Tone as a Physiological Basis for the Theory of Music* (*Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik*) about "*Klangfarbe*" in 1863 and *Handbook of Physiological Optics or Treatise on Physiological Optics* (*Handbuch der Physiologischen Optik*) concerning the perception of motion through a physiological experiment in 1867. Thus, the delimitation of the period should not be strictly interpreted, since the second half of the nineteenth century was when the various schools of thought were conceived and the results of scientific research became available, which are both

[8] Ibid., 21.

significantly related to developments during the next time phase.

In this time frame, technology supported the emergence of cinema and other artistic forms. Through experimental science, scientists like Max Wertheim and Hermann von Helmholtz studied the principles of physics and physiological unconsciousness of sound and vision. In addition, Etienne Jules-Marey and Edward Muybridge's chronophotography triggered the early theoretical foundation of film and new aesthetic perspectives. In the third phase, modern art and individual creativity, in addition to that of Eisenstein, have been continually inspired and motivated by science and technological innovation in terms of artistic technique and means of manufacture. This scientific "invasion" drove art and music in the pursuit of empirical precision and evidence, such as Helmholtz's experiment to measure the periodic sound of "*Klangfarbe*" and the Lev Vygotsky and Alexander Luria's psychological observation and experiment of synaesthesia, which is now accessible with the aid of technological devices to measure the clinical synaesthesia.

Psychology and psychoanalysis also played an important role in the theoretical and conceptual foundation of the arts. Just as scientists were making the micro-physical world visible, the effect of Sigmund Freud's psychoanalysis was to make the unconscious consciously perceivable and analyzable. A few years after *The Interpretation of Dreams (Die Traumdeutung*) was published in 1900, Hugo von Hofmannsthal, who was influenced by Freud's writings, applied psychoanalysis to literary creation. He wrote the drama, *Elektra*, which was later adapted into Richard Strauss' libretto of the same name. At the same time in Russia, Pavlov's reflexology, the predominant theory of psychology, and Taylorism in business management became the theoretical bases of theatre and acting advocated by Vsevolod Meyerhold's biomechanics. In the 1920s, Vygotsky criticized reflexology, and his later research on affect raised Eisenstein's interest in the affective function of art on the recipient. Luria's theory of conflict contributed to Eisenstein's expressive movement as a rectification of Meyerhold's theory of acting and theatre. Constructivism, which favors movement and spatial relations, aside from its influence on almost all the artistic realms, inspired Eisenstein's insistence on the dynamism in stillness.

On the other hand, modernity has been questioned as to the viability of transforming human society and the individual mind. The second time phase, differing from the first period, was to reject and fragment from the former feudalism

and agrarian culture by means of vibrant capitalism and industrialization, which consequently demanded the professionalization and rationalization of human beings for the purpose of efficiency. Modernity has been criticized by Karl Marx for its capitalism and by Max Weber for its rationality. In particular, Henri Bergson associated this modern standardization with the technological mechanism of cinematography, which formed the basis of the later Deleuzian epistemological discussion of cinema. This issue will be further canvassed in the first chapter.

The expansive ethnographical and anthropological enthusiasm for early forms of religion and primitive culture have been salient in both the second and the third time phases, such as Edward B. Tylor on animism, James Frazer on mythology and comparative religion, and Lucien Lévy-Bruhl on primitive mind, for example. Tylor and Lévy-Bruhl typically represented the evolutionist tendency in the modern era with the depreciation, antagonism and phobia of primitive and early religious forms. Nevertheless, the savagery of antiquity was considered in depth by Eisenstein as the affective function and sensory impulse required in order to manufacture cinema and the animation of Disney. James Frazer and Walter Benjamin's mimesis faculty similarly advocated mimesis as the rudimentary essence of human beings. This theory prevailed at that time and endures to this day in the form of modern magic and the commodity fetish, which Karl Marx would consider the result of losing contact with products in the industrialized society. The primitive culture mediated by cinema became the alternative episteme against the rationalization of modernity. One example is Mickey Mouse, which both Eisenstein and Benjamin regard as the opposition to American standardization.

To select the end of the time period in this dissertation is to question the dichotomy of classical–modern in cinematic history. In *Screening Modernism,* András Bálint Kovács identifies three dichotomies of classical and modern thought: the old and the new, the valid and invalid, and the different aesthetic models such as organic and natural for the classical, and actual, intellectual and sentimental for the modern, as postulated by Friedrich Schiller.[9] "Modern" means "the value of the actual or simply the new as opposed to the old or bygone." The antique and the German classical regard the eternal value of the aesthetic model of perfection.[10] This

[9] András Bálint Kovács, *Screen Modernism: European Art Cinema, 1950-1980* (Chicago and London: The University of Chicago Press, 2007), 10.
[10] Ibid., 9, 15.

opposition began to diminish until the late 1970s, since the arrival of the "postmodern" period caused the "modern" period to represent only the era of modernity from the late nineteenth century.[11]

The concepts of "modern" and "modernism" overlap in time and meaning but differ from each other. Clement Greenberg emphasizes modernism as the historical phenomena which "designates an art-historical period characterized by the cult of the modern (actual) and certain general aesthetic features, such as abstraction or self-reflection," rather than the difference between the old and the new.[12] Modernism is to reflect and to criticize the past, to create new value but not to recognize the supremacy of the new over the past. For Greenberg, modernism is a transitory, organic development of history unlike the modern, which radically diverges from the old.

There were not oppositional relations among "classical", "modern" and "modernism" in early film history, but rather filmmakers and theorists aimed to demonstrate film as art of both the classical and the modern period. In the early cinematic modernism of the 1920s, whether it was the theatric means of German expressionism, the "pure form" of absolute film or the "representation of mental states" of French impressionism, all attempted to establish "cinema's *own* artistic tradition."[13] The concept of "modern cinema" appeared in 1940s, and film history has bifurcated into the distinction of classical and modern cinema in the early 1950s. This bifurcation of the classical and the modern is based on three criteria: "the aesthetic and technical evolution of cinema" by "evolutionists," or the stylistic and ideological alternative in the film history by "style analysts." This was followed by a third point of view originating from Gilles Deleuze, who considered modernism as "the actualization of a capacity of the cinema to represent a certain way of thinking," virtually obtained in prewar classical cinema and validly actualized in postwar modern cinema.[14] His two-volume *Cinema* was divided into movement-image and time-image. Deleuze regarded classical cinema with an action-oriented "sensory-motor circuit," while modern cinema is mental-oriented "crystals of time."[15]

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[11] Ibid., 10.
[12] Ibid., 12.
[13] Ibid., 16-20.
[14] Ibid., 33-34.
[15] Ibid., 41-42.

This oppositional relation has changed over time: the "enemies" of the early cinematic modernism in the 1920s were literature and theatre, since the goal was to be independent from these two art forms. With the arrival of the modernism of the late 1950s, cinema struggled for "mental representation" in contrast with the classical cinema of chronological and logical narratives.[16] This begs the question: what of the intervening period from the 1920s to the 1950s, which spans the period of the silent film to the sound film and encompasses Eisenstein's entire productive catalog of film and montage theories? Is cinema in these thirty years, as Deleuze asserted, all "sensory-motor circuit" without mental representation, without the "pure optical and sound situations" of modern cinema?

The controversial division of classical and modern cinema parallels the division of modern and postmodern. As Eric Rohmer observes, "Classicism is not behind, but ahead" since the classical must be proven to be invalid in order to testify to the validity and the actuality of the modern. However, cinema has not yet reached its "solid aesthetic norms."[17] As set out in the definition of modernism given above, *modernism comes periodically*. Greenberg's insists on its self-reflection and self-criticism, just as Deleuze insists on the mental form of cinema. Both of these may be found in prewar cinema that will be examined using Eisenstein's films and writings in the era of classical cinema. These examples of his works bear the attitudes and ideas of modernism, connecting both the modern time within which he lived and the period of modernism after his life ended.

Queries of Visibility as the Specificity of Cinema in the Early Twentieth Century

Representing media specificity in the eighteenth century, in 1766, Gotthold E. Lessing's *Laocoön* identified and limited the specific modality and features of media, such as sculpture as visual and spatial, whereas music is aural and temporal. To identify a certain character of a medium is a normative doctrine of media specificity and purity. Painting is considered to be pure optical art ranking in the first class of aesthetics, as compared to opera or cinema, both of which employ different forms of art and sensory channels. Greenberg claims the visual arts in the twentieth century has been expected to fulfill "the desire of purity" to "put an ever higher premium on

[16] Ibid., 54.
[17] Eric Rohmer, "L'âge classique du cinéma," *Combat* (15 June 1949). Cf. Kovács, *Screen Modernism*, 35.

sheer visibility and an even lower one on the tactile and its association."[18]

In the early twentieth century, film theorists attempted to set a special domain for cinema with the emphasis on visibility. These included Siegfried Kracauer and Béla Balázs, who both advocated the close-up as the unique cinematic technique for cinematic specificity, and Rudolf Arnheim who claimed the "defects" of film images must find their own advantage to compete with paintings. Nevertheless, in spite of engendering their theories of the visual specificity of cinema, some also considered the non-visual senses, spaces and meanings similar to Eisenstein and later film theorists.

Hugo Münsterberg's *Photoplay: a Psychology Study* began with an overview of film history with a unity of technique (outer) and aesthetic movement (inner), and utilized psychological analysis in the viewing of film. Noticing the loss of color, sound, and actual movement, he regarded the beauty of film not lying in its mechanical process—to imitate the world—but to "transform the world so that it becomes a thing of beauty is the purpose of art. The highest art may be furthest removed from reality."[19] This isolation from real life makes film, as an independent art, different from theatre. Spectators will compensate for these "shortages" in cinematic images through their psychological involvement engaging attention, emotion, memory and imagination, in particular the "involuntary attention" oriented and decided by the director.[20] Thus viewing the cinematic images is a not a purely visual process, but rather the mental faculties of the spectator affect the spectator, resulting in a full gestalt.

In *Film as Art*, Rudolf Arnheim mentions the non-visual senses stimulated in silent films, such as smell, equilibrium or touch that are "never conveyed in a film through direct stimuli, but are suggested indirectly through sight."[21] Similar to Eisenstein's *Statement* on sound, he referred to the silent rhythmic music and dance scene in Jacques Feyder's *The New Gentlemen* (*Les Nouveaux Messieurs*, 1929). He rejected the distraction of real sound that may drive spectators' attention from the

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[18] Greenberg complained that he did not advocate for the purity, but described the phenomena of the desire of purity in American culture. See Richard Shiff, "Breath of Modernism," in *In Visible Touch: Modernism and Masculinity*, ed. Terry Smith (Chicago: University of Chicago Press, 1997), 206.

[19] Hugo Münsterberg, *The Photoplay: A Psychological Study* (New York: D. Appleton and Company, 1916). Rpt. New York: Dover Publication, 1970. Foreword Richard Griffith. All quotations cited in this introduction are from the 1970 edition, 62.

[20] Ibid., 32-33.

[21] Rudolf Arnheim, *Film as Art* (Berkeley, Los Angeles, London: University of California Press, 1957), 271.

silent yet rhythmic images, stating that "an audible occurrence is transposed into something visual; and thus instead of giving the occurrence 'itself,'" and to "make visible something that is not visual, but by so doing, actually strengthens its effect."[22] As Münsterberg found, silent films define and interpret artistic characteristics in a manner that yields the ability to transform the world. The audible occurrence has been transformed through the principles of sound and rhythm into the visual images of metaphorical and indirect sound.

In *Theory of the Film*, Béla Balázs analogized the close-up of a face with a melody of a certain limited duration, rather than the entire time. The image of the face occupies not merely a material and visible space, but the invisible "emotions, thoughts and ideas" which exist beyond the spatial visibility:

> Now facial expression, physiognomy, has a relation to space similar to the relation of melody to time. The single features, of course, appear in space; but the significance of their relation to one another is not a phenomenon pertaining to space, no more than are the emotions, thoughts and ideas which are manifested in the facial expressions we see. They are picture-like and yet they seen outside space; such is the psychological effect of facial expression.[23]

To perceive emotion, thoughts and ideas outside of space implies Balázs' phenomenological tendency. As he stated, "Good close-ups are lyrical; it is the heart, not the eye, that has perceived them."[24] To perceive close-ups, the "heart" is a mental experience, a combination of physical and intellectual activities that coincides with Eisenstein's idea of the "feel" experience of an overtonal montage discussed in the fifth chapter.

Early film theorists of the essentialist tendency looked to the medium specificity of cinema to prove it to be different from other visual art forms like painting, photography and theatre. However, they all suggested that *film experience is not a purely visual activity, but also involves the physiological and psychological activities of the spectator integrated with non-visual experience of senses, emotions and memories*. Sharing these commonalities with early film theorists, Eisenstein's idea of "beyond vision" was a similar attempt to probe the gestalt psychology of the spectator like Münsterberg, the musical rhythm of montage like Arnheim, and the

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[22] Ibid., 276.
[23] Béla Balázs, *Theory of the Film: Character and Growth of a New Art*, trans. Edith Bone (New York: Arno Press and The New York Times, 1972), 62.
[24] Ibid., 56.

thought and emotion in the non-material space like Balázs. However, it later developed into a more complex system of dialectical conception and multisensory simultaneity.

Multisensory Approach of Intermedia Studies

When Alexander Scriabin composed his light symphony *Prometheus: The Poem of Fire*, he envisioned a new instrument named "*Luce*," a color organ that was capable of converting sound into colored light. It is premised on projecting the timbre into the visual performance and sharing it with the audience on site, and to release the synaesthetic effect of musicians' either physiological or imaginary state. Today, with the aid of digital devices, Scriabin's expectation has been realized, reflecting interaction between sight and sound, and somehow fulfilling the desire to make the acoustic experience be seen.

We now find ourselves saturated in a time of intermediality, in spite of the theories of medium specificity and supremacy of purity which have previously been mentioned. Scholars have suggested multisensory access to the media experience, contrary to the ideas of the purists. Marshall McLuhan posited that television, a traditionally visual medium, was a tactile one, since electricity can extend human beings' "sensory nervous system" to connect with each other.[25] W.J.T. Mitchell, echoing McLuhan, contends there is no pure visual medium, but a mixed one: a mixture of sensory modalities, not only the media largely regarded as "in-between", such as opera, theatre and film, but also including those such as handmade painting, which bears artist's touch, "encoded, manifested, indicated through non-visual senses in its material existence."[26]

Ágnes Pethő raises the notion that "the ecosystem of contemporary moving images should be understood not as a unified digital environment, but as a highly diversified, 'multisensory milieu'," [27] since Scriabin anticipated that *Luce* would illuminate the audience through both sight (eye-seeing) and sound (timbre), and possibly touch and smell. The "multisensory milieu" in intermedia studies is to challenge the dominant pro-text *ekphrasis*, through which Peter Wagner observes

[25] Marshal McLuhan, *Understanding Media: the Extensions of Man* (London: Ark, 1987), 354.
[26] W. J.T. Mitchell, "There are No Visual Media," in *Media Art Histories*, ed. Oliver Grau (Cambridge, MA: MIT Press, 2007), 401.
[27] Ágnes Pethő, introduction to *The Cinema of Sensations*, ed. Ágnes Pethő (Cambridge: Cambridge Scholars Publishing, 2015), 2.

that the fear of the irrationality of the senses is expected to be cured in order to "translate[s] the pictorial into readable, thus controlling and encircling it with words."[28]

Intermediality has been introduced to the discussion, while being rooted in an intertextual approach that echoes the prevailing "textualization" and "reading cultures" predominant throughout the 1970s to the early 1980s.[29] Joachim Paech in the late 1990s states this tradition has been enhanced by Hansen-Löve's formalist and Hess-Lüttich's semiotic works.[30] Jürgen E. Müller later introduced Gotthold E. Lessing's *Laocoön* and Wagner's *Gesamtkunstwerk* to intermedia studies, reflecting a concern with respect to inter-art studies, which intermediality has neglected.[31] In his article "Sound and Senses" in 1986, Lawrence Sullivan advocates his mode of "sensing" in contrast to "reading" culture. He considers sensorium as a "social fact" embedded in the cultural memory. A symbolic system, named "cultural synaesthesia", is employed to rectify the dominance of the social scientific account of "meaning."[32]

The framework of Claus Clüver, Leo Hoek and Eric Vos divides the word-image relations into four categories: transmedial relation (transposition, e.g., *ekphrasis*), multimedia discourse (juxtaposition, e.g., an illustrated book), mixed-media discourse (combination, e.g., comic strips) and intermedia discourse (union or fusion, e.g., typography).[33] This taxonomy does not include some less common and more subtle relations, and primarily gauges the degree of overlap of two media in space and the transformation of content. However, it could be valuable to compare it with the forms of sensorial relations. Scriabin's sight-sound experiment suggests stimulation from sound to sight in a productive process; McLuhan and Mitchell advocate visual experiences of one medium entailing an experience of touch in a receptive process. A multisensory approach to media research may thus comprise two

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[28] Peter Wagner, *Icons, Texts, Iconotexts: Essays on Ekphrasis and Intermediality* (New York: de Gruyter, 1996), 31.

[29] David Howes, "Scent, Sound and Synaestheisa: Intersensoriality and Material Culture Theory," in *Handbook of Material Culture*, ed. Christopher Tilley, Webb Keane, Susanne Küchler, Michael Rowlands and Patricia Spyer (London, Thousand Oaks, New Dehli: SAGE Publications, 2006), 162.

[30] Ádám Dávid, "Montage of scents. Intermediality and 'intersensuality' in Patrick Süskind's and Tom Tykwer's *Perfume*," in *Words and Images on the Screen: Language, Literature and Moving Pictures*, ed. Ágnes Pethő (Cambridge: Cambridge Scholars Publishing, 2009), 89.

[31] Ibid., 89.

[32] Howes, "Scent, Sound and Synaestheisa," 162.

[33] Leo H. Hoek, "La transposition intersemiotique: Pour une classification pragmatique," in Leo H. Hoek and Kees Meetrhoff (eds.): Rhetorique et image. Textes en hommage a A. Kibedi Varga (Amsterdam: Atlanta 1995), 65-80. See Claus Clüver, "Intermediality and Interarts Studies," in *Changing Borders-Contemporary Positions in Intermediality*, ed. Jens Arvidson, Mikael Askander, Jørgen Bruhn and Heidrun Führer (Lund: Intermedia Studies Press, 2007), 26.

methods: the inspiration of one sense to another, like timbre, which musicians use a musical tone for a purpose of symbolic color; or the multisensory experience of one medium, such as film viewing, which involves sight, sound and touch. This mirrors the dual coverage of intermedia studies. For example, film as a medium includes literature, music and theater, but also involves interaction with other media in its production, for example, adaptation from literature.

However, the multisensory approach functions as the alternative of the demarcation of intermedia relations, which were heavily based on space and material. Multisensory experience may occur in a sequence, simultaneously, or in both ways interchangeably. In silent films, montage images stimulate the symbolic rhythm and tonality of music through affective function, as Arnheim considered in Jacques Feyder's *The New Gentlemen*, and as Eisenstein wrote in *Statement on Sound*. Both of these works call for the abstract and anti-naturalist beauty of silence. With the arrival of sound, films become an audiovisual experience with both modal channels accessible to spectators. Many filmmakers and theorists, such as Arnheim, complained that with the addition of sound, cinema descends to "shallow realism and theatricity."[34] In changing his attitude concerning sound and transitioning from silent to sound cinema, Eisenstein created a synaesthetic experience of sound presented as actual materials to be heard in order to correspond, contradict or balance visual images. The "inner rhythm" of montage is never lost. Cinematic experience became the multisensory compound that Eisenstein suggested that one "feel", rather than "see" or "hear."

Notes on the Sources of Eisenstein's Writings

Eisenstein's extensive writings provide scholars with plentiful and original research sources, but meanwhile confound them with the less organized structure, repetition or subversion of his previous arguments. In order to capture Eisenstein's own thoughts and original intentions about his works, published or unpublished, fulfilled or unfulfilled, this dissertation relies on four volumes of his selected works published by British Film Institute, which have been translated into English. Richard Taylor, Jay Leyda and Naum Kleiman, all internationally well-known as the leading authorities on Eisenstein studies, edited, directed and contributed to these volumes.

The first and the third volumes comprise a selection of important writings and

[34] Kovács, *Screen Modernism*, 53.

speeches in a chronological order, beginning with his first published article in November of 1922 to his publications to the end of 1934, and then his writings from January 1935 until February 1948. These two volumes seamlessly present the shift of two periods in the political environment in the Soviet Union. Constructivism, with the "considerable freedom of artistic expression" in the 1920s was replaced by the constraints of socialist realism "both on the subject matter and the style of artistic work" in 1930s, which was reigned by the Stalin's tight grip of terror.[35] Although the political atmosphere is not the theme of this dissertation, it will never be a negligible factor, possibly influencing the publicity and focus of Eisenstein's writings and speeches. The first volume, published in 1988, shows the formation of Eisenstein's ideas of montage and sound in his early life, both of which were later adapted and have evolved into more complex forms. Most importantly, the volume includes "The Montage of Attractions", "The Montage of Film Attractions", "The Dialectical Approach to Film Form" and "The Fourth Dimension in Cinema." The third volume, which was published in 1996, contains a high political proportion, yet compiles his lectures to the students of film direction at the State Institute for Cinema. In these lectures, Eisenstein demonstrates a pedagogical gift for elaborating on the ideas he has developed for his own film works, for example, "From Lectures on Music and Color in *Ivan the Terrible*." It also includes some of his thoughts respecting semiotics and organic unity acquired through his direction and understanding of Wagner's opera in "The Incarnation of Myth."

The second volume, published in 1991 and entitled *Towards a Theory of Montage*, compiles Eisenstein's often fragmentary and unfinished writings about montage in chronological order from the 1930s to the 1940s, while many articles are interwoven in different time periods.[36] This order also indicates the progressive formation of Eisenstein's montage theory from a montage in single set-up cinema, to multiple set-up cinema and then the sound-film montage. This volume is the primary and key source in which Eisenstein introduced his "anatomy" and generalization of the compositional elements of an image, and then integrated the simultaneous elements of art in general, such as color and sound, into a polyphonic structure.

As claimed by Eisenstein himself, the fourth volume, published in 1995, aims to

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[35] Al LaValley and Barry P. Scherr, introduction to *Eisenstein 100: A Reconsideration,* ed. Al LaValley and Barry P. Scherr (New Brunswick: Rutgers University Press, 2001), 2.
[36] Richard Taylor, "Note on Sources," *SWII*, xi-xii.

combine "autobiography and practical examples" to make "a high-flown theoretical abstraction concrete."[37] Primarily written in 1946, none of these articles was published in the director's lifetime. However, they are important complementary sources on some specific issues, such as color, particularly in the unfinished Pushkin project, and his variations of interest in drawings towards plastic metamorphoses.[38]

Reference is also made to Jay Leyda's translation and editing of Eisenstein's *The Film Sense* (1942). *The Film Sense* has been almost completely canvassed by "Vertical Montage" in the *Towards a Theory of Montage*. Jay Leyda, as a former student of Eisenstein, provides most of his exclusive material and illustrations in this book, except the pull-out page including twelve still shots with Prokofiev's piano-version of the orchestra score, which instead is available in *Selected Works Vol.2*. Leyda's *Eisenstein at Work* (1985) illustrates the blueprint of Eisenstein's Pushkin project and the color use in *Ivan the Terrible, Part II* (*Ivan Grozniy,* Sergei M. Eisenstein, 1958). Further, *Eisenstein on Disney* (1988) elaborates on Eisenstein's thoughts concerning metamorphoses and animism found in Disney animation. *Eisenstein on Disney* was reprinted in 2012 with an introduction by Oksana Bulgakowa. Despite duplicating some content in the select works series, X. Danko's translation of *Sergei Eisenstein: Notes of a Film Director* (1959) is also another helpful resource of Eisenstein's thoughts on color and his collaboration with Prokofiev.

Nonindifferent Nature (1987), translated by Herbert Marshall, represents Eisenstein's synthesis of his creative art and theoretical analysis in the final decade of his life, concerning the "*pathos* constructions" and vertical montage reflected in "On the Structure of Things," "Once Again on the Structure of Things," and "The Music of Landscape and the Fate of Montage Counterpoint at a New Stage."[39] As previously mentioned, the three articles for *The Art of Cinema* in 1940 entitled "Vertical Montage" have been compiled in *The Film Sense*. The rest, written from 1945 to 1947 and presented in *Nonindifferent Nature*, include his reflections on his collaboration with Prokofiev, formatting his "emotional landscape," and providing

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[37] Sergei M. Eisenstein, in a Foreword in *Beyond the Stars* by Naum Kleiman who quoted from a manuscript in Eisenstein's archive. Sergei M. Eisenstein, *Beyond the Stars: The Memoirs of Sergei Eisenstein*, ed. Richard Taylor, trans. William Powell, vol. 4 of *S.M. Eisenstein: Selected Works* (London: British Film Institute, Calcutta: Seagull Books, 1995), xii.

[38] In the footnotes, these four volumes will be abbreviated as *SWI*, *SWII*, *SWIII* and *SWIV*.

[39] Herbert Eagle, introduction to *Nonidifferent Nature*, trans. Herbert Marshall (Cambridge: Cambridge University Press, 1987), ix.

"the mutual immersion of man and nature into the other."[40] *Immoral Memories* (1983), another of Herbert Marshall's translations, includes some of Eisenstein's articles such as "Intellectual Cinema" that the fourth volume of Selected Writings, *Beyond the Stars: The Memoirs of Sergei Eisenstein*, does not canvass, yet are invaluable sources.

Chapter Outline and Preview

Time, Movement and Abstraction from Chronophotography to Expressive Movement

The first chapter of this dissertation begins with Etienne-Jules Marey's physiological interest in animal locomotion and movement, which influenced the abstraction and dynamism of the first avant-garde movement and German Absolute Film at the turn of twentieth century. At the beginning of his theoretical life, Eisenstein's expressive movement was likewise embodied in the comparable physiological motion of conflicts, which through acting, revealed his persistent interest in affective function and dialectical principles. His interest in affect later caused the movement to be disembodied and to evolve into the montage of attraction as the methodology and conceptualization of movement and intervals in cinema.

Metamorphosis as the Conceptual Movement

The second chapter elaborates on metamorphosis as a state of dynamic changing and becoming. Metamorphosis reflects a collision of the modern and the primitive contained in the themes and mechanism of early film and animation. In its artistic style, it accords with the idea of conceptual movement which varies from the figurative and linear variation in animation that Eisenstein exalted in Disney, to the montage of attraction, in which the metamorphosis is not manifested through the variation of lines, but "the invisible line" indicating the process and movement of montage. Metamorphosis also points to the shift of political identities and characters in Eisenstein's first film, *Glumov's Diary* (*Dnevnik Glumova*, Sergei M. Eisenstein, 1923). Eisenstein's montage of attraction, the instant of ecstasy, thus represents the instant of metamorphosis dematerialized and disembodied into a conceptual and

[40] Ibid., xx.

invisible movement between shots. This stands in contrast with Vertov's idea of Kino-Pravda, which asserts that reality inhabits a single shot.

Animism, Mimesis and Cinema as the Modern Magic

The third chapter extends the plasmatic metamorphoses to the humanized characters in Disney animation. Animism is the next stage of conceptual movement: a soul endowed on fictional character through movement, considered within the philosophical and ethnographical discussion of animism and mimesis. Both animism and mimesis are the residues of primitive culture in modern society, but Eisenstein and present-day philosophers advocate for a reassessment of barbarism and primitiveness. This reconsideration is not cultural regression, but an epistemological alternative, mediated by cinema in particular as another modern magic. Cinema uses modern technology to enliven and humanize an inanimate object or an animal in animation, and moreover moves to non-animalistic animism phenomena: humanized electricity and artefacts.

Off-Screen Experience of Cinema: The Arrival of Sound and Synaesthesia

The fourth chapter aims to clarify the philosophical and theoretical foundation of Eisenstein's significant shift in his cinematic life from the conflicts and attraction in montage to the synaesthetic and polyphonic structure of films. This shift is a further exploration of "beyond vision" into the realm of sound and music as the innovative invisibility of vision. Eisenstein's shift was based on several sources: the arrival of sound in cinema; the heritage of Wagner's *Gesamtkunstwerk*, the synaesthetic correspondence of French Symbolists, the experimental psychology of Vygotsky and Luria, and the idea of "lack of perspective" in music and art at that time. Synaesthesia as a multisensory experience of cinema stimulates the other senses in addition to sight, connecting Eisenstein's cinematic theories with later phenomenological film studies.

The Invisible Color: the Symbolic and Affective Coloration

The fifth chapter begins with an overview of timbre as a form of synaesthesia,

mingled with experimental science and the occult tradition engaged by musicians, artists, scientists in the early twentieth century. Though generalized mysticism and strict one-to-one correlation influenced Eisenstein's symbolic color theory, he later discarded these concepts. Visual colors in *Ivan the Terrible, Part II* (1958) contain timbre's invisible symbolic and affective function, being the "second" and "third" meanings Roland Barthes found in Eisenstein's films. Color becomes an autonomous element disassociated with object, taking part in the polyphonic structure in montage with music and dance, all of which contribute to the thematic meaning and aesthetic whole.

The Synchronicity of Senses and the Synthesis of Dialectic Principle

The last chapter illustrates the combination of multisensory (overtonal and vertical montage) and dialectic principles in the dynamic movement. In his 1929 article, "The Fourth Dimension in Cinema", Eisenstein applied musical theory to the taxonomy of montage type, in particular the overtonal montage, which contains a movement constructed through a combination of Marxist social conflicts in content and the contrapuntal relation between image and music in form. The synchronicity of senses perceived through Eisenstein's "felt" experience has developed into organic unity and inner harmony in his vertical montage, a polyphonic structure from a single set-up to a multiple set-up, and finally to the audiovisual. The "invisible line" — the path of the eye moving as the instruction of seeing — is concealed in a single shot or a painting. In the vertical montage, integrated with acoustic lines, it generates "a total perception" as the multisensory and psychological experience of cinema beyond vision.

Chapter 1: Time, Movement and Abstractness from Chronophotography to Expressive Movement

> In my basic cast of mind I have always been more preoccupied with movement – mass movements, social movements, dramatic movement - and my creative interest has always been more keenly directed towards movement itself, towards the actions and deeds as such, rather than towards the person performing them.
>
> – Sergei M. Eisenstein, "On the 20th Anniversary of the October Revolution"

Paul Virilio, through his original concept known as dromology, claims the Industrial Revolution is in fact a "speed revolution," which logistically modernizes tourism transitioning from the pre-existing discursive experience of travel.[1] Jules Verne's *80 days Around the World*（*Le tour du monde en quatre-vingts jours*）reflects exactly this transformation of travel at the advent of modern life. In his introduction to this novel, Roger Gardinal noted that travel experienced a historical shift from the Romanic to the late Victorian age, emerging as the tourism of modern society. This shift was triggered by developments in railways and steamships, which made the most remote sites accessible, and increased the demand for punctuality and location-oriented travel. As quoted by Gardinal, Syed Manzurul Islam underlined the appearance of sedentary travelers — "location swappers" — in his book, *The Ethic of Tourism*:

> they might travel in the fastest possible vehicle and cover a thousand miles yet they remain where they are, because they are on a rigid line which keeps them grounded in the enclosure of their home," in contrast with the nomadic travelers in Romanic era who experience time and movement regardless of the delay and discursiveness, seeking the "the openness of the encounter with the other and the process of becoming."[2]

The adventure, which lasted eighty days, involves two contradictory parts: the openness of the encounter with the "other" and the completion of the trip or target

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[1] See Paul Virilio, *Speed and Politics* (Los Angeles: Semiotext(e), 2006).

[2] Roger Gardinal, introduction to *80 days Around the World & Five Weeks in a Balloon* by Jules Verne (Hertfordshire: Wordsworth Classics 1994), x-xi.

within a time limit. Henri Bergson claimed that "openness" and "becoming" is the solution to sideline the machine culture that the clock represents: fragmentation, homogeneity and efficiency. Time, one of the key philosophical concepts, has transformed into a mechanical and spatialized clock for social disciplines in modernity. Bergson then detected the problem of mechanical time, which divides time into a series of discrete, static instants or moments required and produced by human beings' rationality. However, for Bergson, time is of indivisible duration, exempt from mathematical measurement in space. Duration (*la durée*), Bergson's fundamental philosophical concept, refers to the endless flow of consciousness triggered by intuition rather than rationality:

> For our duration is not merely one instant replacing another; if it were, there would never be anything but the present - no prolonging of the past into the actual, no evolution, no concrete duration. Duration is the continuous progress of the past which gnaws into the future and which swells as it advances. And as the past grows without ceasing, so also there is no limit to its preservation.[3]

Bergson's proposal of duration is to subvert linear, identical "clock" time, which decreases life movement, agglomerates time into a spatial material and follows the predictable. Likewise, Walter Benjamin criticized rationalized time as being "homogeneous" and "empty."[4] There was a nuanced fear and anxiety about the rationalization of "travel" time accompanied the immersion of clock time in the proliferation of industrialized personal life in the mid-nineteenth century. To facilitate the punctuality of railway dispatch and delivery of telegraph messages, time was standardized into 24 time zones and regulated by a signal sent from the Eiffel Tower. Thus, "transportation and communication worked to annihilate the uniqueness and isolation of the local."[5] The need to unify clock time for the purpose of social practice is the outcome of humans' life habitus to impose on the world, not

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[3] Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (Mineola: Dover Publications, 1998), 4.

[4] Walter Benjamin, *Illuminations: Essays and Reflections*, ed. Hannah Arendt, trans., Harry Zohn (New York: Harcourt, Brace & World, 1968), 261.

[5] Mary Ann Doane, *The Emergence of Cinematic Time* (Cambridge, Mass.: Harvard University Press, 2002), 5.

the time they acquire from the world as nomadic travelers open to "becoming", and encountering nature with non-mechanized speed.

Clocks and watches in the seventeenth century were "micro-mechanisms that inaugurate a new era that combined two types of movements and stop mechanisms to achieve regularity" and "transform movement into information" to then establish "a 'clock-making' episteme."[6] Clock and cinema experience a liaison of their machine-like precision and representation of time. The word "montage" is a derivation of the winding-up (*monter*) trait of a clock in French etymology.[7] Cinema, because of its identical time-breaks between frames, from 16 to 24 frames per second, resembles the clock, which divides time into homogeneous intervals. Like photography, each frame image and each instant, is static, dead material. It is the trace of the past — in the words of Roland Barthes, "my own death".[8] Photographic images etch past events and figures within a certain period of time, just as the time scales on a clock. Because cinematography follows the clock time denounced by Bergson, it is unsurprising that cinematography reflects "the mechanical model" of Descartes, which is represented by a clock that divides time into discrete units and reconstitutes them as illusory movement.

Bergson's criticism of cinematography was induced from several arguments about time. First, he posited that time should be experienced through intuition; time is invisible through external machines, like clocks or photographic images. Second, time is indivisible, so instants cannot be represented by the calibration on the clock or by snapshots in cinematography. Finally, the successive moving images in projection thus cannot represent the duration of time, since they are instants selected from movement, and time elapses between each of the two frames.

The polemics of time and movement in cinematography lie in the consideration of time as a flow of mental activities according to Bergson, while movement,

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[6] François Albera and Maria Tortajada, "The 1900 Episteme," in *Cinema Beyond Film: Media Epistemology in the Modern Era*, ed. François Albera and Maria Tortajada (Amsterdam: Amsterdam University Press, 2010), 25.
[7] Ibid., 41. See the notes on this page.
[8] Roland Barthes, *Camera Lucida: Reflections on Photography*, trans. Richard Howard (London: Vintage, 1993), 93.

primarily motion, is perceived by eyes. In particular, this is found in the work of Étienne-Jules Marey and the attempts of the early avant-garde artists. As Jean-Louis Comolli concludes, "Movement becomes a visible mechanics."[9] However, like time, some movements are invisible, as identified in Hermann von Helmholtz's idea of "lost time" — *the time invisible to naked eye.* This is, in fact, the movement "between the reception of the nervous shock or impulse by the muscle and the muscle's contraction."[10] Marey's chronophotography attempted to transform this invisible into the visible. The interest in our bodies' invisible happenings triggered an upheaval in visual arts: what is static, and what is moving? Is movement also a mental activity without being seen? If yes, is this movement of mental activity represented by motions of abstractness or concrete objects or humans? Can motion fully represent movement or time?

This chapter will probe a genealogical chain which reflects that the physiological experiments of motion inspired the abstract shapes in the Modernist art movement. This phenomenon began with Étienne-Jules Marey's chronophotography. In particular, geometrical chronophotography influenced Cubist, Futurist and Suprematist genres, followed by German Absolute Animation which transformed the *dynamism* of abstract still images into *synthetic movement*. The representation of time in moving images, though criticized by some artists and philosophers in terms of its deceptive and mechanical nature, progressively raised artistic attention and "invaded" the art world. Thus, artists such as Hans Richter and other film theorists or practitioners suggested that cinema, with its synthesis of movement, should be perceived as a whole.

Sergei M. Eisenstein was more than merely a film director whose films are significant with respect to their montage of static shots and still camera positions. He also contributed his aesthetic reflections on time, movement and motion. Movement and motion were the origin of Eisenstein's aesthetic theory of Expressive Movement. His theory is a rectification of Meyerhold's biomechanics of theatrical motion, which

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[9] Jean-Louis Comolli, "Machines of the Visible," in *The Cinematic Apparatus*, ed. Teresa de Lauretis and Stephen Heath. (New York: St. Martin's Press, 1980), 123.
[10] Doane, *Cinematic Time*, 47.

launched Eisenstein's theoretical origins in psychology (e.g., affect and ecstasy) rooted in physiology and principles of dialectics (e.g., stillness and movement), which later persistently ran through his evolving montage theories. Developed from the concept of the invisible physiological mechanism, his montage theory has been in opposition to this "frenzy of the visible" movement since the second half of nineteenth century. He advocated that *the invisible movement occurs in the collision of successive shots rather than being described by body and motion*. Moreover, his paradoxical attitudes toward Modernist art and artists were congruent with his own developing understanding and practices of abstractness and movement: *to maintain the natural contour and figure rather than pure linear or geometrical shapes to display the essence of objects. His conceptual movement, which was constructed through montage, reflects mental activities without shape and materiality*.

The paradoxes of both cinema and Eisenstein were centralized on this triadic relation of time, movement and motion: the time of cinema as a rational modern machine versus the time junctures in montage as displaying a magic moment; the visible motion in images versus the invisible bodily affect in both cinema and its spectator; the perceived movement through motions versus movement as the representative progress of a concept, such as metamorphosis and animism. As Eisenstein stated, "Cinema begins where the collision between different cinematic measures of movement and vibration begins."[11]

This "frenzy of the visible" was the result of social multiplication and the expansion of industrialization. This was due, in part, to "the geographical extension of the field of the visible and representable: journeys, exploration, colonization, the whole world becomes visible at the same time that it becomes appropriatable."[12] The journey of this dissertation also commences with the beginning of cinema and an examination of the work of Sergei M. Eisenstein.

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[11] Eisenstein, *SWI*, 192.
[12] Comolli, "Machines of the Visible," 122-123.

1.1. Movement of Animal Locomotion in Marey's Chronophotography

In the fourth chapter of his book, *Creative Evolution* (*l'Évolution Créatrice*, 1907), Henri Bergson argued that people's minds, as a cinematographic mechanism, intend to collect privileged instants and splice them into a spatial duration of time. The psychic mechanism resembles cinematographic production and projection that combines the sequential, immobile, static frames of pictures to create illusionary, successive movement.[13] Though he never pointed to Étienne-Jules Marey by name, his writings reflect his opposition to specializing time by discontinuous images as represented in Marey's chronophotography.[14] However, Bergson made the mistake of only considering the representational outcomes — the chronophotography — as his material for analysis, while ignoring Marey's aims and methods in photographing images. The latter, to some extent, accord with Bergson's experience of time, which is centered on human intuition, and distinguishes Marey from another chronophotographer, Edward Muybridge, in his method of image inscription.

In contrast to Bergson's criticism of making time illusory, Marey, as a physiologist, was concerned neither with whether mechanical techniques could faithfully record duration, nor whether the spectator would be deceived by a forged time experience. Rather, Marey used chronophotography to dissemble the movement of animals and human beings and to situate the positions and gestures of the body in a particular moment and in space. Marey was indifferent to Bergsonian time or how spectators perceived the movement and time in his chronophotography. Zoetrope and phenakistoscope, which were later designated as pre-cinematic forms, were designed to convert static images into animated images with the synthesis of movement, but Marey's interest was merely the principle of physiological movement concealed in animal locomotion:

> In each attitude the object appears to be motionless, and movement, which are successively executed, are associated in a series of images, as if they were all

[13] Bergson, *Creative Evolution*, 296.

[14] Bergson and Marey were acquainted when they both served at the Collége de France from 1900 to 1904. See Marta Braun, *Picturing time: the work of Étienne-Jules Marey (1830-1904)* (Chicago and London: University of Chicago Press, 1992), 279-280.

> being executed at the same moment. The images, therefore, appeal rather to the imagination than to the senses. They teach us, it is true, to observe Nature more carefully, and, perhaps, to seek in a moving animal for positions hitherto unnoticed.[15]

For Marey, movement must be perceived and represented by successive images defining the borders of two position changes and probing the physiological dynamism in a human's joints and muscles. He later applied a microscopic chronophotography to research the mechanism of cardiac pulsation and the movement of the blood in capillary vessels.[16] Movement propelled by physical forces, gravity or physiological principles intrigued him more than the reconstruction of discrete images into movement that is perceived visually.

In chronophotography, time was a mechanical intermittence, an interval different from Bergson's indivisible, non-representable *la durée*, while the inscription of movement was predominantly driven by animal locomotion. Some photograms visually represent each time that animals or humans set foot on the surface of the ground and triggered the illumination. Marey's chronophotographic records were determined by the physical impulses of animals, and thus, to a certain degree, his chronophotography reveals time as inscribed by intuition, will and physical condition. The time between two motions was the individually-exclusive record.

This represents the fundamental difference between the methods of Marey and Edward Muybridge. Muybridge used 24 cameras to photograph a galloping horse. Each camera was activated by a trip-wire on the course. Muybridge created his successive exposures at regular intervals by means of a clock to obtain a more precise division of time. In the dissonance between these methods of image inscription, Marey criticized Muybridge's subordination to an exterior machine — the clock — that omitted too much time between motions due to equidistant calibration. The time perceived in Marey's chronophotography is not equidistantly divided by calibration as in Muybridge's machine due to the subjective intuition and

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[15] Étienne-Jules Marey, *Movement*, original published by D. Appleton and Company in 1895, trans. Eric Pritchard (New York: Arno & The New York Times, 1972), 304.
[16] Ibid, 275-291.

self-motivation of animal locomotion. Linda William identifies four factors in bodily representation in chronophotography:

> First, an increasing tendency to think of the body itself as a mechanism; second, an accompanying doubt as to the ability of the human eye to observe accurately the mechanics of the body; third, the construction of better machines of observation to measure and record bodies now conceived themselves as machines; and fourth, an unanticipated pleasure attached to the visual spectacle of lifelike moving bodies.[17]

This is a summary of Marey and Muybridge's chronophotography, with the exception of the fourth factor, which solely points to Muybridge's photography of naked bodies for "a cinematic perversion of fetishism." [18] Marey's chronophotography may be bifurcated into two stages: The animal machine registered the "privileged instants" of photographed images, and the geometrical graphics represented the trajectory of movement. He later encountered the high superimposition of slow or rapid moving objects, which was not capable of providing enough "legibility" for recording motion and intervals. Marey's interest changed to abstract and bodiless flows and curves to describe movement and geometrical chronophotography, which "disengage[s] movement from that body first," then "consisting only lines and curves in space" to "defamiliarize, derealize, even de-iconize" the trajectory track of moving objects propelled by their physiological mechanism.[19]

Some of Marey's works registered movement by means of recording needles. Chronophotographic recordings of feet while walking, a horse at a full trot and the fingers of a pianist were all reduced into a certain length of thread to show the intervals between two positions.[20] For Marey, the reduction of animal contours into geometrical images was designed to collect the maximum frequency of a particular moment, and the duration of time can be achieved through the accumulation of

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[17] Linda Williams, *Hard Core: Power, Pleasure, and the "Frenzy of the Visible"* (Berkley, Los Angeles and London: University of California Press, 1999), 38-39
[18] Ibid., 39.
[19] Doane, *Cinematic Time*, 54.
[20] Marey, *Movement*, 4-14.

intermittence. Animal machine and geometrical chronophotography are two ways to describe movement in Marey's chronophotography, which later had great impact on the art movement in the early twentieth century with the transformation from figurative to non-figurative and from a physical, perceptible reality to an abstract, psychic one.

The question of time and movement requires a reflection on *the relation of locomotion and its representation of movement*. Bodily movement, which occupies a range of distance and a period of time, is not sufficient to define movement. For Marey, the power that determines the inscription and representation of movement is the essence of movement — the collaboration of the mechanics of chronophotography and the trajectory of natural force:

> Now, the object of Chapter I. was to demonstrate that photography would permit the exact measurement of time intervals. It follows that, if the two notions of time and space can be combined in photographic images, we have instituted a chronophotographic method, which explains all the factors in a movement which we want to understand...The whole question of *mechanics* is based on acknowledge of the movement which is imparted to a mass; for from the movement the force which produces it can be measured.[21]

Marey's chronophotography is the "privileged instant" inscribed through animal locomotion and mechanical precision. Animal locomotion is the force of movement without mechanical precision. Its registration of time through chronophotography does not try to grasp time or measure speed, but rather attempts to grasp the rhythm, which accounts for the successive movements of the human body and the animal. The rhythm is not a smooth flow, but replete with jerks, discontinuities and intervals as occur within and outside of biological bodies.[22] Thus, time will be lost, being the lost movement that Marey sought to acquire, beyond what the naked eye can see.

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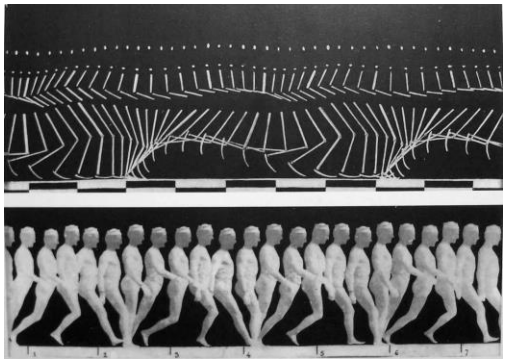
[21] Ibid., 33-34.

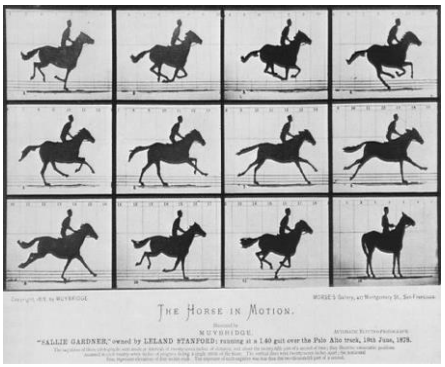
[22] François Albera, "The Case for an Epistemography of Montage - the Marey Moment," in *Cinema Beyond Film: Media Epistemology in the Modern Era*, ed. Fran çois Albera and Maria Tortajada (Amsterdam: Amsterdam University Press, 2010), 67-68.

For Marey, as long as the sporadic instants have been captured, time is "out there," a "continuum divisible" represented by movement.[23] As a physiologist, Marey was more concerned with the life trace of moving objects as an essential existence than the question of whether time is traceable. Whether the trace is photographs of body (which is better for Marey) or the trajectory of moving objects with dots and lines, "Motion is the most apparent characteristic of life; it manifests itself in all the functions; it is even the essence of several of them."[24] It accords with the findings of Max Wertheimer on stroboscopic effect: In some circumstances, viewers do not see an object moving from one position to another, but a "*pure movement*" occurring between two objects that is irrelevant to the perception of viewers.[25]

Etienne Jules Marey, *Course de l'homme, Chronophotographie géométrique partielle* (1886)



Edward Muybridge, Galloping horse (1878)



Movement may be detached from the contour of body and shapes, and exist as itself, but it is still motivated by human locomotion. Having considered Marey's chronophotography concerning time and body, I conclude that *whether movement is described by body, figure and other reality-represented objects, or geometrical, abstract, psyche-reflexed shapes, as a perceptible duration, it represents time in its similarity with the Bergsonian time of mental activities. For example the invisible*

[23] Doane, *Cinematic Time*, 61.
[24] Ibid, 46.
[25] Max Wertheimer, "Experimentelle Studien über das Sehen von Bewegung," in *Zeitschrift für Psychologie* 61 (1912), 163.

break, restart, recoil, acceleration or deceleration is all unpredictable in time. The mechanism of the body in motion has been also considered by Eisenstein as the premise of his theories: Expressive Movement initiates action through a physical and psychological basis and the spectators are affected in response to the actors' motions. In the pursuit of moving images in Modernist art in the early twentieth century, the bodily contours became more blurred and did not appear to be the only way to represent movement and time.

1.2. Marey's Geometrical Chronophotography and the Modernist Art Movement

Marey not only dealt with significant physiological data, but also contributed to aesthetic creation. He predicted the tendency for photography to replace drawings, planes and diagrams. This idea differentiates Marey's photographed images from Muybridge's animated, painted images of horses. Marey commented on Muybridge's zoetrope:

> The apparatus used by Mr. Muybridge was a sort of projection phenakistoscope in which pictures of horses photographs were placed in the focus of the projecting lantern and make to rotate...Now one great disadvantage of Muybridge's apparatus, and indeed, of the Zoetrope itself, is that the figures are out of proportion, owing to their reduction in the transverse direction, so that the painted horses on the revolving discs have to be made longer than they really see, so as to appear in their true proportions when throw upon the screen.[26]

He held the same opinion on Charles-Émile Raynaud's praxinoscope, stating, "As yet, M. Roynaud has only employed figures drawn or painted by hand; doubtless he could obtain remarkable result by substituting a series of chronophotographs."[27] Marey clearly advocated that "no drawing could surpass the veracity of the photograph."[28] For Marey, this "veracity" was not presented in the moving images that represented movement and time duration as perceived by the eye, but in the

[26] Marey, *Movement*, 310.
[27] Ibid., 314.
[28] Braun, *Picturing time*, 267

single image, and whether it perfectly represented the contour of a figure. Marey thus called upon artists to discover photographic aesthetics: the beauty that combines the scientific precision and vitality of the human body, which is precisely what he found in his chronophotography.

Marey wanted artists to embrace scientific truth in their creations by showing the great effort of muscular action and dynamic onward progression. On the contrary, however, artists instead reduced the precision of the bodily image into shadows, curves and lines. Marey confined himself to viewing figure as the only form to show the progression of movement in art and underestimated the artistic value of his geometrical chronophotography, which suggested a process from de-figured toward non-figured representation of movement and speed. Marey was reluctant to reduce the photographic details in the interest of legibility, but his expectation prompted an upheaval in art history. The seventh chapter of Marta Braun's *Picturing Time, the Work of Etienne-Jules Marey (1830-1904)* elaborates on the influence of Marey's chronophotography on European art history, mainly from Cubism to Italian Futurism represented by František Kupka (1871–1957), Marcel Duchamp (1887–1968), Anton Giulio Bragaglia (1890–1960) and Giacomo Balla (1871–1958).

Chronophotography appealed to artists with its simultaneity, which breaks the one-point perspectival code and presents successive figures in a single image. Cubism artists, such as Pablo Picasso (1881–1973) and Georges Braque (1882–1963) were more intrigued by "spatial simultaneity," the idea of "total dimension" with "higher reality" rather than the "temporal simultaneity" of Marey's chronophotography.[29] The Czech artist František Kupka (1871–1957) created a rhythm of successive motions in his paintings of silhouette figures. The overlapping contours focused his attention to kinetic dimension on canvas: "Movement is no more than a series of different positions in space ... If we capture these positions rhythmically, they may become a kind of dance."[30] Kupka's works, though confined to perceiving movement as sequential positions, reflect a consciousness of artists in

[29] Ibid., 282
[30] Ibid., 285-286

this age to represent movement, and his paintings were also the first to blur contour to depict the progression of movement.

Importantly, Marcel Duchamp and Anton Giulio Bragaglia referred to Marey's geometrical chronophotography in advocating the idea of destroying body contour in movement. Perhaps the most evidence of Marey's influence is Duchamp's own transformation of artistic style from Cubism to Cubo-Futurism. He noticed dots and lines in the geometrical chronophotography that Marey used to replace the overlapping contour, stating, "In one of Marey's books I saw an illustration of how he indicated the fencers or galloping horses with a system of dots delimiting the different movement ... As a formula it seems very pretentious but it's amusing."[31] His work, *Nude Descending a Staircase* (1912), shows a concern for mechanics and humanity resembling the collaboration of human locomotion and mechanical technology in Marey's chronophotography.

Bragaglia's photodynamism, however, provocatively proposed an idea to "free photography from the indecency of its brutal realism, and from the craziness of instantaneity, which, [was] considered to be a scientific fact only because it was a mechanical product, [and] was accepted as absolutely correct."[32] Bragaglia aimed for a reality in movement beyond that visible to the naked eye. He clearly expressed that his photodynamism denied the breakdown of actions into hundreds of equidistant instantaneities "toward the synthesis of action, which, because it is *pure movement*, that is trajectory, is completely different from ... stasis and completely different from an analytic scientific reconstruction."[33] Pure movement, for Bragaglia, is a trajectory of movement, duration without breaks and intervals, comparable to Wertheimer's idea of the same name, after his findings in stroboscopic experiments. Bragaglia suggested that a transcendent movement driven by natural forces is represented by a trajectory rather than a reconstruction of discrete instants of motion.

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[31] Pierre Cabanne, *Entretiens avec Marcel Duchamp* (Paris: Pierre Belfond, 1967); translated by Ron Padgett as dialogues with Marcel Duchamp (New York: Viking Press, 1971; London; Thames and Hudson, 1979; reprinted New York: Da Capo Press, 1987), 29. Cf. Braun, *Picturing time*, 287.

[32] Bragaglia, Fotodinamismo futurista (Rome: Nalato, 1913; reprint with critical essays, 2d ed., Turin: Einaudi, 1980), 18. Cf. Braun, 299.

[33] Ibid, 24. Cf. Braun, 300, my italic.

He was inclined to Bergonian transcendental time because of its similar fluid duration as pure movement rather than Marey's chronophotography, even though Marey's geometrical chronophotography displayed a line of trajectory similar to Bragaglia's photodynamism.

In Giacomo Balla's paintings, the superimposed bodily images reflect both Marey's chronophotography and Bragaglia's photodynamism.[34] Although Balla's early works were influenced by Bragaglia's synthetic continuity, his *Girl Running on a Balcony* (1912) and the sketch of this painting imply his appreciation of Marey's geometrical chronophotography. The sketch shows the effect of "analytical decomposition" used by Marey through the use of dots and lines to construct the sequence of moving limbs. The completed painting was composed using chromatic dots instead of lines to delineate the contour of the girl. Balla's later works reduced human bodies in motion into abstract lines in a serial work of "speeding automobiles" with chromatic movement, such as *Abstract Speed + Sound* (1913–1914) and *Paths of Movement + Dynamic Sequences* (1913), evolving into formless, perspective-breaking of movement as the "pure movement" advocated by Bragaglia.

Eisenstein called Balla's painting, "The Man with Six Legs in Six Positions," "primitive Italian Futurism," which lies in between "the pure linear" (Fernand Léger, Suprematism) and "anecdotal" (Henri de Toulouse-Lautrec).[35] This "in-between" status of Futurists is considered by Eisenstein as undermining "natural unity and anatomical cohesion" in Lautrec's painting, but "not yet pushed as far as abstraction" in the pure linear.[36] Futurists gave the impression of movement in progress, which is not necessary for Eisenstein, since the photograms are "representations (inessential though visible)" in his view, while "*movement is the obraz, the essential image*

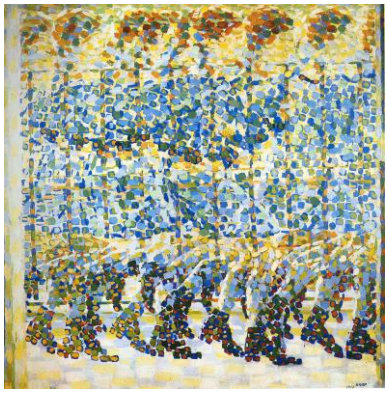
[34] He visited Marey's pavilion in Paris at the Universal Exposition and maintained a regular meeting with Bragaglia. See Braun, *Picturing time*, 303.
[35] Eisenstein considers that Henri de Toulouse-Lautrec's "Miss Cissy Loftus" (1894) depicts parts of bodies in "spatial situations (positions) that vary temporally" as the opposition of the abstraction of Modernist arts, but both of them reflect a dynamism. Eisenstein, *SWI*, 165.
[36] Ibid., 165.

(although 'mental' rather than visible)."[37] Hence, Eisenstein's attitude toward movement, motion and representation may be summarized as the essence of this chapter: *Movement is invisible mental activity that does not have to be performed by individuals, but can be represented by the still image of the body, which conveys a dynamism beyond vision*.

Braun's chapter on Marey's influence on Modernist art comes to an end with a brief mention of Russian Futurist artists such as Natalia Goncharova (1881–1962) with her painting *The Cyclist* (1913) and the early Cubo-Futuristic works of Kazimir Malevich (1879–1935). Since Marey passed away in 1904, his chronophotography, by means of his personal relationships, public lectures and correspondence, only directly influenced Cubists and Futurists at the beginning of twentieth century. However, the exploration of movement and time on canvas has been further brought into theoretical discussion among Russian avant-garde artists, and developed in particular by Kazimir Malevich.

Giacomo Balla,

Girl Running on a Balcony (1912)



Kazimir Malevich,

Suprematism (1916)

1.3. Painting vs. Cinema: Malevich on Movement and Abstractness

Malevich was a representative of Russian Cubo-Futurism before he founded Suprematism. Although Suprematists opposed the utilitarian and functional purposes

[37] François Albera, "Eisenstein and the theory of the photogram," in *Eisenstein Rediscovered*, ed. Ian Christie and Richard Taylor (London: Routledge, 1993), 207.

of Constructivism, with its primacy of pure feeling to create art on its own, there is one common element that they both inherited from Futurists and retrospectively from Marey: the reduction of contour into geometrical representation. *The lines that construct geometrical shapes do not delineate the forms perceived by the eye, but the essences of objects and life*, as argued by Constructivist Alexander Rodchenko (1891–1956) in his article "The Line":

> Non-objectivity [i.e., non-representational art] renounced the old expressivity of painting [...]; it introduced entirely new ways of painting, more suitable for its forms - geometrical simple, clear, and exact - a blunter, coats of paint applied with a roller, pressing, etc. The brush, so necessary to convey the object and its subtleties in painting, became an insufficient and imprecise instrument in the new, non-objective painting, and it was crowded out by the press, the roller, the ruling pen, the compass. [...] The perfected significance of the line was finally clarified - on the one hand, its bordering and edge relationship, and on the other - as a factor of the main construction of *every organism that exists in life*, the skeleton, so to speak (or the foundation, carcass, system). The line is the path of passing through, movement, collision, edge, attachment joining, sectioning. [...] In the line, a new worldview became clear: *to build in essence*, *and not depict* (objectify or non-objectify); build new, expedient, constructive structures in life, and not from life and outside of life.[38]

Malevich's *The Knife Grinder* (1913) shares a similarity with Duchamp's *Nude Descending a Staircase* (1912) in the combination of machine and human using overlapping contours, but he later abandoned the Cubo-Futurist artistic tradition to promote Suprematism, which entirely discarded any drawing technique or visual principle for objective reality. This change in his painting directly reflects the formation of his aesthetic attitude. In particular, his most representative work, *Suprematism* (1916), fits well into Rodchenko's characterization, unfolding a non-objective world of geometrical shapes constructed by lines to "build in essence." The lines are the paths diagonally extending to the corners of the frame, overlapping

[38] Alexander Rodchenko, *Experiments for the Future: Diaries, Essays, Letters, and Other Writings*, ed. A.N. Lavrentiev, trans. J. Gambrell, and intro. J.E. Bowlt (New York: Museum of Modern Art, 2005), 112-114, my italic.

and joining with other shapes, and reflecting the essence of dynamism in the spectator's imagination.

Artists are only capable of conveying the dynamism of stillness in imagination, but cinema incorporates the light and color of painting, and extends the lines that artists wish to visualize in traces and trajectories through their brushes and pencils. In his article, "And Visages are Victorious on the Screen," Malevich wrote about the artists' dilemma in easel painting, namely, their incapacity to transform movement in their minds onto canvas. In spite of insisting on the supremacy of painting, in a later article, "The Artist and the Cinema," he began to pay attention to the synthesis of movement in drawn images:

> I also pointed out that the painter had invariably tried, with the greatest difficulty, using bristle and paint, to make nature and visage appear alive and natural in all of their movement, and that making those movements expressive constituted one of his foremost efforts. But as a result of all his efforts, the painter would manage to capture on the static canvas only a single impression of this movement and only in a single frame. And the artist remained in this hopeless and doomed position until, on the one hand, technology invented cinema and achieved the reproduction not of an impression but of actual movement; and, on the other, a number of painters resolved for themselves the question, 'what is painting and what is art?' From this moment on, art split into two basic divisions: some artists became objectivists (concretists), easel-painters and reproducers of the everyday, never having understood the essence of art; the others, non-objectivists (abstractionists), who understood the essence of art and rejected the portrait and the representation of everyday life.[39]

Malevich pointed out that whatever vivid motion that early avant-garde painters tried to capture, it was only an instant of a movement and remained as a "tendency" to move to the next motion. He made the same comments in his other writings: "Here lies their difference from the old technique, in which a picture frozen on the canvas acts upon the viewer by setting in motion the image reflected in his brain."[40] This tendency of movement is optically imperceptible as metaphysical time and

[39] Kazimir Malevich, *The White Rectangle*, ed. and with an introduction, Oksana Bulgakowa (Berlin and San Francisco: Potemkin Press, 2002), 45.
[40] Ibid., 40.

movement. But while it lacks the cinematic synthesis of movement, the motion is virtual and stays in the artist's and the spectator's consciousness. It is unable to be shared among spectators having the same perception of speed, distance and degree of metamorphosis of the moving objects, whereas cinema can substitute the actual movement for impression.

He was also highly aware of new technological advances being introduced into the art world, and divides the style of art into "objectivists (concretists)" and "non-objectivists (abstractionists)." He praised Cubism that "has free[d] itself from ideological content" and "can exist without image, without everyday life, and without the idea's visage," and thus cinema must also achieve this in order to contemplate its own culture "as such."[41] For this reason, Malevich held a negative opinion of the mimicking quality of cinema, believing that it merely inherits the mimic tradition of objectivist art. Even Vertov's Cine-eye (*Kinoglaz*) was considered by Malevich as the same as the artistic eye of a painter who sees nature, like most pre-Cubist artists, with the naked eye.[42] On the other hand, even if each frame physically runs through the camera in a cinematic production, the projection of successive images still mimics time passing in daily life. Only painting can successfully convey "real dynamics" and "the sensation of speed detached from corporeality, based on dynamism and abstraction."[43]

He paradoxically regarded this dynamism on canvas as being "in the imagination of the spectator," or as "a ghostly intention of movement," but as preceding the movement of a single photogram in cinema. The paradox can be found in his articles "The Artist and the Cinema" and "Cinema, Gramophone, Radio and Artistic Culture", respectively:

> Cinema retains the essence of an easel painter who has developed to perfection his apparatus for perceiving and reflecting nature's light-and-color on the screen. But he has not been able to grant his visages the mobility that he wanted to convey; in reality, his visages move only in the imagination of the spectator, and

[41] Ibid., 43.
[42] Ibid., 46.
[43] Oksana Bulgakowa, introduction to *The White Rectangle*, 26.

> what he manages to capture in a picture is only a ghostly intention of movement, Thus, it seems to me that cinema, by its very nature, carries on a continuous painterly line, organically linked to the painter.[44]

> While painting relies on color, form and laws of relationship, film is essentially a temporal phenomenon. Art constructs elements and their relationships in space-time; in art, everything is futurized, everything is in motion; phenomena in all their facts are unfold in time. In painting, this has been brilliantly resolved by Futurism, but film has failed to grasp it and busied itself with garbage...The artistic problem is not to be resolved in film through the object, because the nature of film is motion and objects are not elements of motion; therefore, it is impossible to set up an artistic composition of objects.[45]

For Malevich, movement appears in the viewer's consciousness, both in film and painting. His negativity toward film as distinguished from painting is because the slight tendency toward motion in each individual photogram of film does not contain the exclusive "element of motion" of a painting. Every single painting aggregates the energy to trigger motion, but the photograms of film decompose motion into dozens of "dead" frames, while losing the fullness and energy that could drive the object into movement.

Eisenstein criticized Malevich as being naïve "to pass judgment on the pictorialism of a *shot* in cinema." In "The Fourth Dimension in Cinema," Eisenstein wrote:

> It is for people with a reasonable knowledge of painting but absolutely no qualifications in cinema. This kind of judgment could include, for example, Kazimir Malevich's statements on cinema. Not even a film novice would now analyze a film shot as if it were an easel painting."[46]

For Eisenstein, Malevich "remains a prisoner of immobility," who "does not understand the fundamental principle of film: namely, that *a shot does not exist as a unit of perception, but is realized only through the dynamics of montage*."[47] This

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[44] Malevich, *The White Rectangle*, 47.
[45] Ibid., 65.
[46] Eisenstein, *SWI*, 191.
[47] Bulgakowa, introduction, 17, my italics.

fundamental principle also differentiates the epistemology of Bergsonian and Deleuzian cinematic time, seeing a film constituted by discrete units or as an experience of the whole. This fundamental principle further differentiates Roland Barthes' "the third meaning" of a single still image in Eisenstein's films from Eisenstein's own explanation of the visual affect in montage as a whole, which will be discussed in the second part of this dissertation.

However, the linear movement advocated by Malevich and Rodchenko is also a key element orienting the development of Eisenstein's aesthetic world. Linear movement reflects the lifelike variation and energy that Eisenstein found in Disney animation. But the mimetic quality of film is not the deficiency that Malevich criticized. Cinema inherits the mimic tradition of objectivist art, but the linear vibration of energy is concealed in montage as "a *concept* of motion."[48] This dynamism of linear movement in a still image was also interpreted in Eisenstein's analysis of paintings, having been integrated into the scenes of his own films as the affect function, and finally into the polyphonic structure of vertical montage.

Like some of the above-mentioned artists who traversed centuries, Malevich observed that easel painters confronted and sided with one of two tracks: objectivist (concrete) or non-objectivist (abstract). The invasion of time and movement propels artistic creation in moving images. German Absolute Film and Animation, especially the works of Hans Richter, reflect the principle of Malevich's Suprematism. They provide a solution by giving painting the synthesis of movement. At the same time, at the representational level, the animated films acquire the dynamism and metamorphism of the lines and shapes of paintings. Malevich asked the ontological question, "What is painting? What is art?" in light of his suspicions of cinema's mimic nature and whether it could successfully rise to be an independent art form. He found a satisfactory art form in Richter's animated painting: the filmic painting with temporal-spatial rhythms and plastic beauty of lines.

[48] Ibid.,18.

1.4. The Synthesis of Moving Images: German Absolute Film and Animation

Before moving images, paintings and sculptures only captured a concrete but single instant. Malevich named it as the "dynamic dynamism outside of movement," that is, the extension of movement or metamorphosis outside the visual images which depict the tendency of moving objects.[49] This idea, and his paintings, imply the tendency toward stretching out the canvas frame in the viewer's imagination. The abstract animations of Walter Ruttman, Viking Eggeling, Hans Richter and Oskar Fischinger possess the synthesis of movement that paintings cannot achieve. The intimate connections among Soviet and German artists began in 1922 with a large number of gatherings, exhibitions and publications of Constructivists in Germany, involving the friendship of El Lissitzky, Aleksandr Rodchenko, Hans Richter and Dziga Vertov.[50] Abstract animation, with its perception and sensibility of speed in industrial modernity, was derived from the Futurist's impetus. Their anti-representational and structural objectivity accorded with Russian Constructivism and Suprematism.

When paintings first formed a symbiosis with cinema, the painted canvas functioned as a backdrop in the films of the Lumiére brothers and George Meliés. Although the Bauhaus school practiced with "kinetic light-painting" as the emergence of abstract films,[51] Malevich urged artists to make moving images of art:

> It is useless, of course, to expect film artists from the GTK,[52] because from the GTK's point of view the painter should be able to come to cinema not as a decorator, janitor, or costume designer, but as a cinematographic artist, a cine-painter of dynamic pictures; and that he should not be called a director, because today's director is that same painter, who, by means of light-shadow, is painting on the canvas (screen) a moving picture.[53]

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[49] Bulgakowa, introduction, 26.
[50] John MacKay, "Vertov and the Line: Art, Socialization, Collaboration," in *Film, Art, New Media: Museum without Walls?*, ed. Angela Dalle Vache (Basingstoke: Palgrave Macmillan, 2012), 83.
[51] Bulgakowa, introduction, 23.
[52] The State Cinema Polytechnic in the Soviet Union, Gosudarstvennyi tekhnikum kinoiskusstva (GTK) founded in 1922, later has been renamed as the State Film Institute, Gosudarstvennyi institut kinematografii (GIK) in 1930.
[53] Malevich, *The White Rectangle*, 50.

Hans Richter as a "Cine-painter" made the "Rhythmus" film series — *Rhythmus 21* (1921), *Rhythmus 23* (1923) and *Rhythmus 25* (1925) — all related to Malevich's Suprematism, using squares and rectangles to achieve a perceptible, actual movement in the frame of canvas or screen. Most of the animations of Hans Richter and Viking Eggeling took geometrical shapes as the fundamental principle of image composition.

In 1920, Theo van Doesburg, a passionate advocate of the Modernist art movement and the chair of Dutch magazine "*De Stij*," inspired Hans Richter and Viking Eggeling with the supremacy of geometrical shapes, saying, "the square is the sign of a new humanity. It is something like the cross of the early Christians."[54] Doesburg proposed a spiritual symbolization of humanity using geometrical shapes, which inherently contain the energy of life and the power to reveal the essence of objects' structures. Eggeling responded to the diminution of the figure and color, "to carry on in the same way as Nature organizes matter, but to use only its principles, not its forms."[55] Eggeling's *Worksheets of Orchestration* (1915) reflects the progressive stages of deconstructing the eye-perceived reality into geometrical shapes.

To find an instrument to present the stages of dynamic progression, Eggeling suggested scroll paintings to see and feel the development of forms different from easel painting, of which "becoming and duration are not in any way a diminution of unchanging eternity; they are its expression. Every form occupies not only space but time. Being and becoming are one … What should be grasped and given form are things in flux."[56] Aside from the essence of geometrical structure, Eggeling also suggested "becoming and duration" to reveal the essence of movement and time. The structures of geometrical shapes can be seen, and time can be felt, but for him, time does not remain at the Bergsonian abstract level. Since structure can be represented by image, time can be "grasped" and represented by succession. At this point, on the

[54] Hans Richter, "Easel-Scroll-Film," *Magazine of Art* (February, 1952), 78.
[55] Ibid., 79.
[56] Ibid., 81.

verge of animating the scroll painting, Richter wrote in his article "Easel-Scroll-Film" published on *Magazine of Art*:

> The logical step we had taken to the scroll had already thrown us, so to speak, out of the world of easel painting. It precipitated us a step further. After each of us in 1919 had finished his first scroll, we began to understand that we had gotten more than we asked for: the necessity to release this accumulated "energy" into actual movement! Never during our collaboration had we dreamt of that. But there it was. And movement implied film![57]

Inspired by Eggeling's scroll painting, which was a sketch of his *Symphonie Diagonale* (1924), Hans Richter screened the first abstract animation, *Rhymthus 21* (1921), at the Theatre Michel in Paris, which was arranged by Theo van Doesburg. In Walter Ruttmann's opinion, there is no fundamental difference between to paint a scroll and to shoot each successive image. "Painting in time," as Ruttmann advocated, is "an art for the eye that is different from painting; it takes place in time (such as music), and the artistic focus is not (as in the picture) in the reduction of a (real or formal) process for a moment, but just in the temporal development of the formal."[58] Ruttmann "composed" the film by painting on layers of glass and then filming each glass separately before hand-tinting and toning. As a painter who aimed to activate his static paintings, Ruttmann did not reduce a specific moment of motion into a point in time. Rather, he regarded the artisanal moving images to extend or twist a thread, to swell or diminish a round or a square, to reflect the "temporal development" of geometrical images as "the formal." As he observed,

> ...and this new setting is so organically in that fact that due to the increased speed with which the data items are cranked deducted the views of the individual content, and is directed to the overall shape of the curve formed from the various points as a time-unwinding phenomenon. The object of our consideration is therefore now the temporary evolution and conceived in a curve of constant physiognomic becoming rather than the rigid juxtaposition of individual points.[59]

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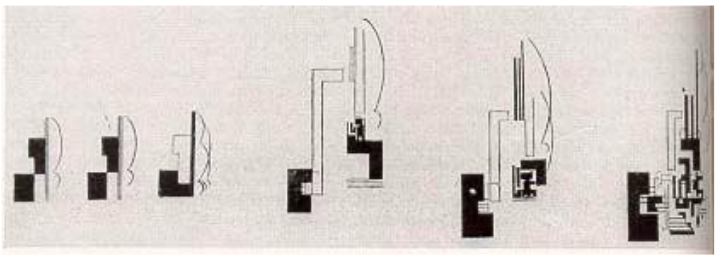
[57] Ibid., 81.
[58] Walter Ruttmann, "Malerei mit Zeit," in *Walter Ruttmann. Eine Dokumentation*, ed. Jeanpaul Goergen, (Berlin: Freunde der Deutschen Kinemathek, 1989) , 74, my translation.
[59] Ibid., 73-74, my translation.

Hans Richter, *Prelude*, scroll painting (1919)



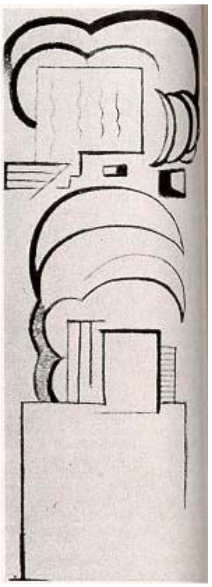
Hans Richter,

Rhythm 21(1921)

Viking Eggeling,

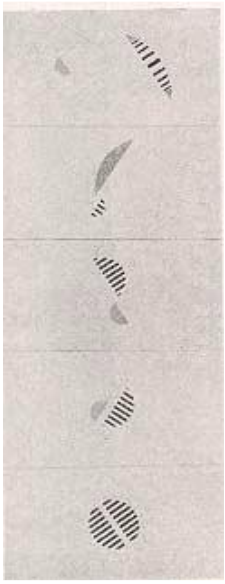
Orchestration of the Line，

scroll painting (1917–18)



Viking Eggeling,

Diagonal Symphony (1921)



Richter and Eggeling's animated scroll paintings as "orchestration" differ from Ruttmann's idea of "painting in time as music." For the creators of German Absolute Film and Animation, music as a time-based art media is analogical and referential to the moving images as a new art form. What Ruttmann suggested was that the new art form "takes place in time (as music)". For Ruttmann, *music is equal to time*. In Richter and Eggeling's early studies, music was the inspiring analogical resource. He states, "[O]ur research led us to make a large number of drawings as transformations of one form element or another. These were our 'themes,' or, as we called them, 'instruments,' by analogy with music — the art form which inspired us considerably.

We felt 'the music of the orchestrated form'."[60] But they placed greater emphasis on the *rhythm* as one, but not the only, specificity of music:

> I did again with the screen what I had done years before with the canvas. In doing so I found a new sensation: *rhythm* - which is, I still think, the chief sensation of any expression of movement...The principles which we followed with our first abstract film are not limited to the articulation of lines or squares alone. The rhythm of a swing or a clock, the orchestration of hats or legs, the dance of kitchenware or a collar - could become expressions of a new sensation.[61]

Music cannot simply equal time. For example, texture is the spatiality of music and can be analogical to composition built up by lines in a single painting. But rhythm representing time and intervals differentiates moving images from a static single image. Richter wrote, "the single image disappeared in a flow of images, which made sense only if it helped to articulate a new element — *time* ... This time I did not concentrate upon orchestrating *form* — but *time*, and time alone."[62] Richter extracted the time dimension of music to discuss other art forms, especially moving images.

Richter and Eggeling primarily weighted the spectator's visual experience over the fragmented itemization of motion that would concern physiologists. From Marey's chronophotography to German Absolute Film and Animation, although there was a tendency to reduce a figure into non-figurative images, they were committed to different purposes. Marey emerged from the teleology of cinematography to make static photograms into moving images. For a physiological purpose, the legibility of images or diagrams to show the biological mechanism was of primary concern to Marey. In the context of Modernist art, movement in the works of the Futurist and Suprematist remains in its imaginary stage. For Hans Richter, the dynamic movement in consciousness becoming actual movement as a shared experience within spectators was the most striking aspect. Having created the scroll painting

[60] Richter, "Easel-Scroll-Film," 79.
[61] Ibid., 84.
[62] Ibid., 81.

with Eggeling, Richter took the experience of the beholder into consideration and compared it with easel painting:

> Without intending to, we had arrived at a kind of dynamic expression which produced a sensation rather different from that possible in easel painting. This sensation lies in the stimulus which the remembering eye receives by carrying its attention from one detail, phase or sequence, to another that can be continued indefinitely. This is because the esthetic theme is just that: the relationship between every part and the whole. In so following the creative process, *the beholder experiences it as a process, not as a single fact*. In this way, the eye is stimulated to an especially active participation, through the necessity of memorizing; and this activity carries with it the kind of satisfaction which one might feel if one were suddenly to discover new or unusual forms of one' imagination.[63]

The easel painting is unable to show the continuity and transformation in "one detail, phase or sequence, to another". It is *a single fact* confined in the frame. But the scroll painting could invite the beholder to experience *a process* that the artist hopes to externalize in his or her mind. It is remarkable that Richter pointed out that the experience of a single painting is a *part*, while in scroll painting, successive images are the *whole*. To consider the visual experience of successive images as the integral reception of the whole scroll, Richter applied this belief to the animated scroll paintings, his "Rhythmus" series. He expressed his puzzlement at Theo Van Doesburg's indifference to synthesis of movement:

> These seem to me the main characteristics of the scroll, which offers sensations that the easel painting, by its very nature as a static form, cannot offer. Van Doesburg, though, tried to make a different point. 'It makes no difference whether one who looks at a Mondrian canvas moves his eyes (from one 'opposite' to the other) or whether a scroll 'moves' before the eyes of the beholder.' Well, I think he had a point there but only a polemic one, as the *attitude* of the creator and the spectator is different in each case.[64]

Richter proposed two key points to differentiate the beholder's or spectator's

[63] Ibid., 81, my italic.
[64] Ibid., 81.

perception of easel painting, scroll painting and animated film. First, scroll painting and animated film should be considered as *a whole, a process*, but not a series of single images. Richter's idea resembles what Gilles Deleuze later suggested is the experience of time in moving images. In *Cinema 1,* Deleuze advocated that the section of serial images is "mobile" because it consists of movement-images as an open, changing *whole* rather than the confined and immobile spatial position and points of view as a closed *set.*[65] The "any-instant-whatever" is a real movement which becomes a mobile section of duration, and this is what Deleuze called "real movement→concrete duration."[66] Openness and wholeness are the fundamental essences of Bergsonian duration. Scroll painting or cinema immediately gives the beholders or spectators the successive images as a *whole,* rather than discrete still images at the outset.

However, scroll painting lacks synthesis of movement if compared with cinema. The *attitude* of artists in controlling the projection plays a key role in constructing spectators' temporal and visual experience. If synthesis of movement is engaged, there is a difference for the spectator between voluntarily moving one's eyes through a static scroll painting and seeing the automatic images flow in front of one's eyes. For spectators, even if the scroll painting is perceived as *a whole*, the actual movement, a cinematic duration, can be never achieved without the synthesis of movement.

This cinematic duration, in Bergson's view, is fabricated. It is not the real flow of time. The real time flow — durational time — cannot be captured through early cinematography, which neglects the abstract elapse of time between two frames. Deleuze later designated it as "immobile sections + abstract time."[67] The deception of cinematography is that through the visual reception, the spectator does not perceive film as an aggregation of discrete frames. This is the principle of the retina that the *phi* experiment explained: If the speed of moving images resting on the

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[65] Gilles Deleuze, *Cinema 1: The Movement-Image,* trans. Hugh Tomlinson and Barbara Habberjam (Minneapolis, MN: University of Minnesota Press, 1986), 10.
[66] Ibid., 1
[67] Ibid., 1.

retina exceeds 1/10 of a second, then the impression of an image one by one is substituted with the perception of continous movement and duration of time.

But the persistence of vision is inadequate to explain cinematic movement. The early film theories during the 1910s suggested that moving images should be seen as a whole instead of discrete units. Both Max Wertheimer and Hugo Münsterberg considered movement not merely as the "superimposition of static images" or "melting-together of the frames" in the mind of the spectator.[68] Deleuze suggested that perceptible movement is the real movement representing cinematic time that is isolated from the physical world. As Hugo Münsterberg argued in *The Photoplay: A Psychological Study*: "*The photoplay shows us a significant conflict of human actions in moving pictures which, freed from the physical forms of space, time, and causality, are adjusted to the free play of our mental experiences and which reach complete isolation from the practical world through the perfect unity of plot and pictural appearance*."[69] In connecting life and film, Deleuze's refutations of Bergsonian time, which only concerns the continuities and discontinuities of time, restate and reemphasize the idea of "being in film" as "being in the world" to a great extent. The cinematic representation of time surpasses the time lost in cinematic materiality. Moving images should be experienced: The illusion of contingency and flux in film is a "structuring of the spectator's time."[70]

A shift from a concern with time in the cinematic mechanism to the time projected in representation and the experienced situation is emphasized above in the analysis of the historical development of visual images from Marey to German Absolute Film. Marey never intended to attain animated images comparable with the movement in reality. To impute a deceptive effect mistakenly portrays Marey, who was a scientist pursuing truth in nature. Animal locomotion and photographic inscription breaks down the movements of animals and humans, penetrating the

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[68] Trond Lundemo, "Quoting Motion, The Frame, the Shot and Digital Video," in Dalle Vache, *Film, Art, New Media*, 100.
[69] Hugo Münsterberg, "The Means of The Photoplay", in *Film Theory and Criticism: Introductory Readings*, fourth edition, ed. Gerald Mast, Marshall Cohen, Leo Braudy (New York, Oxford: Oxford University Press, 1992), 361.
[70] Doane, *Cinematic Time*, 24.

eye-perceived surface and observing the concealed mechanism of motion. Hence, Marey's chronophotography is not an illusion for spectators, but rather serves as scientific research material for physiologists.

The Modernists, especially Futurists and Suprematists, were all dedicated to staging the representation of movement and time on canvas through the depicted motion, and gradually reduced the objective space composed by a figure. Without a change of motion displayed on canvas, geometrical shapes and lines present a trajectory of the past, but not a progression manifested to the viewer. Canvas is only capable of displaying a static dynamism, and thus the movement and time presented by artists remains in the psychological association of those beholding it. Similar to Bergson, the resistance of cinema was the rejection of homogeneous time and movement shared by both artists and viewers, which is the essential quality of modernity.

In German Absolute Film and Animation, artists animated the geometrical images concretely, with actual movement attributed to retinal persistence through the cinematographic dispositive. The epistemological separation of static single images and animated scroll paintings proceeds from imaginary movement to the illusion of continuity. Richter even made the epistemological separation of moving images with and without the synthesis of movement aided by projection, emphasizing a fundamental difference involving the activity and passivity in the viewing experience of spectators.[71]

Eisenstein's notion of movement related to the photogram and *phi*-effect of cinema has been revealed in "The Dramaturgy of Film Form" (The Dialectical Approach to Film Form):

> We know that the phenomenon of movement in films resides in the fact that still pictures of a moved body blend into movement when they are shown in a quick succession one after the other.[…] For in fact each sequential element is arrayed, not next to the one it follows, but on *top* of it.[72]

[71] Maria Tortajada, "The Cinematographic Snapshot-- Rereading Etienne-Jules Marey," in *Cinema Beyond Film*, 92.
[72] S.M. Eisenstein, *SWI*, 164.

Eisenstein sought a "higher new" dimension beyond the visual illusion of *phi*-effect for his montage of attraction and intellectual cinema, which aims not to display the process in the same manner as Modernist art but to present a collision, a third meaning, "a transcendental result (concept)." [73] François Albera describes Eisenstein's idea of movement in cinema as "some kind of cut + abstract time," which distances Eisenstein from "the reproduction of movement" presented by Futurists or the various optical toys produced before the advent of cinema, and from "Bergson's inner intuition" represented by the abstraction of Suprematism and German Absolute Film. He states, "[I]t is externality that is needed in respect of the object. The object, nature, is inert and passive (being-there) and it must be dynamised from outside (by an initiative conscious of its goal)."[74]

1.5. Motion, Affect and Abstract – Eisenstein's Expressive Movement

Against this blueprint of the discussion of motion and movement, it is instructive to reconsider the interweaving of science and art in Russia. Sergei M. Eisenstein was saturated in this atmosphere, where the prevailing reflexology and behaviorism influenced the artistic circle to seek a new sensorial and psychological performance and experience. This arose due to the socio-political background in the Soviet Union, which promoted the education and cultivation of the agrarian population into humans of both strong mind and body, a better "life building."[75]

Eisenstein and Sergei Tretyakov established a training program in 1923 for actors called "Expressive Movement." It was based on an idea extracted from Eisenstein's experience in Vsevolod Meyerhold's workshop on biomechanics in 1921, which adopted a rationalized Talyorism and reflexology, and a later experience with Grigori Alexander in Kuleshov's three-month workshop from 1922 to 1923, which presented "a lexicon of gestures and poses that presume to replicate each of the

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[73] Ibid., 164.
[74] François Albera, "Eisenstein and the theory of the photogram," 208.
[75] Oksana Bulgakowa, "From expressive movement to the 'basic problem': The Vygotsky–Luria–Eisensteinian theory of art," in *The Cambridge Handbook of Cultural-Historical Psychology*, ed. Anton Yasnitsky, René van der Veer and Michel Ferrari (Cambridge: Cambridge University Press, 2014), 423.

emotional or psychological states possible within a dramatic character."[76] Expressive Movement was not only derived from these two workshops, but also Expression Gymnastics, whereby a gymnast controls his own body and its motor power in cooperation with gravity and weight. Expressive Movement thus differing itself from the two workshops that Eisenstein participated in, was born of a conflict between Ludwig Klages' idea of "the urge and the will" that an actor, like a gymnast, mediates the urge of affect and inhibition from the will.[77]

In Expressive Movement, actors "sell" their movement in order to be compellingly theatricalized and characterized for the spectators, who feel a palpable echoing in the actors' gestures and actions.[78] In the pamphlet for this acting program, Eisenstein wrote,

> It is precisely expressive movement, built on an organically correct foundation that is solely capable of evoking this emotion in the spectator, who in turn reflexively repeats in weakened form the entire system of the actor's movements; as a result of the produced movements, the spectator's incipient muscular tensions are released in the desired emotion.[79]

Expressive Movement thereby fully manifests its affective function, not only in the process of acting, but also in prompting the spectator's bodily (unconscious) and emotional (conscious) response. This bodily reaction, the contraction of muscles, is the "unconsciously imitative" result of the spectator in response to the actor's movement on stage, and emotion is consequently triggered by the physical reaction, rather than the opposite.[80]

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[76] James Goodwin, *Eisenstein, Cinema and History* (Champaign, IL: University of Illinois Press, 1993), 34.
[77] Bulgakowa, "From expressive movement," 428.
[78] Eisenstein used "sell" to emphasize actor's awareness of spectator in his expressive movement to distinguish with the naturalistic movement in gymnastic movement. See Robert Leach, *Revolutionary Theatre* (London and New York: Routledge, 1994), 153-154.
[79] Sergei Eisenstein and Sergei Tretyakov, "Expressive Movement" (1923), trans. Alma H. Law, *Millennium Film Journal* 3 (1979), 36-37.
[80] Eisenstein postulated British physician William Carpenter's ideomotoric phenomenon that to observe movement will trigger the contraction of observer's muscles. See Bulgakowa, "From expressive movement," 427.

Eisenstein's interest in the effect of aesthetic affect was highly associated with two Russian psychologists — Alexander Luria and Lev Vygotsky — and the German Gestalt psychologist, Kurt Lewin. Vygotsky's idea of oppositional and explosive affect as the release of energy lies in the conflict of producing art work, e.g., its content and form, and moving toward a dynamic unity of oppositions, which inspired Eisenstein to abandon pure reflexology of an acting body and to seek a balance between rationality and sensuality. This balance is the *Grundproblem* that Eisenstein introduced in his unpublished book, *Method*. Affect, the key concept pervading Eisenstein's whole theoretical life stemmed from Expressive Movement. Later, affect extended to the multisensory experience of cinema, which will be discussed in the second part of this dissertation.

Expressive Movement was based on the principle of embodied conflict. But this conflict has been further disembodied. In Eisenstein's later theories, body became a continuum and a generator of affect, emotion and senses rather than representative of movement. Bodily movement is crucial in theatrical performance, but less important in cinema, since movement is embedded in its materiality and technology. Movement that is separated from motion, like that in abstract art and German Absolute Films, is no longer performed by the body, but manifested in the theme and the narration of metamorphosis or attraction.

Both Eisenstein and Marey demonstrated a great interest in the physiological mechanism of the human body and considered instinctive reflexes as the stimuli of motion. But in relation to their different teleology for moving images, Eisenstein disassociated expressive movement from the purely bodily reflexes in Meyerhold's biomechanics, instead identifying the unity of body and image. This means that in cinema, it is not body and its motion that is the only representation of movement, as is the case for those onstage at a theatre and in chronophotography. Rather, movement is a *conceptualized theme* representing the idea of transition based on the physiological initiative of the body, which cooperates with the frames, camera, *mise-en-scène*, montage and the potential spectators.

Eisenstein held negative opinions on the abstractness in Modernist art, e.g., Cubist, Futurist and Suprematist genres, claiming that they "dissipated into nothing." [81] He characterized Cavalcanti and Man Ray's films as "abstract bagatelles". Richter, Ruttmann and Eggeling's absolute films were "experiments," but Dreyer's *The Passion of Joan of Arc* was a "magnificent tragic image."[82] The key point is that for Eisenstein, abstractness is not the reduction of object contours in abstract art, but the affect, passion, and ecstasy conveyed figuratively through the tangible the image for spectators:

> What interests Eisenstein are modernist art experiments which he compares to examples from classical antiquity, the Renaissance, and the Enlightenment. Eisenstein regards the formalized structures of sensual thinking – in which space and mimetic analogies mean more than time and causality – as a reservoir of artistic devices (e.g. the non-differentiation of the inner and outer in the emotional role of the landscape in art, *pars pro toto* and close-up in film, etc.).[83]

Modernists made the essence, the inner dimension of an object, be seen (dynamism or geometrical structure) through the negation of the external figurative shapes, but for Eisenstein, the essence was conceived in the well-structured painting and the close-ups of film. A representation of a landscape is a manifestation of both the sensorial pathos and the rational structure (e.g., the Golden Section) of nature.

Eisenstein objected to abstract representation in Modernist art, but not the abstraction conveyed through cinema, which responds to the Lumière brothers' pessimism of cinema that why people need to watch something in cinema that has been seen in daily life: to feel, not to see, dynamism and movement through montage. It is a combination of Malevich's "real dynamics," or "the sensation of speed detached from corporeality," and the synthesis of movement in German Absolute Film. Eisenstein's conceptual movement was manipulated by cinematography in terms of its mechanism, such as German Absolute Film, yet maintained the

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[81] Sergei. M. Eisenstein, *Nonindifferent Nature*, trans. Herbert Marshall (Cambridge: Cambridge University Press, 1987), 289.
[82] S. M. Eisenstein, *SWIV*, 336.
[83] Bulgakowa, "From expressive movement," 438.

photography of cinema to convey a motif or concept through the dynamism and structure of a figure or landscape.

Summary

The passage of time, as all human beings have experienced, respected and feared, points to aging and ultimately, death. Changes to the body and motion indicate self-reflexive evidence of the passage of time. But consciousness will not age until the final moment of corporeality, and knowledge reversely proliferates — the dilemma that Faust encounters. As long as consciousness exists, one can engage in time and be aware of the finite. On the one hand, representations of time exist as a reminder indicating that time is "out there," and it can be represented, publicized and socialized, but it is no longer an individual experience. On the other hand, a time-representing apparatus, such as a clock, art, chronophotography and cinema, stores time, resisting the decay that biological bodies suffer, much like the picture of Doran Grey which preserves the beauty of appearance that Grey himself cannot maintain.

Time, for Freud, was "a symptom whose effects are intensified by the excessive trauma of modernity."[84] All the hostility toward the machine was rooted in the fear that the machine will surpass the human. It conceals a traditional dichotomy of mind and body, interior and exterior, reality and its representation. In Marey's choronophotograhy, the body-described movement was manipulated by biological locomotion full of individual intuition to create intervals, montage and duration. *Time reflects a paradox, in that it flows as a duration, but can be only grasped through the static instant.* The discussions and practices of moving images at the turn of twentieth century were all centered on the question whether time is located within the material object as its essence or whether it can be represented "out there."

As Friedrich Kittler affirmed, "Time determines the limit of all art."[85] From Marey's chronophotography to German Absolute Film, there exists a reduction of

[84] Doane, *Cinematic Time*, 34.
[85] Friedrich A. Kittler, *Gramophone, Film, Typewriter*, trans. and with an introduction by Geoffrey Winthrop-Young and Michael Wutz (Stanford: Stanford University Press, 1999), 3.

objective reality into a geometrical shape reflecting the essence of a material. This tendency has been accompanied by the parallel development of moving images and its technology, which include optical toys like the zoetrope, phenakistoscope, praxinoscope, etc., existing before the Lumière brothers' first film in 1895, as well as Marey's chronophotography. In fact, the two parallel roads are intersected, having mutually influenced each other, generated Modernist art and cinema, and fused the two art forms into abstract animation. Therefore, to some degree, time does not limit art, but extends and widens the realm of the arts.

Eisenstein began his life in film and theory in this evolving media formation and emergence driven by the philosophical theories of time, movement and motion. He was satisfied with neither the dynamism of stillness in painting without the synthesis of movement, nor the primitive abstractness of German Absolute Film with cinematic movement. But both the dynamism of stillness and the abstractness consistently appeared in his aesthetic theory, which propelled an evolving montage of conflicts. The conflicts lie in both the montage itself in films and the theorization of montage based on the triadic relations of time, movement and motion. The individual shots within a montage are still, but thoughts are moving through these shots; the cinematic images are mimetic, but the concepts carried through the images are abstract.

The Expressive Movement was inspired by theatrical acting and body management, but he developed his own affective function among spectators in terms of culminating conflict and ecstasy, to evoke the spectator's "earlier modes of thinking," a "collective barbarism — into cultural regression," connected to primitive religion and Roman-Greek mythology.[86] Though this infatuation with non-European culture was controversial, Eisenstein's interest in the initiative impulses of life that were remediated and enhanced by cinema in modern times extends the exploration of Eisenstein's abstract linear movement in cinema in the next chapter.

[86] Bulgakowa, "From expressive movement," 425.

Chapter 2: Metamorphosis as the Conceptual Movement

In nova fert animus mutatas dicere formas / corpora;
"I intend to speak of bodies changed into new forms;"
– Ovid, *Metamorphoses I*

The last chapter identified two tendencies with respect to visual images in the early twentieth century: the abstraction of figure contour and the visualization of movement inspired by Marey's chronophotography. In film, a figure does not appear in a certain instant as it does in the easel painting, sculpture or photograph, but represented through the continuous movement of images. The technical nature of celluloid film also applies to animation, in that it is a time-based medium of time lapses between frames and the illusion of duration. Along with the advent of the cinema, animation appeared to provide insight into the muscles' action and dynamic onward progression, in accordance with the subject Marey wished to depict. The discrete painted image is exactly what Marey showed in his chronophotography.

The variation of a contour is a form of the shape-shifting motif, a metamorphosis that Eisenstein frequently exalted in his writings about Disney animation. Animation, the symbiosis of painting and film, represents metamorphosis through a process of changing lines within a period of time that constructs and reconstructs a body or a figure. Eisenstein's persistent interest in figurative drawings, in contrast with the abstraction of the early modernist arts, resulted in his favor toward the plastic figuration in animation, while real objects were unable to achieve this plasticity in film. Thus, the metamorphosis was reflected in both the literary context and meaning, and the mechanism of cinema itself.

Since the second half of the twentieth century, movement was embodied and represented through body and motion as the effect of "frenzy of the visible", as discussed in the last chapter. In Disney animation, this metamorphosis was also bodily represented. However, conflict and the affect function of expressive movement are not sufficiently illustrated through the variation of figures in animation. Rather, in Eisenstein's films, metamorphosis has evolved into the attraction of montage, the instant ecstasy, indicating *the metamorphosis dematerialized and disembodied into a conceptual and invisible movement*.

This chapter will analyze the notion of metamorphosis in Eisenstein's writings,

which combines his praise of the "plasm-plastic line" in Disney animation and his montage of attraction as a conceptual movement in both film technique and contextual meaning, as exemplified in *Glumov's Diary* (1923). Concerning theories of time and movement, his idea of manifesting metamorphosis through intra-shots contradicted Vertov's "Cine-fact" (*Kinopravda*) within a shot. Moreover, Eisenstein's understanding of metamorphosis has its cultural roots in Western classical literature, most remarkably in Ovid's *Metamorphoses*, which embraced metamorphosis as an important theme. The Eisensteinian terms of primitiveness, ecstasy and sensual impulse are also features of metamorphosis. Metamorphosis was Eisenstein's thematic interest in Disney's animation and its association with animism — a process of transformation of life, death and soul through movement.

The representations of metamorphosis in moving images reflect a collision of the modern and the primitive in cinema and animation. Metamorphoses were portrayed as a superstitious magic, and as the antithesis of modernity, which contradictorily and ontologically cinema itself represents. However, cinema at its emergence in modern times was keen on producing magic by representing the process of metamorphosis. For example, Georges Méliès' discovery of the stop-motion technique widely contributed to filmed magic shows, and those of Segundo de Chomón, whose films used fire as a natural power that implies the magic of metamorphosis. Eisenstein analyzed the motif of the magic fire in Richard Wagner's *Der Ring der Nibelungen* to express his affirmation of fire, which accurately matches his understanding of metamorphosis: the plasmatic form triggers a variation of contour. Eisenstein's partiality toward plasmatic Disney animation and the motif of fire perversely imply his inclination towards the non-figurative abstract forms, despite his opinion of the abstract modernist arts as naïve and primitive forms.

2.1. Ovid's *Metamorphoses* and Eisenstein's Plasma Drawings

Metamorphosis is a prevalent theme representing physical and psychic displacement in literary discourse in the twentieth century, such as the works of Kafka, Nabokov and Borges, when the world in every realm experienced a period of upheaval and uncertainty.[1] The supremacy of imagination, motivation and

[1] David H. J. Larmour, "Pythagoras and the Butterfly: Nabokov's Ovidian Metamorphoses," in *Metamorphoses in Russian Modernism*, ed. Peter I.Barta (Budapest: Central European University Press, 2000), 74.

recognition of the animalistic desire were all revealed in Greco-Roman myths. The questioning, violation and collapse of the boundaries between male and female, life and death, the transition of the human to the non-human or vice versa, and all the chaos in the world of becoming are collected in Ovid's epic poem *Metamorphoses*.

The metamorphosis in Russian mythology and culture may be traced from the Petrine myth. Like Ovid, Alexander Pushkin was intrigued with "immortality" achieved in the transformation from life to lifeless objectification. His interest in the myth of Petersburg, embodied in *The Bronze Horseman*, indicated his fascination with the protean Peter the Great, who transformed Russia into a Westernized country.[2] In Barta's view, Ovid's *Metamorphoses* showed a transcendent world, metaphorically similar to modern Russia, which also suffered a transformation accompanied by violence and pain. Barta considered Ovid's *Metamorphoses* as a metaphor of Russia under Peter the Great's efforts, which led to modernity, while experiencing the suppression of chaos, which sometimes broke through the surface of order,

> As Ovid's poem shows, the birth of the world is a huge transformation from chaos to order, but as the many stories also illustrate, chaos continues to be a vital force lurking under the surface of this order. Likewise, behind the gilded facade of Peter's 'Western' state or Catherine's Potemkin's village, the country's profoundly non-European aspects are always apparent.[3]

Ovid's tales in *Metamorphoses* have two implications. First, the metamorphosis is a constant process of becoming, like Bergsonian time, with the freedom of shape-changing amid various forms of life. As Ernst Cassirer states, "Nothing has a definite, invariable, static shape. By a sudden metamorphosis everything maybe turned into everything. If there is any characteristic and outstanding feature of the mythical world, any law by which it is governed — it is this law of metamorphosis."[4] Thus the representations of metamorphosis are framed in the discussion of time and space, or an imaginary spatial-temporal dimension beyond the restrictions of daily life. Second, the metamorphosis contains the animalistic nature of primitive culture that represents sexuality, proliferation and desire. For example, Tiresia is a mythological character in Ovid's *Metamorphoses* who shifts between man and

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[2] Peter I.Barta, introduction to *Metamorphoses in Russian Modernism*, ed. Barta, ibid., 3.
[3] Ibid., 6-7.
[4] Ernst Cassirer, *An Essay on Man* (New York: Doubleday, 1944), 43. See Larmour, "Pythagoras," 81.

woman to testify as to which gender acquires better sexual experience. She is finally punished by the goddess Juno with loss of her sight, while being compensated with the transcendental power of prophetic vision. This example, which is similar to stories such as those of Narcissus, Orpheus and Daphne, questions what is forbidden, disavowed, or displaced in sexual and gendered meaning in Greco-Roman times. While suppressed by Peter's transformation and Westernization, this animalism of sexuality never disappears, and in its struggle with modern culture becomes the stimulus for metamorphoses.[5]

In an interview published in Feburary, 1914, the Italian poet Gabriele D'Annunzio considered Ovid's *Metamorphoses* as "a true cinematic subject" ("*Ecco un vero soggetto cinematografico*"): The transformation of Daphne into a laurel tree has a cinematic equivalent created by the technique of dissolves.[6] Metamorphosis, the process of becoming, can be represented through animation and film as time-based media, which depicts the indefinite status and impulse of life and death.

Eisenstein found this in Disney animation, and practiced this understanding of metamorphosis in his own drawings. A sense of metamorphosis was one of the more influential factors in Eisenstein's drawings. Eisenstein related the plastic forms of life in Disney animation to Ovid's *Metamorphoses*, stating, "Poetry's principle of transformation works comically in Disney, given as a literal metamorphosis ... Metamorphosis is not a slip of the tongue, for in leafing through Ovid several of his pages seem to be copied from Disney's cartoons."[7] The metamorphosis of Mickey Mouse extends to another notion that Eisenstein raised as the attribution of animation — animism — which will be discussed in the next chapter.

For Eisenstein, Mexico was a place where metamorphoses occurred in the flow of transformative identities as what happened in Russian. A trip to Mexico encouraged Eisenstein to renew his drawing in a new style at the brink of life and death. His pictures of the story of Macbeth were constituted using flowing lines of plasmatic limbs with knives piercing bodies. Eisenstein compared them to the works

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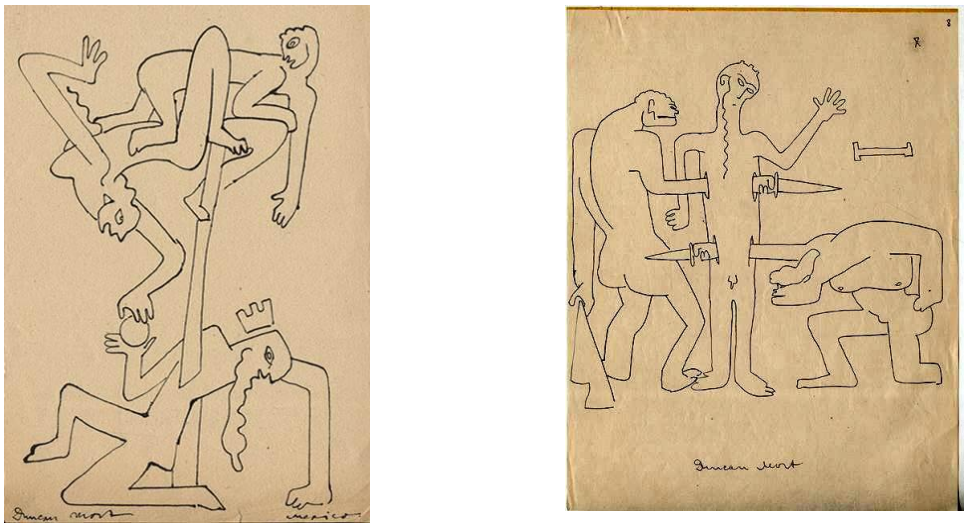
[5] Ed Madden, *Tiresian Poetics: Modernism, Sexuality, Voice, 1888-2001* (Cranbury: Associated University Press, 2008), 16-17.

[6] Gabriele D'Annunzio' interview on *Il Corriere della Sera*: the text is reprinted in *Interviste a D'Annunzio* (1895-1938), ed. Gianni Oliva (Lanciano: Rocco Carabba, 2002), 278-285. See Martin M. Winkler, "The Iliad and the Cinema," in *Troy: From Homer's Iliad to Hollywood Epic*, ed. Martin M. Winkler (Maden, Oxford, Victoria: Blackwell Publishing, 2007), 50, and see the note on the same page.

[7] Sergei. M. Eisenstein, *Eisenstein on Disney*, ed. Jay Leyda, trans. Alan Upchurch (Calcutta: Seagull Books, 1986), 40.

of modernists such as Picasso, Dali, Annenkov and Grigoryev.[8] The vigorous, seemingly infinite extension of lines metamorphosed into the tools to end life. Eisenstein used bullfights to analogize this process, when life approaches death.

> they also both seem to be, not for life, but for death (the sword-for the bull or the horn-for the matador!), grappling with nature itself; also in the same way the horn or sward penetrate each other; they penetrated each other in a similar great moment of the mutual merging of life and death, bull and man, instinct and craft: animal nature and the art of man![9]



Sergei M. Eisenstein, *Death of Duncan* (1931), pencil on paper.

In "Savage Thinking: Metamorphosis in the Cinema of S.M. Eisenstein", Anne Nesbet claims that Eisenstein's understanding of metamorphosis absorbs the "sensual thought" that he regarded as the power of classical mythologies conveyed by Ovid, being "the emphasis of sex as a part of transformation."[10] In Nesbet's view, Eisenstein's metamorphosis implies an obsession with the fetus, the plasmatic figure that is capable of shaping and reshaping itself. His interest in the protoplasmic forms of life in the womb were reflected in his drawings following his return to the Soviet Union from Mexico in 1932,

> The figures 'hover' in space; that is, the atavism in them belongs to the period before being set upon solid ground, to the amoebic-plasmatic stage of movement

[8] Ibid., 70.
[9] S. M. Eisenstein, *Nonindifferent Nature*, trans. Herbert Marschall (Cambridge: Cambridge University Press, 1987), 362.
[10] Anne Nesbet, "Savage Thinking: Metamorphosis in the Cinema of S.M. Eisenstein," in *Metamorphoses in Russian Modernism*, ed. Barta, 154.

> in liquid. This is the graphic equivalent of the sensation of 'flight' among ecstatics: an identical uterine sensation of gyroscopicness and the identical phylogenetic pre-stage-the floating of the amoebic-protoplasmatic state in a liquid environment.[11]

The concept of "hover" reflects animation as an art form that may escape from gravity. Drawing makes "hovering" in a single frame possible, but moving images subvert the daily experience of time and space and create a spatio-temporal alternative world for the continuation of hovering without being dragged to the ground.

For Eisenstein, his drawings not only escape from gravity, but also capture the process that transforms the figure: "In my drawings, the truly appealing theme is the coming into being of the human form from plasma."[12] The contour, constituted in a state of liquid flux, flows from one shape to the next. Eisenstein's concern in drawing was not static shots, as seen in his films, *but the dynamic movement constructed by lines* (though his montage experiments also create a rhythmic influx within successive images). *The lines do not aim to delineate a figure resembling fact as denoted by vision, but to narrate a fact, a concept and a thought*, as in the work of Malevich, Kandinsky and Rodchenko, who advocated the key role of the lines in modernist arts: *The line is not to mimic, but to abstract*.

In his adolescence Eisenstein's drawings demonstrate the clear anatomical structure of bones and muscles, as found in "In the World of Animals" (1913–1914). Plasmatic metamorphoses renewed his drawings into sharp lines of contour instead of creating the three-dimensional perspective. James Goodwin points out that Eisenstein's attitude toward graphic lines and chiaroscuro bifurcated into two different practices in drawings and cinema,

> The graphic line itself serves an analytic, dissecting function. For Eisenstein, the line produces an incisive, rudimentary outline or shape for his subject. And as often as not, the line demarcates a site of conflict and contradiction, of antagonism and antithesis. This graphic practice is distinct from treatment with chiaroscuro, where contour is in transition between light and dark and form can remain ambiguous or indefinite. When warranted by his scenic concept, Eisenstein employed devices of chiaroscuro. In *Sutter's Gold* the migration of miners and profiteers was envisioned as a descent of locusts upon California, darkening then consuming a fertile land. From the late 1930s until his death,

[11] Eisenstein, *Eisenstein on Disney*, 70.
[12] Ibid., 69.

Eisenstein fully employs a graphic environment of shadows and darkness.[13]

In Eisenstein's drawing, *Death of Duncan*, the removal of shadow and anatomical principles demonstrates the intention of highlighting the subject as tangible and fluid matter — a fetus formed and reformed in the womb. Meanwhile, the divided graphic space serves to create dynamic intensity in the two-dimensional plane. Eisenstein's plasmatic drawings become a metaphor of metamorphosis through their simplified lines as the means to divide the space and to accomplish this metaphor..

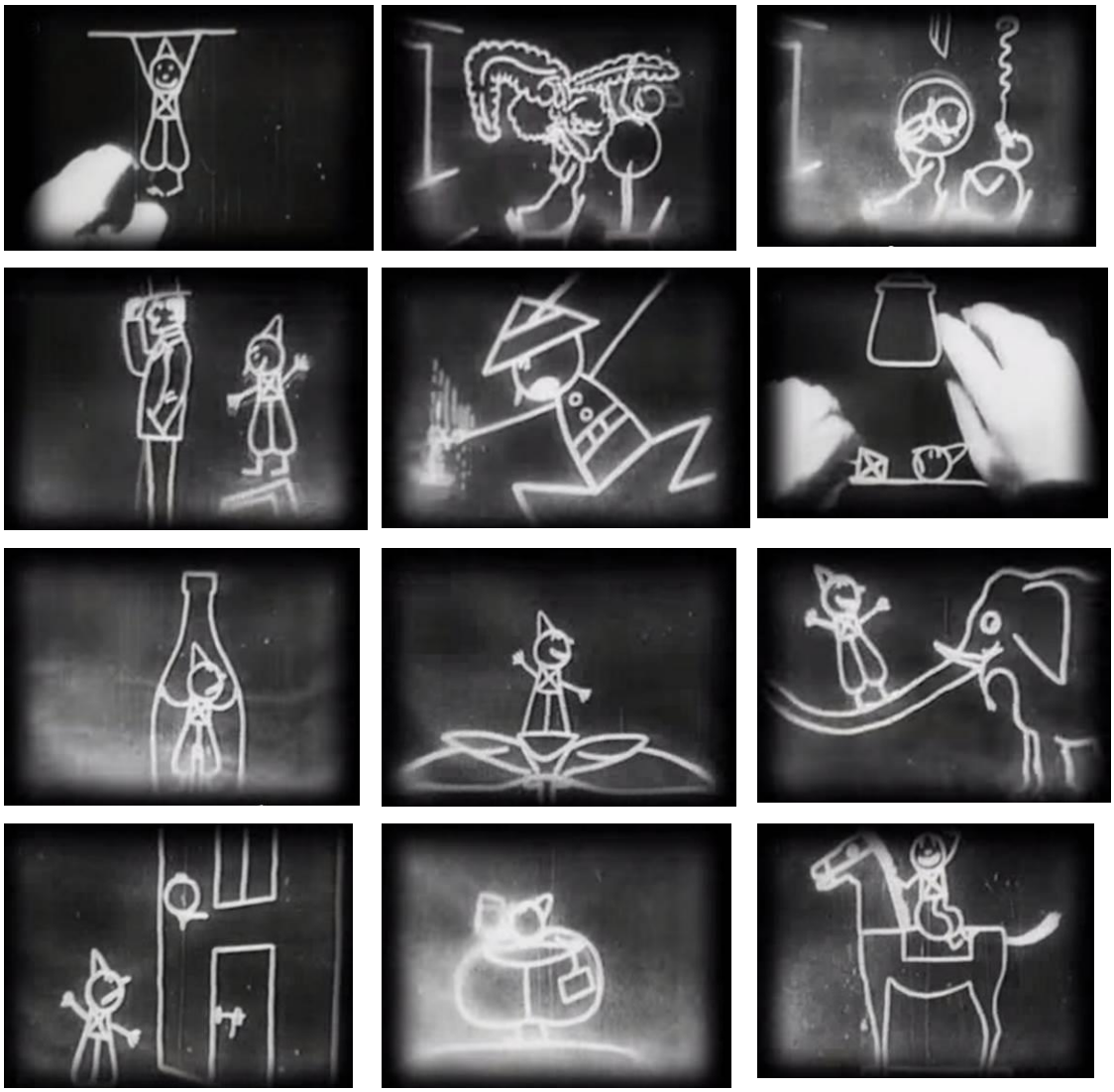
2.2. Metamorphosis in Early Animation

Eisenstein saw Disney animation as the continuous transformation of the "animated" contour line, the very mechanism of a flowing omnipotence concealing the depths of pre-memory and provoking unconsciousness and impulse. Eisenstein's reflection on Disney animation echoes the traits of early animation, especially stroke drawing animation, which emerged in the late 1920s before the establishment of Disney Studios. The French caricaturist J.J. Grandville painted a series of graphics named *Metamorphoses of the Day* (*Les Métamorphoses du jour*, 1828–1829). In this series, animal heads with men's bodies present a comedy of human characteristics in seventy pictures. As an extension of graphic narrative, Émile Cohl's animation and the Fleisher brothers' rotoscoping showed metamorphoses of lines without separating them shot-to-shot or graphic-to-graphic, as shown in Grandville's series of drawings.[14]

Fantasmogorie (*Fantasmogorie*, Émile Cohl, 1908), the first animated feature, contains lines transformed into various objects for non-plot purposes. Émile Cohl used an illuminated glass plate to draw black lines on paper, making each picture with slight variations to create 700 photographs. The results, printed in negatives, provided the same appearance look as a chalkboard. In the first scene of *Fantasmogorie*, the artist draws a puppet-like character on the blackboard with chalk. The puppet, as a theater announcer or curtain dragger, presents a comedy that plays out in the theater: a man pulls the feather on a large hat worn by a lady sitting in front of him that is blocking his sight, and then the lady's hat turns into a ball of knitting

[13] James Goodwin, *Eisenstein, Cinema and History* (Champaign, IL: University of Illinois Press, 1993), 137-138.
[14] Norman M. Klein, *Seven Minutes: the Life and Death of the American Animated Cartoon* (London: Verso, 1993), 64.

wool. When the puppet jumps out of the lady's hat, the theater scene was thoroughly disrupted. Various metamorphoses occur in several dimensions: A Western-suited man transforms into an ancient Chinese officer (transition across races and countries); the head and body of the puppet are separated, but rescued by the filmmaker's hands (immortality of dismembered body, the invasion of the real world into the film world); and a man who tries to capture the puppet's head turns into a bottle to kidnap the puppet, but the bottle becomes a flower, a flower's stalk becomes the nose of elephant, and the elephant then becomes a house (transformations between biological objects and lifeless objects). Finally, the puppet shuttling to and from different metamorphoses of objects is able to expand or shrink its body (metamorphoses to reconcile with the environment).



Fantasmogorie (*Fantasmogorie*, Émile Cohl, 1908)

The puppet, a substitute for the artist, engages a series of phantasmagoria. It appears in the form of a bystander seeing a comedic scene in a theater. However, when the puppet is involved in the other scenes of the comedy as an active participant or occasionally as a manipulator of these metamorphoses, the metamorphoses exceed both the logic of narrative and the limits of space. Whether the objects are animate or lifeless, all come to life through the metamorphosis of the lines. The omnipotent lines create shapes and forms, endowing objects with autonomy. The transitions between the objects flows fluidly, without solidity, and becomes unrestrained as if they have their own will to become anything.

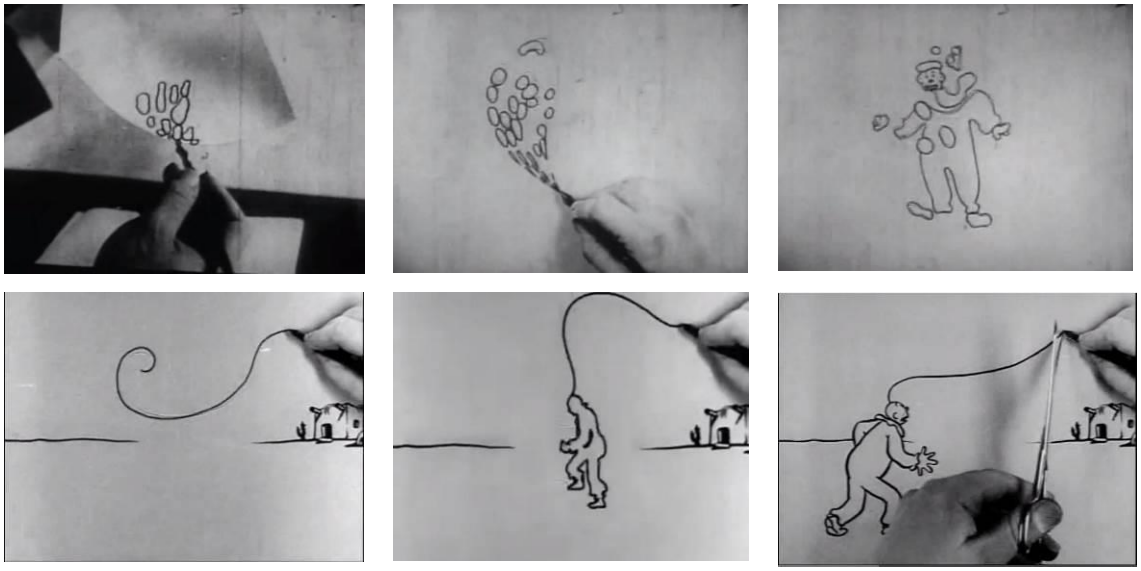
As expressed by Eisenstein, "the inner intuition is concealed in the lines which construct the contour of figures. The omnipotent line is constantly 'coming into being' and constituting the 'plasmaticness' of existence 'beyond any image, beyond tangibility — like a pure sensation'."[15] As indicated by its title — *Fantasmogorie* — the various changes in one's imagination and the metamorphoses of lines shifting from one recognizable figure to another reject logical, rational and linear continuity, in turn becoming surreal, "impulsive" and "unconscious". In other words, as Eisenstein described Disney, they are "the pre-memory."

Fleisher brothers' series *Out of the Inkwell* in the 1920s is another example of metamorphosis shifting between the imaginary graphic world and the real world. In the first episode of the series *Modeling* (1921), ink on paper moves into the pen. The ink oozes out of the artist's (Mike Fleisher's) pen as if it had life, and then many small bubbles metamorphose into Ko Ko the clown. Similarly, in *Jumping Beans* (1922), an ink line flows out of the pen and turns into the contour of Ko Ko, which moves the body, draws more ink lines and gradually details its figure. Ko Ko the clown completes his figure contour using different methods at the beginning of every episode. In later episodes, the painting process becomes more and more simplified when compared with other animation of that period. The innovation in this series is the various forms of interaction amid the tangibility of lifelike drawing materials, which are permutable surfaces mediating between the real and imaginary world through the artist's dexterous and intervening hands.

The Fleisher brothers commented on a scene of metamorphosis in *Snow White*, observing, "an image transmutes, as if by alchemy, into many others; its atomic

[15] Eisenstein, *Eisenstein on Disney*, 46.

structure seemingly comes unglued."[16] The transformation of ink into the character was practiced in their series, *Out of the Inkwell*. Ink and paper, like the atomic elements, have their own ability vitality to make chemical reactions, and thus the artist, like the alchemist, does not direct the movement of chemical elements or form their amalgamation.



Out of the Inkwell series (Max & Dave Fleischer, 1918–1929). The three still images on the first line are from *Modeling* (1921), and the three still images on the second line are from *Jumping Beans* (1923)

The self-referential artists in early animation can be regarded as the heritage of metamorphoses in literature. The connection between an artist and his or her own work is the ultimate intention of immorality, achieved through the constant becoming and being-in-life in art: "[That] the writer metamorphoses into his writing … [is] more acceptable to modern humanity than the faith in physical transmutation that was part and parcel of the religious and philosophical order of the classical world,"[17]

> At the end of the Latin poem stands Ovid himself, confident in the eternal fame his art will bring [...] It is not only reality which emerges from the chrysalis of the author's experience as art, but the author himself. The creator recreates himself, leaving behind the author of the first world, like a discarded chrysalis, and moving on to another incarnation, in a process which Ovid would have recognized as fundamentally akin to Pythagorean metempsychosis.[18]

[16] Klein, *Seven Minutes*, 64.
[17] Barta, introduction, 4.
[18] Larmour, "Pythagoras," 81.

The artist's hands in *Fantasmogorie*, as the hands of a creator with a religious or artistic implication, give life to the puppet and later revive it when it disintegrates. The hands not only draw the figure of the puppet, but assemble the parts of the body in a surrealistic way, as if the chalk-painted limbs could be moved, picked up and glued by the artists' hands. Similar special effects are also utilized in *Modeling*. For example, the artist's hand can prick Ko Ko the clown to make him more active. However, the relationship between the artist and the character of Ko Ko is more interactive, and even the artist is revolted by the virtual character. For example, they are able to talk to each other and engage in several fights during the series. Each time the artist and his friends try to tease or mock the clown, the clown will tease them back and effortlessly win the argument. Unlike the metamorphoses in classical literature, the creator or artist is no longer, as were the gods, standing aloof above the creatures in an imaginary world. Fleisher brothers' *Out of the Inkwell* series reverses the stereotype of clown of the traditional comedy into a positive character with dexterity and intelligence.

Animated paintings alter the tension between stillness and movement, and change pace and perspective through animation. The visualized metamorphosis manifests movement and rhythm, though its materiality is constructed through breaks and intervals, and has its own manner of deciding direction and speed. As Eisenstein said, the metamorphoses of lines in animation indicate the *phenomenon of movement*, just as he described fire as a natural phenomenon.[19] As discussed in the first chapter, Marey, Wertheimer and Malevich all advocated for disembodied movement. In animated paintings, lines metamorphose into various figures and characters, but whether the figures are transformed into others as in *Fantasmogorie* (1908), or the characters were created with impulsive energy to begin a vivid life as in *Jumping Beans* (1923), they are all disembodied from their original forms.

2.3. Time and Movement in Shot and Montage: the Cine-fact Debate between Eisenstein and Vertov

Eisenstein associated senses with metamorphosis — the vigor of life as the intellectual basis for developing the principle of montage. Montage is an influx of movement stimulated by metamorphoses and mediated by graphics. Eisenstein's

[19] Eisenstein, *Eisenstein on Disney*, 24.

films are striking for their still images and objects that are strict to the composition of the graphics, which is a strategy to reduce the variants within shots to build up the rule of montage between shots. Thus, to discuss the montage as a form of metamorphoses, a review of Eisenstein's principle of movement in and out of shots should be compared with the proponent of the opposing theory on this issue, Dziga Vertov.

The Soviet montage school's theory of film places particular focus on the intervals and gaps between frames, especially as practiced and theorized by Sergei Eisenstein in his montages, and Dziga Vertov's theory of interval. As Oksana Bulgakowa writes in the introduction of Malevich's collection of writings on film,

> The Russian film avant-garde treated motion analytically; it was concerned not with the synthesis of motion, but with the realization of a gap, an interval, a moment of stasis between the photograms, which was effected both by Eisenstein, in his montage of statues and static objects, and by Vertov, who treated the interval as the organizing moment of film montage.[20]

Montage of metamorphosis is deemed to address the issue of time and movement, the key point of the polemics within the Soviet film school, although they differ from each other on their own positions. The comparison between Eisenstein and Vertov began as they both lived in the productive time of cinema. Viktor Shkolvsky's *Their Genuineness* (1927) was the first to trigger the controversy, favoring Eisenstein's innovation on montage. Vlada Petrić's *Constructivism in Film: The Man with the Movie Camera: a Cinematic Analysis* delves into the Eisenstein and Vertov controversy, yet maintains a pro-Vertov tendency. Petrić concludes that there are three differences in their artistic opinions and practices: definitions of "ontological authenticity" in cinema, "theory of Intervals" and "attitudes toward the role of sound in cinema."

Concerning the "cinema of fact," Eisenstein and Vertov hold different opinions on the camera's autonomy in cinematic practices. Petrić quotes Sergei Drobashenko, noting that "Eisenstein's entire theory and practice in the 1920s (and even much later) was subordinated to a single goal and to one overriding idea, which was to find the best expressive means and stylized devices capable of jarring the viewer's psychology." Eisenstein accused Vertov of lacking "a dispassionate representation of

[20] Oksana Bulgakowa, introduction to *The White Rectangle*, ed. and with an introduction, Oksana Bulgakowa (Berlin and San Francisco: Potemkin Press, 2002), 26.

reality."[21] Image composition, montage, *mise-en-scene,* all of these being Eisenstein favorites, highly relied on filmmakers' and artists' manipulation, and the camera is only an instrument which cannot penetrate into reality without the artists' involvement. However, Vertov trusted in the camera-eye as a mechanical power beyond the human eye: What the naked eye perceives is not the truth. Rather, "Cine-eye" (*Kinoglaz*) sees the truth, including slow motion that shows the details and appearance in nature that may be overlooked by the human eye. Vertov's theories of "Cine-Eye" (*Kinoglaz*) and "Cine-truth" (*Kinopravda*) challenged the traditional view of seeing as perception and consequently triggered the beginning of the documentary as a genre, as well as Godard's establishment of the *Dziga Vertov Group* in 1968. However, Eisenstein's understanding of imitation did not remain on the superficial duplication of reality. In his 1929 article, "Imitation as Mastery," he wrote, "The age of form is drawing to a close. We are penetrating matter. We are penetrating behind appearance into the principle of appearance."[22] Eisenstein called for the reality of inner essence beyond the duplication of what the naked eye perceives.

Regarding ontological authenticity, Petrić explains it as the power of the motion picture evoking "a sensorial notion of reality as well as a strong feeling that the events, characters, and the environment exist as a real world."[23] For Petrić, Eisenstein's use of "stylized devices" in acting, makeup and *mise-en-scène* reduced ontological authenticity. However, neither Eisenstein nor Vertov pursued or presented this reality in their film works. There is one commonality that Vertov and Eisenstein shared: They both seek a reality beyond human perception; Film-Eye, with its mechanical capacity, can detect the principle, forces and truth in physical nature that mankind cannot see. Like the early modern artists, including Malevich, with whom his relationship was marked by criticism and controversy, Eisenstein sought a reality that is the intangible, fluid process of metamorphoses, "the metaphysical theory of motion as an optically imperceptible phenomenon".[24] Despite Eisenstein's visual appreciation of a stylized appearance, he pursued an artistic reality beyond the surface — the metaphysical reality of abstract released from the figure and contour.

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[21] Vlada Petrić, *Constructivism in Film: The Man with the Movie Camera: a Cinematic Analysis* (Cambridge: Cambridge University Press, 1987), 51.
[22] Sergei. M. Eisenstein, "Imitation as mastery," trans. Richard Taylor, in *Eisenstein Rediscovered*, ed. Ian Christie and Richard Taylor (London: Routledge, 1993), 68.
[23] Petrić, *Constructivism*, 50, and see the note on the same page.
[24] Bulgakowa, introduction, 28.

Eisenstein and Vertov's opposing opinions on cinematic reality and interval led to their own respective film styles. Vertov's theory of intervals was rooted in the collision of movement from opposites. Petrić suggests a different means of applying the *phi*-effect theory to understand Vertov's theory of interval. *Phi*-effect is assumed to create the impression of movement. However, in Vertov's *Man with a Movie Camera* (*Chelovek s kinoapparatom*, Dziga Vertov, 1929), *phi*-effect has been used in reverse: a shot is a unit of a sequence as the photogram is a unit of a shot, and thus the movement in a shot creates an interval with the movement of oppositional direction in the next shot.[25] Vertov's understanding of shot differs from Eisenstein's idea of movement in montage. Shot contains movement in itself, and the autonomy of shot is also the autonomy of camera which reveals the reality of the material world. Therefore, Vertov resisted quoting the film image by frame. Rather, he quoted the successive shots using a table with numbers of time records.[26]

For Eisenstein, the distinctive value of montage in cinema surpasses individual shots. The shot is a static unit, the indivisible element constituting the non-static montage, the conceptual movement conveyed by the collision of static images. The Eisensteinian shots and montage resemble his drawings, which reduce the perspectives and shadows to make the movement of plastic lines salient. Similarly, the static shots also emphasize the movement and rhythm between the shots. As Eisenstein said about the plasmatic existence, the movement is "beyond any image, without an image, beyond tangibility — like a pure sensation."[27] The sensation of movement in the montage is not similar to that of animation's ever-changing image and lines. Rather, it can be sensed through rhythmic and physiological impulse, the affect. The metamorphoses occurring in the movement of montage is achieved through the montage of attraction, a "physical infectiousness" which Eisenstein identified to probe the "physiological effect of montage irregularity and rhythm" rather the narrative illustration of *Kinopravda*.[28]

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[25] Petrić, *Constructivism*, 139-143.
[26] Trond Ludemon, "Quoting motion: the frame, the shot, and digital video," in *Film, art, new media : museum without walls?* ed. Angela Dalle Vache (Basingstoke: Palgrave Macmillan, 2012), 106-108, and see the table on page 104.
[27] Eisenstein, *Eisenstein on Disney*, 46.
[28] Eisenstein, *SWI*, 42.

2.4. Fire as a Means for Magic and Metamorphosis

Metamorphosis can be traced from Georges Méliès' stop-motion as a cinematic special effect, an exploration of time and space beyond daily life and logical process. Georges Méliès as an illusionist and a filmmaker, though famous for innovations of special effects — stop-motion, dissolves, multi-exposure, etc. His credit as a "cinemagician" refers to his early production of films that collaborated with magic acts, such as *The Vanishing Lady* (*Escamotage d'une dame au théâtre Robert Houdin,* Georges Méliès, 1896), *The Magician* (*Le Magicien*, Georges Méliès, 1898), *The Four Troublesome Heads* (*Un Homme de Têtes*, Georges Méliès, 1898), *The One-Man Band* (*L'homme orchestra*, Georges Méliès, *1900*) and others. Magic in Méliès films, through the jump-cut, makes objects or people disappear and reappear in the blink of an eye. In *The Four Troublesome Heads* (1898), which disembodies a head using multi-exposure trickery, both the body and the head remain alive. Nabokov was keen on the metamorphoses of moths and butterflies, and expressed his interest in doing these "magic tricks," "turning water into wine, that kind of thing" in his childhood. He considered this phenomenon of metamorphoses as a shot.[29]

Metamorphoses in early cinema are realized through montage as their device, often being set in the theater for performances by a circus or magician. The symbiosis between film and magic was practiced by another filmmaker, Segundo de Chomón, who showed a preference toward fire as an indicator of the instant of magic occurrence. Fire has been frequently referenced in Chomón's films portraying a performance of magic. His *Metamorphoses* (*Métamorphoses*, Segundo de Chomón, 1912) manifests the collaboration between magic and film. The film is a magic show performed by a female magician. The fire, without any reason or source, burns an object into ash and then burns the ash into other objects, such as a bird, a tiny bear and dolls, all of which become animate. Fire is the agent of magic through which metamorphoses between the objects and the birth and rebirth of objects occurs, such as the transition of death to life, or life to death. One such example appears in the futurist novel, *Il codice di Perelà*, which was written by Aldo Palazzeschi in 1911. An old valet, Alloro, sets fire to himself, resulting in his death, for acquiring a light body like the protagonist, Perelà, a man endowed with life and youth through a metamorphosis from the smoke in the chimney.

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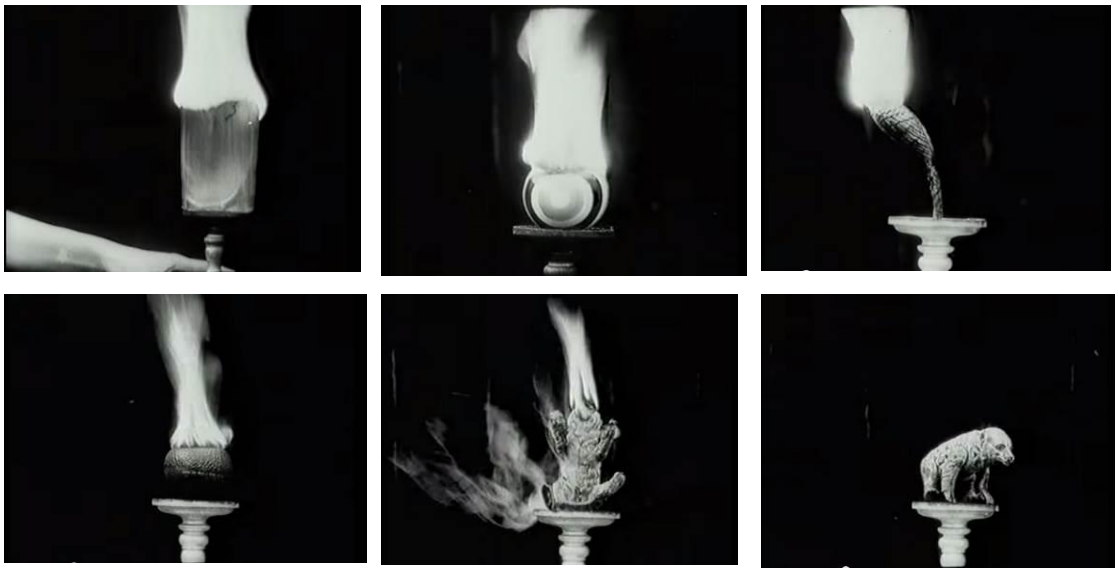
[29] Vladimir Nabokov, *Strong Opinions* (New York: Vintage International, 1990), 11, cf. David H. J. Larmour, "Pythagoras", 65.



Metamorphoses (*Métamorphoses*, Segundo de Chomón, 1912)

Eisenstein considered fire as the perfect metaphor of a metamorphic status. Fire bears many traits associated with Eisensteinian metamorphoses: omnipotent, plastic shape and form, and impulsive, unconscious enactment. Eisenstein quoted Hegel's characterization of fire: "physical time, it is absolute unrest."[30] Fire, like the flow of water, indicates time and movement of continuity and monotonous rhythm. As Eisenstein states, *phenomenon of movement* is "an embodiment of the principle of eternal coming into being, resemble the potentiality of the primal plasma."[31] German sexologists quoted by Eisenstein associated *Pubertät* (adolescence) and the presence of fiery emotions during this period of life with fire, which also implies desire and erotica.[32] Inspired by German criminologist Dr. Erich Wulffen, who referred to the magic of fire (*Feuerzauber*) as a motif in Wagner's *Der Ring der Nibelungen*, Eisenstein ranked it below the manner in which the magic of fire represents the eternal natural power permeating the entire opera series,

> Tongues of flame, the transition of shades of fire, the bubbling volcano and the bronze portals glimmering with reflected fire – all these follow the movement of the music, blend with it, to create a picture of the sound and color of the final magic of fire (*Feuerzauber*). This idea running through the whole spectacle – the synthetic merging of emotion, music, action, light and color – here perfects the image of 'non-indifferent nature', as it appears to man's imagination in the

[30] Eisenstein, *Eisenstein on Disney*, 48.
[31] Ibid., 45.
[32] Eisenstein refers to German psychiatrist, Iwan Bloch and Paul Adolf Näcke, and the German crimiologist Erich Wulffen. See Eisenstein, *Eisenstein on Disney*, 45.

process of creating legend and myth.[33]

In *Die Walküre*, the magic of fire appears as an important stage or property to imply "the ardor of love" between Brünnhilde and Siegfried in the following opera — *Siegfried*. Brünnhilde falls asleep on a rock surrounded by a magical fire that deters all but the bravest hero, Siegfried, from passing through and waking Brünnhilde. The characters then celebrate the intensity of their love enlightened by the fire. In the final opera, *Götterdämmerung*, Brünnhilde runs into the fire in an act of self-immolation, sacrificing herself to cleanse the curse of the ring. The fire flares up and engulfs all the gods in the final scene, "a double self-cremation" of both the fire itself and the heroine.[34] Fire not only brings "sensuous thought" to the foreground, as the representative of "the ardor of love," but also conceals the sinful desire hidden in the background. Thus fire, according to Eisenstein, is "a spectacle of aesthetic contemplations *an und für sich* (in and of itself), assembled as if it were made according to a dialectical formula."[35]

Fire is a natural power acquired from an accident of lightning, adored and feared in primitive cultures and primarily associated with archaic cultures and mythologies. With the progress of civilization and modernization, the functions of fire, cooking, heating and lighting have been separated, particularly lighting derived from the wick instead of the log and torch.[36] The wick, according to Wolfgang Schivelbusch, is a revolutionary artificial light providing seemingly infinite combustion without any visible sign of self-destruction, such as that seen when one burned wood, and this capacity of eternal existence has been subsequently enhanced in gas or electric lighting.[37] In Chomón's *Metamorphoses*, fire seems to be a magical power which comes from nowhere and ends nowhere. Meanwhile, outside of the cinematic world, it gradually becomes controllable and mechanized in modern times.

Cinema has a similar fate as a technological, magical power in this era. Cinema simultaneously doubles and negates magic. While it shows a photographic representation of the facts, a faithful record of happening, montage makes cinema

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[33] Eisenstein, *SWIII*, 161.
[34] Ibid., 24.
[35] Ibid., 45.
[36] Wolfgang Schivelbusch, *Disenchanted Night: The Industrialization of Light in the Nineteenth Century*, trans. Angela Davies (Berkeley, Los Angeles, London: University of California Press, 1988), 4.
[37] Ibid., 6.

"the art of comparisons" in terms of both consecutive and separate representation, in contrast with the "real action" of theater.[38] Thus cinema is also a form of magical power to enliven objects and enchant spectators through juxtaposition and accumulation, just as fire does in the process of self-cremation during a performance of magic.

2.5. Montage of Attraction as the Metamorphosis in *Glumov's Diary*

Instead of turning to Christian models of faith, Eisenstein's interest lies in universal mythologies and other religious cultures, as presented in the works of anthropologists such as James Frazer and Lucien Levy-Bruhl. However, these anthropologists represented a Eurocentrism that prevailed since the late nineteenth century, i.e. the "othering" of non-European cultures. The anthropological primitiveness discussed in Frazer's *The Golden Bough* was Eisenstein's initial impulse to explore primitiveness and the prelogical in Mexico. As he noted,

> it is here in *Terra caliente* that I come to know the fantastic structure of prelogical, sensuous thinking - not only from the pages of anthropological investigations, but from daily communion with those descendants of the Aztecs and Toltecs, Mayas, or Huichole who have managed to carry unharmed through the ages that meandering thought[39]

Eisenstein's fascination with "primitive and prelogical thinking" reflects the placement of non-European cultures in a hierarchy as uncivilized "mysteries" and exotica that are inferior to those of Western modern societies, though this primitiveness was considered to have rejuvenated Western artistic creation in the time of modernity. This type of discovery was similar to Antonin Artaud's characterization of "the primitive" in Balinese theater, being that which "precedes language and culture, something elementally human."[40] Rustom Bharucha criticized Artaud's work on the grounds that it "concerned not Balinese theater as such but its con-rhythms and gestures, hieroglyphs and revelations, comic trances and metaphysics, mental alchemy and exorcism. The Balinese theater was merely a stimulus for the theater of his dreams, an autonomous, ahistorical, creation."[41]

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[38] Eisenstein, *SWI*, 41.
[39] Sergei. M. Eisenstein, *Immoral Memories: An Autobiography*, trans. Herbert Marshall. (Boston: Houghton Mifflin Company, 1983), 211.
[40] Ric Knowles, *Theatre and Interculturalism*. Hampshire, Palgrave Macmillan, 2010, 17.
[41] Rustom Bharucha, *Theatre and the World: Essays on Performance and Politics of Culture* (Columbia, Mo:

Bertolt Brecht, though not engaged in "a search for the transcendent in some mysterious east," was also "looking for a model for his own, non-psychological, non-Aristotelian 'epic theatre'," which he found in Chinese acting. In their performances, the performers never lost themselves in their emotions, which he termed *Verfremdungseffect* ('defamilarization effect') in his 1936 essay "Alienation Effects in Chinese Acting."[42]

In the early twentieth century, Ric Knowles concluded that inter-culturalism within modernist theatrical visions had primarily resulted in a Western colonization which "removed performance forms or techniques of non-European cultures from their social contexts, histories, and belief systems, othering them, treating them as exotica, or reducing them to their purely formal or aesthetic properties."[43] This also happened to Vsevolod Meyerhold, who had a fascination with "non-realist Japanese modes of representation,"[44] and Eisenstein, who developed the junctures and intervals of montage from Kabuki, a classical Japanese theater with slow acting, singing and dance. Both extracted the styles and forms from Japanese theater for their own theoretical and artistic interests with little consideration of the origin and social-historical context of these arts.

In spite of criticism of the evolutionist mindset, Eisenstein emphasized the physiological initiative and scientific wisdom of montage, and thus analogized montage as the "copulation" of animals from different species, a superimposition that transforms the animals into a new species.[45] The word "copulation," on the other hand, implies a collision of the senses and intellect. In this regard, cinema has emerged in the modern era from historical roots in agrarian culture. Therefore, for Eisenstein's metamorphic experiments, cinema as a medium contains the sensual desire and animal husbandry of intellectual wisdom, as presented in the tales of Ovid.

When Eisenstein explained his notion of attraction, he began with a discussion of theatrical attraction as presented in Alexsandr Ostrovsky's nineteenth-century comedy *Enough Simplicity for Every Wise Man* at the Moscow Proletkult Theatre in 1923,

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South Asia Publications, 1990), 18.

[42] Knowles, *Theatre and Interculturalism*, 12-13.

[43] Ibid., 12.

[44] Ibid., 12.

[45] Eisenstein, *SWI*, 139.

> An attraction (in our diagnosis of theatre) is any aggressive moment in theater, that is, any element of it that subjects the audience to emotional or psychological influence, verified by experience and mathematically calculated to produce specific emotional shocks in the spectator in their proper order within the whole. These shocks provide the only opportunity of perceiving the ideological aspect of what is being shown, the final ideological conclusion.[46]

This short paragraph includes two main perspectives on "attraction." First, in spite of instantaneous moment, attraction occurs through a sequential visual experience analogical to that of constructivist photo-collages of Rodchenko. Secondly, the "direct shock-effect" stimulates emotional shocks within spectators such as fear or surprise, kidnapping the spectators using psychological shifts.[47] Additionally, Eisenstein suggested producing a mathematical shock, as he wrote in the essay "On the Structure of Things". The "magic effect" follows the formula of the Golden Section, not only regarding geometrical proportions in the composition of fine arts, but also the biological and physiological regularities in nature. The artist's work is to mediate the correspondences among the human and organic world.[48] This paragraph also reflects the ideological shift in the spectator's reception. For example, Anne Nesbet observes the effect of the "political caricature" of the characters in *Glumov's Diary* (1923) and *Strike* (*Stachka*, Sergei M. Eisenstein, 1925).[49]

After writing the article "The Montage of Attractions," Eisenstein created a cinematic version of *Enough Simplicity for Every Wise Man — Glumov's Diary* (1923) and wrote another article the following year, entitled "The Montage of Film Attractions," in which he posited the montage of attraction as the commonality of theater and cinema,

> Thus cinema, like theatre, makes sense only as 'one form of pressure.' There is a difference in their methods but they have one basic device in common: the montage of attractions, confirmed by my theatre work in Proletkult and now being applied by me to cinema. It is this path that liberates film from the plot-based script and for the first time takes account of film material, both thematically and formally, in the construction.[50]

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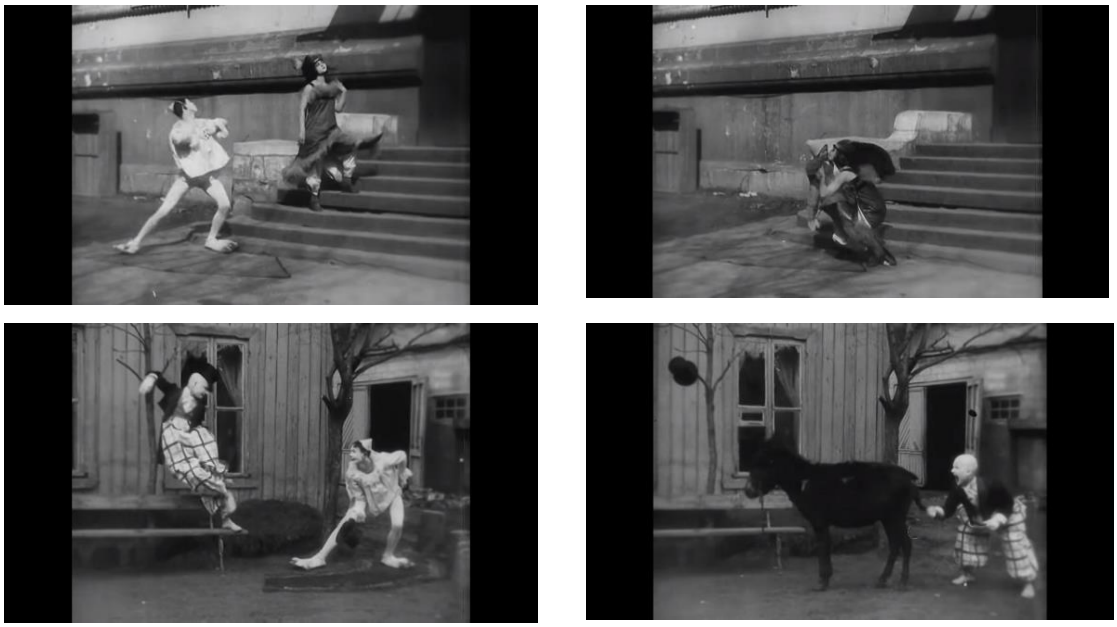
[46] Eisenstein, *SWI*, 34.
[47] Oksana Bulgakowa, "The Evolving Eisenstein: Three Theoretical Constructs of Sergei Eisenstein," in *Eisenstein at 100: A Reconsideration*, ed. Al LaValley and Barry P. Scherr (New Brunswick: Rutgers University Press 2001), 42.
[48] Ibid, 45-46.
[49] Nesbet, "Savage Thinking", 156-157.
[50] Eisenstein, *SWI*, 40.

In *Glumov's Diary* (1923), Eisenstein's first cinematic practice, metamorphosis is represented through dissolves, one of Méliès' tricks that transform Glumov into several objects: a canon, a swastika, a baby and a donkey. Linda Williams quoted and translated Philippe Soupault's article *L'Indifférence*, in which he identifies the *poème cinématographique* as a "Méliès-inspired flexing of cinematic muscle" to create the special effects in transforming people and objects. He states, "I sit down on a bench … suddenly there appears beside me a man who changes into a woman, then into an old man. Just then another old man appears who changes into a baby then into a woman … I get up and they all disappear."[51] *Glumov's Diary* is an exact cinematic representation of Soupault's experience. The attraction lies not only in the shifts among Glumov and the objects, but also the exaggerated stunts reflected by the characters' facial expressions at the beginning of every episode and their changes in attitude toward Glumov's shifts for the purpose of comedy and entertainment.

[51] Philippe Soupault, "Note l'sur le cinéma", *Sie* 25 (January 1918), 4, trans. Linda Williams in her F*igures of Desire: A Theory and Analysis of Surrealist Film* (Berkeley, Los Angeles and Oxford: University of California Press, 1992), 5.



Glumov's Diary (*Dnevnik Glumova*, Sergei M. Eisenstein, 1923)

The metamorphosis also serves to shift identities through the association of Glumov with the symbolic meanings of some objects. Glumov, a hero in Ostrovsky's original play, "Enough Simplicity for Every Wise Man," becomes a self-satirizing role and the embodiment of political caricature in *Glumov's Diary*. This metamorphosis appears in two levels, as Nesbet observes,

> …on the first, the character becomes the embodiment of something demeaning to itself, its own satire; on the second, as an attraction, it effects a secondary metamorphosis: the transformation of the spectator, who is altered by emotional and even physiological 'shocks' from which he cannot retreat.[52]

The metamorphosis of identity results from the "unfaithful" adaptation of the original role-set in the drama, breaking through the limitation of the context and space in this film: It extends to the memory of the past context, and the receptive effect in cinematic theater. Metamorphosis of satire is also reflected in another Eisenstein film, *Strike* (1925), in which montage juxtaposes each Tsarist agent with one animal, to "underscore satirical comparisons or reveal the secret identity of characters," providing a hint of Eisenstein's interest in Honoré Daumier's satirical drawings of his childhood.[53]

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[52] Nesbet, "Savage Thinking", 156.
[53] Ibid., 156.

Summary

Cinema in the early twentieth century remediated the theme of metamorphosis. Cinema itself appears with traits of modernity — technological advances and precision, as well as sensual initiative for metamorphosis through its montage of attractions, as theorized by Eisenstein. In his writings and films, montage, beyond the alignment of static images, is a process of aggregating events to complete the metamorphosis and to augment the effect of affect and emotion on the basis of physiological effects.

Metamorphosis in cinematic montage also reflects what Eisenstein claimed about time and movement in visual representation — the movement beyond vision, invisible, disembodied and dematerialized. Animation and his plasmatic drawings express his affirmation of come-into-being, omnipotent and formless change. However, he regarded as the primary phase of film history as "the single set-up cinema by plastic composition," and montage composition was the next evolving stage in "multiple set-up" cinema.[54] The third phase was the sound cinema, based on his audiovisual theory, synchronizing music and montage, that will be examined in the second half of this dissertation.

From the metamorphosis as the attraction of film to his plasmatic drawing implying a fetus in the womb, Eisenstein's interests always lie in the physiological impulse and sensuality as the stimulus of various life forms in movement and process. Since the emergence of Marey and modern artists at the turn of twentieth century, advocacy of time and movement has been a trajectory toward a disembodied pure movement, simply constructed by geometrical lines and shapes. However, the metamorphosis of montage evolved into another stage: For Eisenstein, movement is not to be perceived through motion, but through affect received by spectator's psyche and physical body through montage, the physical infectiousness of movement. Thus metamorphosis, like movement, is invisible and bodiless, but indicates a process of change, a junction and an instant when the attraction works on the spectator's mind.

[54] Sergei. M. Eisenstein, *SWII*, 4.

Chapter 3: Animism, Mimesis and Cinema as the Modern Magic

> Un film est une source pétrifiante de la pensée. Un film ressuscite les actes morts. Un film permet de donner l'apparent de la réalité à l'irréel.
>
> ——Jean Cocteau, *Le Testament d'Orphée* (1960)

Eisenstein's notion of metamorphosis specifically supplements his theory of montage. Movement detached from the representation of motion develops into a *conceptual movement*, and the metamorphoses of lines create omnipotent shapes and forms. Eisenstein quoted *Feuerzauber* (the magic of fire) from scenes in Wagner's *Die Walküre* to suggest natural phenomenon as one of the stimuli of metamorphoses because of its infinite changeability and modulation. This omnipotent fire has its own will to decide its form and meaning, as if it had acquired a soul like animism in religious cultures.

Animism beyond animalization may be represented by shapeless and amorphous objects in nature, such as fire or air. Electricity — the formless, dangerous, yet indispensable factor in industrial life — initiated collaboration between cinema and the representation of animism in both technology and context. Disney's animation and surrealistic films all underscored that imagination and metamorphosis are universal, rather than biological forms. Cinema and animation illustrate the idea of animism in response to standardized human activities in capitalism and modernity. Animism is not the savagery and naiveté of the beliefs of primitive cultures considered by humans, either today or in the past, but an alternative episteme to compensate for the partiality of dichotomy and naturalism.

This chapter will investigate the notion of animism in today's philosophical discussion and Benjamin's mimesis faculty, which both coincide with Eisenstein's understanding of these concepts. They contend that animism and mimesis are both primitive residues in modern society. They are not opposing notions to be raised in contrast to modernity, but rejuvenate modernity and its forms of media, such as cinema, which remediates animism as representational context and functions as a copy machine of the mimesis faculty. Thus this dissertation will further probe the representational and historical novelties of non-animalistic anima — electricity and aesthetics in early films and French surrealism — which all manifest a grand

collision and collaboration among life and death, human and machine, aesthetics and artifacts.

3.1. Animism as a New Episteme

The general impression of animism remains in the romantic imagination, which regards animism as a superstitious belief or a magic power against objectivism and natural science. The primitive and savage image of animism was first defined in the nineteenth century by the anthropologist, Edward B. Tylor, who adopted Georg Ernst Stahl's seventeenth century notion of "animism" as the "minimum definition of religions 'belief in spiritual beings'…similar to fetishism and totemism" where the "people of nature" are to be classified hierarchically in a cultural differentiation from "people of culture."[1] Tylor claimed that European society developed a belief in science rather than polytheistic and monotheistic beliefs, least of which is animism, the lowest stage of "savage survivals" and forms of religious belief.[2]

Recent philosophical concerns about animism have been raised, alongside the question of the dominance of naturalism in science, by authors such as Philippe Descola, an anthropologist specializing in Amazonian aborigines. He systematically discussed the notion of animism and classified four types of religious cultures identifying a relation between human and non-humans:

> Either most existing entities are supposed to share a similar interiority whilst being different in body, and we have *animism*, as found among peoples of the Amazonian basin, the Northern reaches of North America and Siberia and some parts of Southern Asia and Melanesia. Or humans alone experience the privilege of interiority whilst being connected to the non-human continuum by their materiality and we have *naturalism* – Europe from the classical age. Or some humans and non-humans share, within a given framework, them same physical and moral properties generated by a prototype, whilst being wholly distinguishable from other classes of the same type and we have *totemism* – chiefly to be found among Australia's Aborigines. Or all the world's elements are ontologically distinct from one another, thence the necessity to find stable correspondences between them and we have *analogism* - China, Renaissance Europe, West Africa, the indigenous peoples of the Andes and Central-America.[3]

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[1] Anselm Franke and Sabine Folie, *Animism: Modernity through the Looking Glass*, ed. Anselm Franke and Sabine Folie (Köln: Walther König, 2012), 160.
[2] Ibid., 160.
[3] Philippe Descola, "Who Owns Nature?" *Books & Ideas*, 21 January 2008, accessed June 28, 2016, http://www.laviedesidees.fr/Who-owns-nature.html?lang=fr; originally from Philippe Descola, *Par-delà nature et culture*. (Paris: Gallimard, 2005).

Criticisms of Descola's four schema focus on its oversimplification and overgeneralization. However, he proposed the idea that naturalism is just one of four "ontological routes" to explain the human and non-human world, being one of the epistemes of science. Isabelle Stengers noted the distinction between *Science* with a capital *S*, indicating science in general, and the "adventure of sciences," being the experimental sciences that naturalists call science. Experimental sciences, which are not synonymous with *Science*, depend on a very particular "creative art, and a very selective one."[4] Thus, if one says animism is a sorcery of surrealistic power, naturalism and the capitalism of modernity that traps us with limited choices filtered by data also functions as a kind of sorcery, creating the illusion of "rightness."

The difference between animism and naturalism is that native Amazonians, proponents of animism, believe in the commonality and continuity of anima (soul) between human and non-human, whereas naturalists believe this commonality is rooted in the body, since humans and animals share similar life traits. The body becomes either the limit or the evidence of anima in different arena of science. In animism, humans distinguish themselves from other creatures through the body, but the soul makes communication between species possible. Eduardo Viveiros de Castro referred to Felix Guattari's suggestion "to cut off the relation between the subject and the human,"

> The subject is an objective function that one can find deposited on the surface of everything...Subjectivity is a fusion of multiplicity, not of unity...a function of dispersion. Subjectivity is a disjunctive synthesis. Animism, a world which at its root is anti-monotheistic, mono-subjectivism. This is animism, the idea that the subject is outside, a society without the self, without interiority in this sense. Animism is the ontology of societies against the state.[5]

The renewed interest in animism in philosophy claims it as a new knowledge construct and paradigm, one of the epistemologies of the West, as well as in political advocacy. It is not the animistic practices of primitive cultures from an anthropological and ethnographical perspective, but rather an alternative response to the homogeneity and linearity of modernity. One author notes, "Nobody has ever

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[4] Isabelle Stengers, "Reclaiming Animism," *E-flux* 36 (2012), accessed June 28, 2016, http://www.e-flux.com/journal/reclaiming-animism.

[5] Eduardo Viveiros de Castro, "Assemblages: Felix Guattari and Machinic Animism", interview by Angela Mlitopoulos and Maurizio Lazzarato, *E-flux* 36 (2012), accessed June 28, 2016, http://www.e-flux.com/journal/assemblages-felix-guattari-and-machinic-animism.

been animist because one is never animist in general, only in terms of assemblages that generate metamorphic transformation in our capacity to affect and be affected — and also to feel, think, and imagine."[6]

Assemblage, termed "agencement" by Deleuze and Guattari, implies the aggregation of heterogeneous components, which transcends the epistemology of dualism.[7] The assemblage of heterogeneity also indicates the temporality of discursive formation and different epistemological perspectives, rejecting the linearity of development and narrative teleology in modernity, which was discussed in the first chapter. Facing the naturalization and secularization of the experience of time, animism may be regarded as the "downstream" under the "upstream" within the timeline of historical narrative: the "logic of animist thought provides an opening for conceptualizing of other histories of modernity beyond the linear, teleological trajectories of the conventional historical narrative."[8]

The status of Disney, for instance, in the upstream of historical and sociological narratives has another downstream in aesthetic representation and philosophical thought. Eisenstein commented on Disney animation as "an instant of complete and total release from everything connected with the suffering caused by the social conditions of the social order of the largest capitalist government. Disney neither brands, nor exposes." He identified Disney's radical thoughts and its qualities of free will in its early development as the prelogical impulse against American standardization, contrary to its value to the media economy and entertainment as a phenomenon of capital culture.

3.2. Cinema of Mimesis Faculty as a Modern Magic

The representation of either body or soul in animism calls to mind its association with another notion — mimesis. One of Walter Benjamin's fascinations in terms of modernity, media and art was posited as "mimetic faculty," upon which he wrote two articles in 1933, namely, "Doctrine of the Similar" and "On the Mimetic Faculty." For Benjamin, mimesis is a primitive and fundamental ability of humans. Though it seems to wane, mimesis persistently appears in children's games and has been

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[6] Ibid.
[7] Ibid.
[8] Harry Garuba, "On Animism, Modernity/Colonialism, and the African Order of Knowledge: Provisional Reflections," *E-flux* 36 (2012), accessed June 28, 2016, http://www.e-flux.com/journal/on-animism-modernitycolonialism-and-the-african-order-of-knowledge-provisional-reflections.

inherited by modern men in the perceptual world from their ancient ancestors. Dance or occult practices, for example, have fostered the correspondence between human and nature in the rituals of ancient and primitive societies.[9] Modernity, a juxtaposition of the old and the new, "provides the cause, context, and needs, for resurgence — not the continuity — of the mimetic faculty."[10]

Michael Taussig claims that in modernity, the mimetic faculty has two layers: copying and sensuous connection between perceiver and the perceived, such as the magic of two classes in *The Golden Bough.* Taussig adopted James Frazer's ideas of *imitation* and *contact*.[11] In contrast to language as the "non-sensuous" and "highest level of mimetic behavior" described by Benjamin, humans conducted communication and correspondence in primitive society without language and Enlightenment rationality through the use of pre-linguistic senses and image-based symbols. In his collection of ethnographic examples, Taussig analogized the ritual activities in these primitive societies with European curative behavior since the nineteenth century, finding the same purpose of "a secret sympathy" between objects and humans.[12] The relation of contact and copy between human and objects in modern society as deployed by Karl Marx has been distorted, with the commodity becoming fetishized, an effect that "displace[s] contact between people onto that between commodities, thereby intensifying to the point of spectrality the commodity as an autonomous entity with a will of its own."[13] The absence of contact mystifies and animates the copied commodity.

Benjamin's mimesis faculty is highly associated with the representation of images. Cinema, the modern machine of mimetic power, a mixture of science and art, creates the "magical technology of embodied knowing." Cinema is defined by Benjamin as the "physiognomic aspects of visual worlds," a tactile quality that "hit[s] the spectator like a bullet."[14] The perceiver, as if shot by the bullet, is drawn into the imaginative, mimetic faculty to identify another body with which to correspond. This

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[9] Walter Benjamin, "Doctrine of the Similar," *New German Critique* 17 (1979): 65, and "On the Mimetic Faculty," in *Selected Writings, 1926-1934, vol. 2*, trans. Rodney Livingstone and Others, ed. Michael W. Jennings, Howard Eiland and Gary Smith (Boston: The Belknap Press of Harvard University Press, 1999), 721.
[10] Michael Taussig, *Mimesis and Alterity: A Particular History of the Senses* (New York: Routledge, 1993), 20.
[11] Ibid., 21.
[12] Ibid., 121.
[13] Ibid., 22.
[14] Ibid., 24-25.

explains why cinema as a modern magic re-enchants the perceiver through a copy of body, movement, language, social behavior, intelligence and the *optical unconscious* made by camera and cinema, which not only contact the perceiver through vision, but also through touch and affect as a sensuous, instant, and less consciously-aware connection.

For Eisenstein, the classical Japanese dance-drama, Kabuki, in which actors perform a slow movement as a montage of "a breaking up of shots," challenges the duplication of daily movement and motion perceived by vision in cinema.[15] This break and interval presented in Kabuki and persistently seen in Eisenstein's films is to scatter the mimetic mode of perceiving cinema, and lead cinema away from a visually-heavy medium through the enlargement and visualization of the instant quality of affect and touch. This revelation of the immanent bodily perception moves cinema into a medium of brain mode. Eisenstein said the psychic stage is the higher stage of the physical, followed by cinema. As Deleuze observed, cinema represents and functions as a mental activity rather than a superficial, visual function. This decreasing dominance of the visual toward a mixture of perception and mentality has gradually emerged from the affective mechanism as mentioned in the first chapter, becoming dominant after the arrival of sound and color in Eisenstein's later theoretical life.

Benjamin wrote an article titled "Zu Mickey-Maus" (1931) that expressed his opinion on Disney animation as "a rejection of the 'civilized' bourgeois subject."[16] Miriam Hansen, in analyzing Benjamin's acclaim of Disney as related to his concept of innervation, observed, "While mechanically produced, the miracles of the animated cartoon seem improvised out of the bodies and objects on the screen, in freewheeling exchange between animate and inanimate world."[17] Benjamin saw the Disney characters not as humanized animals, but as animalized humans. This forecasts his later articles about mimesis, and echoes the epistemology on animism that recent philosophers have discussed, as noted above, that in the absence of human agency for motion and movement, *humans identify animals as a copy of their own body, behavior, intelligence and public social interaction, through mimetic faculty.* In

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[15] Ibid., 29.
[16] Esther Leslie, *Hollywood Flatlands: Animation, Critical Theory and the Avant-Garde* (London, New York: Verso, 2002), 81.
[17] Miriam Hansen, *Cinema and Experience: Siegfried Kracauer, Walter Benjamin, and Theodor W. Adorno* (Berkeley, Los Angeles, London: University of California Press, 2012), 174.

other words, the "mimetic modes of perception in which spontaneity, animation of objects, and a language of the body combining thought with action, sensuousness with intellection, is paramount."[18]

Nevertheless, Mickey Mouse did not remain only an imitation of a human's daily life. On the contrary, it surpassed the limitation of logic and rationality in the human world. Within the ambit of method of representation, "The appeal of the animated creature, and this goes beyond Mickey, owes much to its hybrid status, its blurring of human and animal, two-dimensional and three-dimensional, corporeal and neuro-energetic qualities."[19] To quote Benjamin, "For the first time it is possible to have one's own arm, even one's own body, stolen ... a creature can still survive even when it has thrown off all resemblance to a human being. He (Mickey Mouse) disrupts the entire hierarchy of creatures that is supposed to culminate in mankind."[20] To dislocate body parts and to transmute elastic contours in Disney animation are not malevolence toward the human body, but reveal man's fantasy of projecting "its psychosocial body in the form of prosthetic body armor," which parallels Benjamin's reference to the "historical experience of mutilation and fragmentation in technological warfare and industrial production."[21] Disney animation has thus created the possibility of "psychic immunization against ... mass psychosis ... American slapstick comedies and Disney films trigger a therapeutic release of unconscious energies."[22]

3.3. Eisenstein, Disney and Animism

Eisenstein discovered Disney animation as "the 'survival' of animism and totemism in modern consciousness and art" and "the continuous transformation of the 'animated' contour line."[23] The freedom in Disney animation lies in the prelogic mentality in primitive culture and the metamorphoses of elastic forms and shapes. The aesthetic unity of content and style are reflected in Disney's internal spirit of rebellion and the external representation of omnipotence. Ecstasy has also been

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[18] Taussig, *Mimesis and Alterity*, 20.
[19] Hansen, *Cinema and Experience*, 174.
[20] Benjamin, *Selected Writing, 1926-1934*, 545.
[21] Miriam Hansen, "Of Mice and Ducks: Benjamin and Adorno on Disney," *The South Atlantic Quarterly* 92 (1993), 45.
[22] Walter Benjamin, *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*, trans. E. F. N. Jephcott (Boston: Harvard University Press, 2008), 38.
[23] Naum Kleiman, introduction to *Eisenstein on Disney*, ed. Jay Leyda, trans. Alan Upchurch (Calcutta: Seagull Books, 1986), xi.

found in Disney's plasmatic qualities of form, color and rhythm. To quote Eisenstein, "Disney's pictures are pure ecstasy — all the traits of ecstasy (immersion of self in nature and animals, etc.). Their comicality lies in the fact that the process of ecstasy is represented as an object: literalized, formalized."[24]

Eisenstein referred to Donald Duck smashing a radio, which is "the machine of self-discipline and self-control" that delivers the sermon of Christian virtue as well as represents the outcome of electrification and precisely measured time. Donald Duck's destruction of the radio is to liberate one's individuality from the time lock of American life: Disney "achieve[s] a mastery and supremacy in the realm of freedom from the shackles of logic, from shackles in general … constantly gives us prescriptions from folkloric, mythological, prelogical thought — but always rejecting, pushing aside logic, brush[ing] aside logistics, formal logic, the 'logical case'."[25]

The metamorphoses of shapes and forms dissociated with past traces and senses culminate in a full automatism of movement. This metamorphosis is distinguished from stroke drawing and cave drawing of the "simple automatism of 'outlining a contour'," in which "movement [of] the hand has not yet been separated into an independent movement."[26] Eisenstein underscored the synthesis of movement in Disney animation without human manipulation. The hands that draw in *Fantasmogorie* (1908) and *Out of the Inkwell* (Max & Dave Fleisher, 1921–1925) have disappeared in Disney animation. Eisenstein praised a full automatism similar to a human's and animal's physical mechanism, with a complete rejection of assistance from another force.

Eisenstein pointed out the connection between animation and animism from the etymological perspective. Animation is a combination of anima (soul) and motion: "the animated drawing is the most direct manifestation of ... animism! That which is known to be ordinary lifeless object, a graphic drawing, is animated … It is the process of mythological personification of the phenomena of nature, the external appearance of the soul."[27] Drawing "animated through mobility," the unity of the animated, the soul, and movement, has been released from its human creator and bestowed with self-motivation.

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[24] S. M. Eisenstein, *Eisenstein on Disney*, ed. Jay Leyda, trans. Alan Upchurch (Calcutta: Seagull Books, 1986), 42.
[25] Ibid., 22-23.
[26] Ibid., 43.
[27] Ibid., 43.

Animalization, for Eisenstein, is not limited to biological creatures such as plants or beasts, but also natural forces, which can be also animated and humanized. This idea comes from E. Kagarov's categorization of the souls in folk beliefs which can be represented, firstly, by breath, smoke, steam, wind, fog, clouds; and secondly, by animals, birds and insects, snakes.[28] In his 1940 article *The Incarnation of Myth*, Eisenstein used Wagner's *Der Ring der Nibelungen* as an example in which Odin-Wotan was the key mythological figure who represents the air. Ancient gods in mythology, like Wotan, are to be created in two aspects:

1. The ancient god, a spiritual icon, acquired an exaggerated physical strength compared to a human, but also suffered and was enchained by the sins, desires and inhumanities of human society. As quoted by Eisenstein, Wagner created a mythological world to hint at the world of his time. He wrote in 1882 that "all mankind was being enslaved," and it was "a world of murder and theft legitimized by lies, deceit and hypocrisy."[29] Wagner's Wotan is a mythological character equipped with the forces of nature and mankind's will and ideas, but fettered by the cursed society of inhumanity. Mythology gives Wagner the freedom to show the strength, will, initiative and passions of humans, yet presents them falling helplessly into the fatal tragedy, with the only exit being to metamorphose themselves in the final fire and perish.

2. Their strengths and powers are supernatural, yet stem from those of the forces of nature, and in a mythological context, natural phenomena and forces such as movement are deified and consecrated as "spiritual movements." Odin-Wotan, the animalization of the air, may only be perceived "*in motion, movement in general*."[30] Movement is defined as a general trait of life in nature. In other words, "If it moves, then it's alive, an innate, independent, volitional impulse."[31] Wotan as a god is embodied with spiritual movement as well as natural force and life.

This gives rise to a question: In the absence of movement motivated by humans, does movement definitely manifest a life or a soul? Herbert Spencer rejected Edward

[28] Ibid., 44.
[29] S. M. Eisenstein, *SWIII*, 146.
[30] Ibid., 145.
[31] S. M. Eisenstein, *Eisenstein on Disney*, 54.

Tylor's recognition of movement as a trace of life, since humans and superior animals could differentiate the living and moving.[32] But the mimesis faculty means that our tendency is to empathize with things that we resemble. For example, Eisenstein saw Mickey Mouse's hands as human hands and the curves or movement as the spontaneity of life's energy, even though the life-like curved shapes or moving objects are not biological lives. Spyros Papapetros refers to the art and cultural historian Aby Warburg, who stated that although both humans and animals perceive moving objects as hostile, the representation of "life in motion" in art assimilates the perception of threats. Cinema as a form of art mediates a subject, an object and an image, and "ultimately the image ... absorbs, inflects, or nullifies all previous agencies and mediates our communication with both subjects and objects."[33]

Movement does not validate the existence of the soul, but in its visual representation, movement has been restored in another medium — cinema — which replaces the biological system with mechanical synthesis as the agency motivating the movement. Thus for Eisenstein, anima is strongly associated with movement as its representation, such as air, which humans cannot perceive if it is not represented. It is possible to endow anima in moving images with a physiological initiative or forces of nature that human beings and others may possess and trigger. It seems Eisenstein treated movement in cinema and animation differently. In his films, there are collections of *tableaux vivants* to indicate a rhythmic movement of montage, a time order through stillness of the body. However, in animation, he suggests movement described by motion, in which soulless objects, such as animals; lifeless objects, such as a desk or chair; or intangible natural forces, such as air and fire, may demonstrate anima which can be perceived in movement. However, the difference lies in an inherent commonality of the idea that *movement is a transcendental phenomenon* that belongs not only to human beings who initiate movement and motions as a common sense, but also to lifeless objects which imply a movement that is not seen in daily life although it may be manifested through animation. By contrast, Eisenstein sought a movement in cinema beyond that of daily life, a perceptual impulse in montage in accordance with that of lifeless objects being unseen or

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[32] Spyros Papapetros, "Darwin' Dog and the Parasol: Cultural Reactions to Animism," *E-flux* 36 (2012), accessed June 28, 2016, http://www.e-flux.com/journal/darwin%E2%80%99s-dog-and-the-parasol-cultural-reactions-to-animism.

[33] Ibid.

overlooked.

The *Silly Symphonies* series, especially *The Skeleton Dance* (Walt Disney, 1929) and *Merbabies* (Walt Disney and Harman and Ising, 1938), illustrate Eisenstein's idea of metamorphoses, ecstasy and animism, and moreover, synchronized image and sound. In these two short animations, ecstasy has been described as a "carnivalesque spectacle" of parade, with music and dance through the metamorphoses of lines and shapes, which endows anima to mummies and sea animals and alters the images of lifeless corpses and the stagnant, dark sea. Anselm Franke notes, "Disney alludes to the animistic quality of animation as the return of the repressed, as embodied in gothic imagery and the aesthetics of the uncanny."[34] Benjamin saw Mickey Mouse as a direct manifestation of collective dreams that characterizes humans' fantasy of prosthetic bodies. For Eisenstein, the dream lies in the ecstasy of unfettered movement in a limited moment, just as the mummies are released from the tombs but must return when the rooster crows, and as the carnival in the deep sea was motivated by the "merbabies", who ultimately become bubbles and disappear on the surface of the sea. The deficiencies of mankind in rejuvenation and rebirth, the limited functions of the body and its organs, may be fully represented realized in animated films.

The Skeleton Dance (Walt Disney, 1929)

Merbabies (Walt Disney and Harman and Ising, 1938)

[34] Anselm Franke, "Animism: Notes on an Exhibition", *E-flux* 36 (2012), accessed June 28, 2016, http://www.e-flux.com/journal/animism-notes-on-an-exhibition.

3.4. Electricity to Kill or to Animate in Early Film

Derived from myths in which natural forces and animals are humanized, at the beginning of the history of electrification, films were rotated through industrial powers: automatism and electricity. Like fire or air, these forces benefit people even while they present a potential danger beyond human control. Electricity's "occult mechanism" is the key technological and symbolic medium for capitalist expansion and social order.[35]

The *World's Columbian Exposition* of 1893 in Chicago, which occurred two years before the first film, displayed a model household with electric appliances, as well as Thomas A. Edison's kinetoscope to demonstrate American capital and modern progress.[36] After a short while, electricity motivated cinema in both technical materiality and representation. Edison filmed Czolgoz's execution by electric chair in *Execution of Czolgoz, with Panorama of Auburn Prison* (Thomas A. Edison, 1901). The scene was set in a panoramic view, showing all the people who were involved in the process of execution. The viewer could not see the pain in Czolgoz's face or the reactions of the onlookers. No blood or bodily damage was shown on film could be discovered; only a final shudder of Czolgoz indicated his death. The entire process occurred at a certain distance from spectators, yet transmitted a sentiment of cruelty in its rationalized efficiency, manifesting "electricity in the service of the restoration of a social order" and "the usurpation of the divine powers of creation."[37]

In 1903, Edison made another execution film, *Electrocuting an Elephant* (Thomas A. Edison, 1903), in which an elephant of "massive size and sheer physical resistance" was still killed by electricity, "an almost magical lethal force."[38] In this film, the presence of the camera and "stylistic traits" are the major differences from *Execution of Czolgoz,* which was a reenactment advertised as a "realistic imitation."[39] In *Electrocuting an Elephant* (1903), the camera presented a panning movement following the elephant's passing in front of it with a change in the depth of field. The obvious cut in the film, as expressed by Mary Ann Doane, was for the purpose of excising "uneventful time" in the film, while the jump-cut in the

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[35] Anselm Franke, *Animism: Modernity through the Looking Glass*, ed. Franke and Folie, 150.
[36] Ibid., 150.
[37] Ibid., 150.
[38] Mary Ann Doane, *The Emergence of Cinematic Time* (Cambridge, Mass.: Harvard University Press, 2002), 151.
[39] Ibid., 153.

Execution of Czolgoz was to rectify the discontinuity in time and to show the spectator the reality of one's presence at the site. David E. Nye concluded that Edison's execution films:

> Electricity was the sign of Edison's genius, the wonder of the age, the hallmark of progress. It was a mysterious power Americans had long connected to magnetism, the nervous system, heat, power, lightning, sex, health, and light. One of Nathaniel Hawthorne's characters exclaimed, 'Then there is electricity, the demon, the angel, the mighty physical power, the all-pervading intelligence!' He went on: 'Is it a fact-or have I dreamt it-that, by means of electricity, the world of matter has become a great nerve, vibrating thousands of miles in a breathless point of time?'"[40]

Execution of Czolgoz, with panorama of Auburn Prison (Thomas A. Edison, 1901)

Electrocuting an Elephant (Thomas A. Edison, 1903)

The dominant genre on or about 1900 was actuality or documentary dealing with family scenes, fights, natural disasters or other daily events in the works of Lumière or Edison. Although stop-motion and multi-exposure techniques were discovered before 1900, a shift in representation occurred in the last five years of the 1910s: the decline of narrative recordings, and an increase in the number of feature films.[41] As opposed to Edison's execution films, Segundo de Chomón's *The Electric Hotel* (*El Hotel Electrico*, Segundo de Chomón, 1908) and *The Electric Current* (*Le Courant Electrique*, Segundo de Chomón, 1906) both show automatism and electricity through the cinematic technique of stop-motion, a super power that humans in the twentieth century encountered with both fear and enthusiasm. In *The Electric Hotel* (1908), a couple went to a hotel where it was not necessary to shave, brush one's hair or unpack luggage, since all of the lifeless objects were capable of reading their

[40] David E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge, Mass: MIT Press, 1990), 1.
[41] Ibid., 142.

minds and automatically performed these duties. In *The Electric Current* (1906), a shopkeeper used electricity to prevent people from stealing his goods. Electricity fastened the thieves to the goods, as well as the policemen who tried to capture the thieves. In the end, automatism made a mess of the hotel, and the shopkeeper who mocked the blundering people was also subordinated to electricity.

The Electric Hotel (*El Hotel Electrico*, Segundo de Chomón, 1908)

The Electric Current (*Le Courant Electrique*, Segundo de Chomón, 1906)

The two films attempt to warn that electricity is blind without human control and may cause disorder and chaos. However, from another perspective, the objects subject to electricity could rebel against the manipulation of humans. Electricity as the soul of lifeless objects disrupts the hierarchy and the order of human versus objects. The unpredictible movement of objects possess a kind of magic and prelogic, independent from the rational and irrational, reason and unreason, cause and effect, which stimulate the Eisensteinian ecstasy of anarchism. Anima in lifeless objects surpasses drawing in the duplication of reality that is perceived by the naked eye. Movement decomposes reality in the tempo-spatial relations upon which human perception of lifeless, still objects is based.

3.5. Anima in Art Crafts

Animated art craft in films was another frequently used motif inherent in Gothic novels and aestheticism of the nineteenth century. As in Oscar Wilde's *The Picture of Dorian Grey* (1891), aestheticism has been mystified into a magical power which absorbs Dorian Grey's soul and maintains its representation: the picture, immortal and invulnerable. Another theme in literature manifests the overwhelming power of art which seduces artists to devote their life's energy — blood or bodily suffering —

to creating unique art crafts. Roka Tokutomi's *Nature and Man* (*Shizen to Jinsei*, 1900) tells the story of a painter who created only one piece of work in his life which shines in a strange, red glory: The painter died from the use of his own blood as the dye to finish his work. Similarly, Franz Kafka's short novel, *A Hunger Artist* (*Ein Hungerkünstler*, 1922), describes an artist who reaches the pinnacle of artistic expression by suffering a lethal hunger.

With the contribution of Luis Buñuel, Jean Epstein's *The Fall of the House of Usher* (*La Chute de la Maison Usher*, Jean Epstein, 1928), an adaptation of Edgar Allan Poe's story of the same name, and certain plot lines in another of Poe's works, "The Oval Portrait," suggest a similarity with *The Picture of Dorian Grey* in that a portrait had supernatural power.[42] While the film began with plot-setting and naturalistic scenes, it was later inclined to surrealism in its lack of narrative events, and created an intense Gothic atmosphere. The master of the house of Usher, Roderick Usher, obsessively painted his wife Madeleine, who finally died when her portrait was finished. As though her life poured into the painting, the portrait came to life with blinking and facial expressions. The scene then proceeded to an intercutting montage of accelerated rhythms between Roderick's gradually enlarged face, hysterically obsessed with painting, and Madeleine's decline with the ebb of her life energy, together with close-ups of the obscure portrait, a shining painting palette and dwindling candles. This created an effect of rhythmical notation of the music in the varied length of shots. Guy Grucianelli relates *The Fall of the House of Usher* to surrealist theories on the "transformative powers of the imagination," and on a technical level, to Russian montage as well as Fernand Leger's *Ballet Mécanique* (1924).[43] Grucianelli does not further explain his analogy, but the intense and rapid montage in *The Fall of the House of Usher* resembles Eisenstein's rhythmical montage, which will be discussed in the final chapter, and the musical and imaginative *Ballet mecanique*, which Eisenstein especially appreciated, is comparable to others among the first avant-garde films of the 1920s.

Candles as a motif of life were also referenced in one of the stories of Grimms' fairy tales (*Grimms Märchen*), "Godfather Death" ("Der Gevatter Tod"), in which the

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[42] Guy Grucianelli, "Painting the life out of her: aesthetic integration and disintegration in Jean Epstein's La Chute de la maison Usher," in *Monstrous adaptations: Generic and thematic mutations in horror film*, ed. Richard J. Hand and Jay McRoy (Manchester and New York: Manchester University Press, 2007), 22.
[43] Ibid., 20.

god of death can manipulate the duration of a human's life by controlling the time within which a candle burns. In *The Fall of the House of Usher* (1928), candles had a similar function, the drops of wax becoming mixed with the dyes as they burned. Roderick painted with these compounds as if he painted Madeleine's life into her portrait. Multi-exposure images depicted Madeleine's life extracted by Roderick's action at these moments, and concluded with the superimposition of Madeleine and her statue, indicating that she had transformed into a dead object. When the portrait was completed, it was not praised for its vividness and verisimilitude, as had previously been the case. Rather, at this time, Roderick said, "In fact, it's life itself," a fulfillment of Usher's repeated prophecy, "It is there that she lives!"[44] The blinking and facial expressions of Madeleine's portrait served as a *tableau vivant* performed by the actress. That is the innate and magical capacity of cinema: making painting into a "life itself." Cinema allowed Epstein to visualize Poe's motif of the 'living' portrait, a complete "transubstantiation from 'flesh' to 'paint,' 'real' to 'represented'."[45]

Jean Mitry referred to Jean Epstein's book *Bonjour Cinema* (1921) as "a witty parody of a film program [in which he] was already playing with the idea of 'editing' together the diverse strands of modern life into something analogous to a film."[46] This idea has been applied to Epstein's concept of *photogénie*, being "the decomposition of an event into its *photogénic* elements is the first law of film, its grammar, its algebra." It is a combination of scientific calculation and poetic expression which lies in its "aesthetic of approximation and the indefinite" as the traits of the nineteenth-century symbolism of literature, advocating an art of "suggestiveness and implication."[47] In *The Fall of the House of Usher* (1928), it is a story of the supremacy of idealistic beauty in aestheticism, and the plausibility and obscurity of symbolism in the nineteenth century, created by Epstein in the time of modernity when "scientific calculation" had destroyed many mythical fantasies and supernatural events. However, cinema, through its scientific capacity of *photogénie*, implements the *photogénie* of portrait in the nineteenth century not only in the dimension of verisimilitude of outlook, but also as a sign of life, and a unity of body

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[44] The original intertitles are "En vérité, c'est la vie même," and "C'est la qu'elle est vivant!"
[45] Abel Richard, *French Cinema: The First Wave, 1915-1929* (Princeton: Princeton University Press, 1984), 467; Grucianelli, "Painting the life," 28.
[46] Richard, *French Cinema*, 249.
[47] David Bordwell, *French Impressionist Cinema: Film Culture, Film Theory, and Film Style* (North Stratford: Ayer Company Publishers, 1980), 96.

and soul. The *photogénie* of cinema is thus also the mimesis faculty, which duplicates the contour of a figure and its movement for spectators to visually accept the miracle of transformation from a lifeless object to a human similar to themselves.

The Fall of the Usher House (*La Chute de la Maison Usher*, Jean Epstein, 1928)

Cinema for Jean Cocteau is a magic medium of "phoenixology," a term he borrowed from Salvador Dali to describe the theme of "death and rebirth of the artist" in Cocteau's personal mythological world. This idea has been filmed in his "Trilogy of Orpheus" — *The Blood of a Poet* (*Le Sang d'un Poète*, Jean Cocteau, 1930), *Orpheus* (*Orphée*, Jean Cocteau, 1950), *Testament of Orpheus* (*Le testament d'Orphée, ou ne me demandez pas pourquoi!*, Jean Cocteau, 1960). Cocteau quoted Modest P. Mussorgsky's line in his contribution to *CineMonde* in 1953, stating, "one

day, art will express itself through the statue on movement."[48] He practiced this line in *The Blood of a Poet* (1930), which implied the confrontation between the artist and his own artifact, that is, the challenge of representing an ideal, yet in fact showing the opposite. In the film, the artist tried to erase the talking mouth on a face that he had painted on the canvas, but the mouth moved into his hand and became "an ominous cut." The artist transplanted the mouth to a bust statue, and fed it with his own blood. The statue came to life and began to speak, and then persuaded the artist to enter the imaginary world in a mirror. This antagonism between the artist and his work has been interpreted by Cocteau himself,

> I was merely trying to express myself through a medium which in the past had been inaccessible to poets. So much so that without being aware of it I was portraying myself, which happens to all artists who use their models as mere pretexts. Christianity and erotic film…I said, 'Poetry springs from those who don't worry about it. We are cabinetmakers. The spirit rappers come afterwards and if they care to make our tables speak its' entirely their own business.'
>
> Our thoughts cease being exactly our thoughts as soon as we've written them down. And even while they're still just thoughts, they are already mere phantoms of our beliefs. We write them down to give them flesh and blood. But we very seldom succeed in giving them a physique, a body corresponding to what they really are. Syntax interferes, and also our creative mania which leads us further and further away from them as we try to embellish them and give them more character. In short, we endow them with a force and an existence which often turn against us.[49]

An artwork should represent the idealistic "*I*" of the artist as his purpose of creation. However, in Tokutomi's story, aside from a narcissistic and idealistic love, fear was also embedded into it, which threatened his life as the painting absorbed the painter's blood. In the mirror, the artist had a peep through the keyholes of four rooms with allegorical meanings: phoenixology (a killed and reborn Mexican), disobedience (child chided by a mistress), opium (the shadow of a Chinese person taking opium), and ambiguity of sex and gender (bisexual bodies) — all being important issues in the Coctalien universe. The mirror deciphered the reality of the poet's past and memories beyond appearance and image. In the alternative world of the mirror, the artist saw all in contradiction with his pursuits: lack of reasoning, cruelty, numbness

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[48] The original sentence is "Un jour, dit-il, l'art s'exprimera par des statues qui bougent." Jean Cocteau, *Du Cinématographe* (Paris: Belfond, 1973), 23.

[49] Jean Cocteau, *Cocteau on the Film: Conversation with Jean Cocteau Recorded by Andre Fraigneau*, trans. Vera Traill (New York: Dover Publications, 1972), 60-62.

and meaninglessness. The disappointed artist shot himself, but death credited him as an artist laureate. Cocteau gave his own explanation of his film in his book *Du Cinématographe*,

> The poet is lonely. He experiences every piece of work he created as a cut left in his hand. He loves his mouth, in a final analysis, he loves himself. He wakes up every morning with this mouth as if they encountered. He puts this mouth on a lifeless statue to get rid of it. This statue turns to be alive. She starts to revenge and takes him into a terrible adventure. I can tell you the snowball fight is the poet's childhood. When he plays cards with his muse, honor and fate, he cheated to gain what he should have gained in his own inside instead in his childhood. I can tell you he falls into 'the eternal fatal vexation' that people conceive in front of celebrity's tombs since he tried to have the honor in human world.[50]

For Cocteau, all the enigmatic events in *The Blood of a Poet* (1930) were the appearance of reality in the unreal, "l'apparent de la réalité à l'irréel," a phrase he expressed when he was acting in his final film of the trilogy, *Testament of Orpheus* (1960). In other words, these were the "documentary scenes from another realm," which made *The Blood of a Poet* stand in opposition to surrealism: "the more one touches the mysterious, the more it is necessary to be realistic."[51] Paradoxically, Cocteau's realism could be considered as having a surrealist purpose, by revealing the immanence of objects rather than knowledge based on physical and logical appearance and phenomenon, and further, than this immanence of objects is the reality rather than the appearance of the perceived objects. Cocteau differentiated himself from surrealists in that cinema validates the objective and material existence of the unreal to be experienced through visual proof.



[50] Jean Cocteau's speech on the premier of *The Blood of a Poet* in Vieux-Colombiers on 20 January, 1932. My translation from Chinese-translated version of his *Du Cinématographe*. Jean Cocteau, *Du Cinématographe*, trans. Xiaoshan Zhou (Shanghai: East Normal University Press, 2005), 181.
[51] Cocteau, *Cocteau on the Film*, 35.

The Blood of a Poet (*Le Sang d'un Poète*, Jean Cocteau, 1930)

Films having such artistic traits and themes operated with these peculiar magical effects. Both examined the nature of representation and the artists' self-imposed suffering haunted by the supernatural power of art crafts that absorbed the energy and soul of human beings. Art crafts, immortal and perfect in their duplication of their subjects, surpass the duration of human life and youth, as in *The Fall of the House of Usher* (1928). Alternatively, they mirror the vanity and conceit that humans fail to confront, as in *The Blood of a Poet* (1930).

Summary

Since Enlightenment, colonialism and the scientific revolution, animism has been defined as the primitive, savage and pre-modern. To reassess animism today is to reassess modernity, the paradoxical modern past, which remains in the dualism of mind and body, the old and the new, and "the dialectic of abstraction and figuration" that is "supplanted by the heterogeneity of media, materials and references."[52] Mimesis faculty, like animism, may be found in its originally defined form in primitive societies, but has metamorphosed into other forms in modern times. One example is cinema, which functions as a visual copy machine to connect with its perceiver, like previous art forms such as painting and photography. Moreover, it "touches" the perceiver to identify the movement through its tactile quality, namely, the affect when it animates the filmed body or object.

Cinema is an advanced technical representation of modernity and modernism.

[52] Franke and Folie, *Animism*, 160.

Meanwhile, it is also a magic generator which, by representing bodily movement, enchants the spectator with sensorial contact. As Disney blurs the boundary between human and animal, cinema embeds anima into lifeless objects to create magical effects juxtaposed against modern standardization, questioning the natural and non-natural, science and non-science. Animism, like mimesis faculty, provides an alternative means to discover the world with an original, yet rejuvenated perspective, and has been utilized by filmmakers using various themes in modern times.

Jean-François Lyotard considered modernity "a way of shaping a sequence of moments in such a way that it accepts a high rate of contingency."[53] This contingency of time includes both the actual event recorded in Edison's early films and the imaginary fascination in the works of Chomón, Epstein and Cocteau. Even Edison's *Electrocuting an Elephant*, an early form of montage, serves the purpose of providing a concise and eventful narration. Cinema mediates the soul, the representation of the soul and the image, creating cinematic attraction with special effects such as stop-motion and multi-exposure. Surrealistic imagination in early film establishes a platform of equal communication, or even rebellion, among objects and humankind.

As Eisenstein spoke of Disney, animism was a form of metamorphosis against the standardization of modern times. Disney was a collective dream that complements humankind's deficiencies in bodily non-regeneration and liberates its characters from biological science. Electricity — the demon, the angel, the intelligence — became a system of nerves, just as those of human's, conducting successive and unbreakable movement, invisible but perceptible and representable. Immortal art crafts, idealistic pursuits and the desires of humans with respect to their own individuality surpass the physical limitation of human beings. The complexities of the ontology of soul and its representation have reflected the anxiety of humankind when entering an epoch of modern powers that overwhelmingly deconstruct the forces of balance and rules of nature, such as electricity. The concept of stillness and movement, life and death was also challenged by cinema. Art is where humans' self-esteem and soul is rooted. In the period of modernity, artists previously believed, but now wrestle with, the uniqueness and eternality of art.

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[53] Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1991), 68.

Chapter 4: Offscreen Experience of Cinema: the Introduction of Sound and Synaesthesia

> The violins, the deep tones of the basses, and especially the wind instruments at that time embodied for me all the power of that pre-nocturnal hour…I saw all my colors in my mind; they stood before my eyes. Wild, almost crazy lines were sketched in front of me…Wagner had painted 'my hour' musically.
>
> —— Wassily Kandinsky, "Reminiscences"

In his published writings and speeches, Eisenstein seemed to express an obstinate resistance to the introduction of sound and color in cinema. However, if this had been the case, the unprecedented exploration of the audiovisual experience and coloration in both his films and theories would never have been realized. David Bordwell claims the significant shift in his theoretical and aesthetic interest from the conflicts and attraction in montage to the synaesthesia of senses and polyphonic structure is driven by political demand, but Peter Wollen points out, Eisenstein's shift was driven by "the developments in his own thinking" and "the new reality of sound and color as integral components of cinema."[1] From its inception, technology was advancing to incorporate sound, dialogue and color, which, as a filmmaker and theorist, Eisenstein could not evade.

Eisenstein was also impelled by the development in his own thinking, which was influenced by the prevailing artistic and sociological trends at that time. Eisenstein's application of musical theories in cinema and montage was closely interlinked with the work of his mentor, Vsevolod Meyerhold, whose theatre made careful consideration of music; his cooperation with the great composer Sergei Prokofiev; and directed Wagner's *Die Walkürre* in Moscow Bolshoi Theatre in 1940. Eisenstein was inspired by the idea of "Leitmotif" and utilized it in his own film and color theory. His doctrine of audiovisual intermediality was historically rooted in two aesthetic trends at the turn of twentieth century. First, since the nineteenth century, the heritage of Wagner's *Gesamtkunstwerk* continued to influence later artists, composers and music theorists, but meanwhile scientific experiments on the acoustic qualities of music were introduced into the discussion of synaesthesia. The second aesthetic trend was the idea of correspondence among Symbolists, particularly

[1] Peter Wollen, "Perhaps …," *October* 88 (1999), 44.

Baudelaire and Rimbaud, and the idea of "absence of perspective" applied to modern art and music as a method of correspondence and simultaneously as a rectification of the hierarchy of sight and sound.

Eisenstein's interest in synaesthesia, a form of sight-sound correspondence, was also the result of his longtime relationship with Lev Vygotsky and Alexander Luria, who not only inspired him with regard to the aspects of movement and affect as discussed in the first chapter, but also through their clinical experiments in synaesthesia. Having regard to ethnography and anthropology, not only was he was intrigued by Lucien Lévi-Bruhl and James Fraser's studies of primitive culture which exalted ecstasy and mimesis as the modern magic and the heritage of modern man. He was also interested in the means by which it may be performed and represented in cinema, which gave rise to a question of the method to be employed. His unpublished book, *Method*, presented the *Grundproblem*, being the paradox of the mathematically-calculated productive process needed to effectively arouse the prelogical and sensual affect in spectators. Eisenstein persistently sought a solution to this paradox.

The previous three chapters discussed the conceptual movement, which is constructed in a horizontal order and temporal dimension, manifested and completed through undetectable mental activities. In Eisenstein's films and theories, the conceptual movement, the flow of thoughts and consciousness as time, flows in the fourth dimension. In subsequent chapters, beyond vision extends to a *vertical dimension, a dimension of simultaneity*, referring to the multisensorial experience of cinema other than the visual. The introduction of sound and color in cinema reflects the technological movement in cinematic history, which entails a modernist view of sight and sound at the turn of twentieth century. Furthermore, Eisenstein's own evolving theories were influenced by the burgeoning social and artistic modernity.

To imitate the demarcations of Eisenstein's book *The Film Sense*, otherwise known as "Vertical Montage," the following three chapters will be divided into three similar parts. The current chapter provides a theoretical and philosophical overview of Eisenstein's audiovisual correspondence and synaesthesia, which further enacted affect in the cortex of the brain through a phenomenological experience of cinema. This is similar to the section named "Synchronization of Senses" in *The Film Sense*. Chapter 5 will discuss timbre as a reference to symbolic color in Eisenstein's *Ivan the Terrible, Part II*, an experiment that applies the symbolic function of the invisible

color, timbre, into vision. In *The Film Sense*, this section is entitled "Color and Meaning." Finally, Chapter 6 provides an illustration of vertical montage and its method. This method is derived from the composition for dynamism in a single set-up based on gestalt psychology and dialectical conflicts in the fourth dimension in order to create invisible linear movement in a polyphonic structure, which is similar to the content of the article entitled "Form and Content: Practice" in *The Film Sense*.

4.1. Internality and Idealism: the Hierarchy of Sight and Sound

The dichotomies of mind and body, rationality and emotion, externality and internality, seek a connector to bring the two parts together, such as artistic beauty posited by Kant, for example. The precondition of this effort is that the senses as well as their carrier, the body, are separated from and inferior to the mind. In *Aesthetics: Lectures on Fine Art*, Hegel divided the senses into two categories based on the degree that they approach Idealism: "theoretical sense" concerned aesthetics and "practical sense" concerned physical consumption.

Practical senses bridge humans' self-satisfaction and individual desire and the external world because of their "immediately sensible qualities." To quote Hegel, "we can smell only what is in the process of wasting away, and we can taste only by destroying; and touch also needs warmth, cold and smoothness ... [this] cannot have to do with artistic objects."[2] In Hegelian philosophy, sight and sound are supreme, aiming to gain intelligence and to bring human consciousness and inner being into artistic cognition, rather than the immediate human satisfaction of the practical senses derived from consuming materials.

As Hegel stated in *Aesthetics*, "sight is the first ideality, the first auto-affirmation of nature. In light, nature for the first time becomes subjective."[3] As Jacques Derrida noted in "Speech and Writing According to Hegel," although light manifests the contour of object, and sight does not consume an object, sight only remains in its "sensible and exterior existence," and is "not ideal in itself, but on the contrary perseveres in its sensible experience."[4] However, sound exists by "its own

[2] Georg Wilhelm Friedrich Hegel, *Aesthetics: Lectures on Fine Art, Vol.1*, trans. T. M. Knox (Oxford: Oxford University Press, 1998), 38-39.
[3] Ibid, 39.
[4] Jacques Derrida, "Speech and Writing according to Hegel," trans. Alphonso Lingis. *Man and World* 11 (1978), 127.

being-there, and vanishes by itself."[5] Hence, sound is closer to Idealism through the negation of its material existence.

For Hegel, sight lacks the manifestation of objects' internality. Concerning the inability of sight to penetrate objects, Gilles Deleuze, inspired by Foucault, similarly claimed, "Visibilities are not forms of objects, nor even forms that would show up under light, but rather forms of luminosity which are created by the light itself and allow a thing to exist only as a flash, sparkle, or shimmer."[6] Stanley Cavell also described the exteriority of sight, remarking, "[A] sight is an object or an extraordinary happening, like the aurora borealis; when you sight something, is an object — anyway, not the sight of an object."[7]

As discussed in the first chapter, the visual arts have rejected the visual duplication of reality since the late nineteenth century. Instead, they seek objectless internality which manifests mentality, emotion and temporality within a dimension in which sound performs well but image is exploratory. Karin von Maur considered the visual arts in this era as "the disintegration of the unified pictorial space and the fragmentation of the object, the autocratic employment of liberated motif element, the autonomy of color, form, and line, and the increasing dynamism of all three."[8] The visual arts did not remain focused on the visibility of the surface of an object, but decomposed the elements of construction in space to promote dynamic uses of motif and theme.

Eisenstein implied his dissent on Hegelian Idealism concerning sight and sound. In *The Film Sense*, Eisenstein responded to the idealism of sound in the chapter "Color and Meaning" before his analysis of Kandinsky's color theatre "Rhapsody in Yellow." Eisenstein regards Kandinsky as a "life-long advocate" of Hegelian idealism,

> When we speak of 'inner tonality' and 'inner harmony of line, form and color,' we have in mind a harmony with *something*, a correspondence with *something*. The inner tonality must contribute to the *meaning* of an inner feeling. As vague as this feeling may be, in its turn it is always directed finally to something concrete, which finds an outer expression in colors, lines

[5] Ibid., 127.
[6] Gilles Deleuze, *Foucault*, trans. and ed. Seán Hand (London: Continuum, 1999), 45.
[7] Stanley Cavell, *The World View7ed: Reflections on the Ontology of Film*, Enlarged Edition, (Cambridge, MA: Harvard University Press, 1979), 20.
[8] Karin von Maur, *The Sound of Painting: Music in Modern Art*, trans. John W. Gabriel (New York: Prestel, 1999), 44.

> and forms.
>
> Nevertheless, there are those who claim that such an approach denies the 'freedom' of feeling. To counter our views and opinions, they propose an aimless, vague, 'absolutely free' inner tonality (*der innere Klang*), neither as a direction nor as a means, but *as an end in itself*, as the summit of achievement, as finality.[9]

In the previous chapters, I argued for Eisenstein's conceptualization and abstraction of movement. However, Eisenstein negated the spiritualization of art, especially that which regards color and timbre as having a mystical meaning, as advocated by Scriabin. Eisenstein dissociated himself from Scraibin on the grounds of his theosophistic approach. The same shift occurred in his attitude toward Hegelian Idealism when applied to the differentiation of sight and sound. If sound is its "own being-there" and vanishes "as an end in itself," the corresponding relation between sound and image, harmony or disharmony, cannot be established for the purpose of analysis. Eisenstein needed both sound and sight to perform in a certain orientation and through a certain means in order that material substances may serve a practical purpose.

4.2. The Polemics of the Introduction of Sound

In contrast to the higher status of sound in Hegelian aesthetics, negative attitudes concerning the introduction of sound in cinema were prevailing among the filmmakers and theorists in the 1930s. Rudolf Arnheim believed that sound made film lose "aesthetic homogeneity and purity" and that talking imitated theater.[10] Similarly, Carl Dreyer said, "The talking film presents itself like a theater piece in concentrate form."[11] Béla Balázs similarly expressed that sound film was a "catastrophe," but it could seek out a new aesthetic and abstraction.[12] András Bálint Kovács concludes that the cinema of modernism in the 1920s was "an attempt to exploit cinema's aesthetic potential for the purposes of modern art," and thus the lack

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[9] S. M. Eisenstein, *The Film Sense*, trans. and ed. by Jay Leyda (London: Faber and Faber, 1970), 92-93.

[10] Rudolf Arnheim, *Film as Art* (Berkley: University of California Press, 1957). Cf. Kovács, *Screen Modernism*, 53.

[11] Carl Theodor Dreyer, "The Real Talking Film" (1933), in *Dreyer in Double Reflection*, ed. Donald Skoller (New York: Da Capo Press, 1973), 54.

[12] Béla Balázs, *Der Geist des Films* (Halle/Saale: Verlag Wilhelm Knapp, 1930), See. András Bálint Kovács, *Screen Modernism: European Art Cinema, 1950-1980* (Chicago and London: The University of Chicago Press, 2007), 53.

of sound was "an asset" to reflect the same "abstract, antinaturalist quality" as other visual arts.[13] Through her ideological perspective, later film theorist Mary Ann Doane regards sound in classic cinema as the constitution of *fantasmatic body*, which aims to anchor the identification of sight and sound as a unity of experience, and speech is a typical "individual property" and the "ideological consequences."[14] Meanwhile, using Lacan's notion of the invocatory drive, she also contended that coming of sound would satisfy the spectator's desire to eavesdrop, just as their voyeurism in cinematic theatre had been satisfied already.[15]

In his essay "Aural Objects," Christian Metz observed a primitive substantialism with the "subject-predicate structure" in Western dualism.[16] In this structure, the primary quality is the substance of an object, such as the visual for presence and production needs, and the tactile, referring to materiality. Sound and scent as attributes are secondary because sound must be evoked, and scent is not an omnipresent quality if the premise is that human beings are the subjects.[17] This division of primary and secondary qualities leads one to define cinema as a visual medium, and according to Metz, that is the reason that black-and-white silent cinema lasted for a long time — because of the subordination of sound and color, "subdimensions of the visual order."[18]

Metz claimed that it was not possible for sound to be offscreen. In the cinema, it could either be audible or not, in contrast to the visual, which may exist on-screen or offscreen. Allan Casebier criticized Metz's tautology of characterizing sound, which is of no use in probing "what capacities the film has via its sound to induce audiences to imagine what objects exist out of sight of the camera in the world of the film."[19] Sound has not only been offscreen with the introduction of sound in the late 1920s. Even in the silent period, when sound was a synaesthetic experience stimulated by visual images on-screen, sound was symbolically "heard" by seeing the moving images, yet also "the object out of sight of the camera," since the rhythm, the tone

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[13] Kovács, *Screen Modernism*, 53.
[14] Allan Casebier, *Film and Phenomenology: Toward a Realist Theory of Cinematic Representation* (Cambridge: Cambridge University Press, 1991), 91.
[15] Ibid., 92.
[16] Christian Metz, "Aural Objects," in *Film Theory and Criticism: Introductory Readings*, fourth edition, ed. Gerald Mast, Marshall Cohen, Leo Braudy (New York, Oxford: Oxford University Press, 1992), 313.
[17] Ibid., 313.
[18] Ibid., 313, and the notes on the same page.
[19] Casebier, *Film and Phenomenology*, 96.

and the overtonal were all created and experienced not by seeing what is within the rectangular space. Rather, motion and vibration were conveyed through invisible intervals of montage.

In cinema, sound has undergone a transition from symbolic status to physical existence. Regarding the coming of sound, Eisenstein, Pudovkin and Alexandrov made a statement on sound in 1928 when they discovered in American and German films a tendency to welcome sound in cinema.

> Sound used in this way will destroy the culture of montage, because every mere *addition* of sound to montage fragments increases their inertia as such and their independent significance…*Only the contrapuntal use* of sound vis-à-vis the visual fragment of montage will open up new possibilities for the development and perfection of montage.[20]

The statement did not categorically reject sound in film, but rejected dialogue that serves as a digest for the purpose of describing something that an image can perform just as well. Sound may interfere with the "inner sound" of an image. As Eisenstein stressed, the "time-bound rhythmic function" in the montage and the tonal effect in shot composition have been "a subject which *in itself* potentially contains the *entire theory* of the interconnection of picture and sound." [21] This explains why sound as an extraneous element disturbs the inherent principle of images. Dialogue will attract focus on the content and literal meaning, yet make the spectator neglect the physical and musical attributes of sound, such as tone, pitch and rhythm which may bind to those images.

Concerning the introduction of sound in cinema, Vladir Petric considered Eisenstein as intransigent compared to Vertov, but in reality he was quite the opposite. Eisenstein sought the demolition of the contradiction or hierarchy of sight and sound. Eisenstein's opinions on sound were seeking an interwoven and synchronized form of image and sound, which he called "this inner synchronicity between them," and "attainable — though only, of course, in and through an image and in the totality of the image that is formed by the combination of them."[22] For Eisenstein, the problem of coming-of-sound is that more elements in image should be involved, such as texture, shapes, lines and *chiaroscuro*. They should be intermixed in their

[20] S.M. Eisenstein, Vsevolod Pudovkin, and Grigori Alexandrov, "Statement on Sound," in *SWI*, 114.
[21] Eisenstein, *SWII*, 229.
[22] Ibid., 260.

minimalized physical forms — a form of particle oscillation, the same as those of sound in physics. For Eisenstein, the audiovisual montage is the extension of the montage in silent films. Music edited and selected by pieces, along with the montage of images, compose a "double exposure" of a stream of shots and a stream of sound.[23] As Robert Robertson commented,

> Eisenstein notes at this point how this audiovisual process was very like the method he used to create the montage for his pre-sound films. The basic difference was that instead of selecting pieces of montage to a pre-existing recording of music he had in his mind what he describes as a 'musical score' or 'inner melody' to which he edited his shots.[24]

The coming of sound is not regarded by Eisenstein as a disturbance of silent rhythmical images. Rather, it is seen as corresponding with images of its invisible dynamism in still image and a single shot, which is also a negation of cinematic visibility as the ultimate image. These reflections on sound may be found in his collaboration with Prokofiev in *Alexander Nevsky* (*Aleksandr Nevsky*, Sergei M. Eisenstein, 1938). The sound, while invisible, enriches the cinematic experience into the offscreen, drawing vision into the affect of the cerebral system, which precisely the cinematic experience beyond vision advocated by Deleuze and later phenomenologists.

4.3. The Audiovisual Correspondence and "Lack of Perspective"

The interrelation between sight and sound were increasingly the concern of musicians and visual artists at the turn of twentieth century. With respect to music, Scriabin, Rimsky-Korsakov and Schönberg all showed great interest in the color of sound, a visual quality used to describe tones. They all devoted themselves to the theoretical discussion and experimental exploration of timbre, or *Klangfarbe*. On the visual side, Kandinsky, Klee and Whistler all painted series of works on music-related themes. With a particular focus on the correspondence between individual color and sound, Eisenstein analyzed "*the stylistic aspirations of particular 'eras' in both the structuring of music and the structuring of painting*."[25]

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[23] Eisenstein, *The Film Sense*, 68.
[24] Robert Robertson, *Eisenstein on the Audiovisual: The Montage of Music, Image and Sound in Cinema* (London: I.B. Tauris, 2009), 143.
[25] Eisenstein, *SWII*, 341, emphasis in the original italic.

The key idea of Wagner's *Gesamtkunstwerk* inspired many synaesthetic explorations of collaboration between film and music in the early twentieth century, in which the practice of opera as a multimedia art form was continually associated with audiovisual experiments rather than "pure music."[26] Francis Poulenc composed a libretto based on Jean Cocteau's play, *La Voix Humaine*, a monodrama which featured music mimicking telephone conversation and emphasizing the dramatic effect of the play. Béla Bartók also composed a libretto about Bluebeard's story, rewritten by the Hungarian film theorist Béla Balázs as *Bluebeard's Castle*, in which the color of light symbolized the notions during the staging and the timbres in their shift of tonality represented the evolving themes and emotions.

The best-known audiovisual correspondence in literature is Charles Baudelaire's *Correspondences* compiled in *Les Fleur du Mal*, which is considered to be the manifesto of the Symbolist movement. Influenced by the cosmology of Swedish philosopher Emmanuel Swedenborg, Baudelaire's poem indicates the correspondence between the material and spiritual world "through forests of symbols" which form communication between nature and human beings. Senses, such as smell, hearing and sight provide access to synaesthetic experience when "Perfumes, sounds, and colors correspond" and interlock to the tactile ("cool as the flesh of children") and taste ("sweet as oboes").[27] Although Eisenstein did not quote this Baudelaire poem, his audiovisual counterpoint and intermodality were similar to that reflected in Baudelaire's poetry and writings. Synaesthsia achieves the extreme emotion — "the ecstasy of the soul and senses" — that precisely reflects Eisenstein's appreciation of "sensual thought" in audiovisual experience to reach ecstasy and pathos.[28]

Eisenstein quoted from a sonnet by another French Symbolist poet, Arthur Rimbaud, entitled "*Voyelles*": "A black, E white, I red, U green, O blue."[29] Similarly, René Ghil formed a table concerning the vowel–color correspondence, and Arnold Böcklin systematized the "alphabet of color."[30] But Eisenstein questioned the charts of absolute correspondence between color and sound proposed by some musicians

[26] R. Bruce Elder, *Harmony + Dissent: Film and Avant-Garde Art Movements in the Early Twentieth Century* (Waterloo, ON: Wilfrid Laurier University Press, 2008), 16.
[27] Robert Robertson, "Eisenstein, Synaesthesia, Symbolism and the Occult Traditions: Eisenstein's 'audiovisual cinema'," *Off Screen* 10 (2006), accessed 28 March, 2016, http://offscreen.com/view/eisenstein_synaesthesia.
[28] Ibid.
[29] Eisenstein, *SWII*, 258
[30] Ibid., 338-341.

and the Symbolists, which is further discussed in the next chapter.

Nevertheless, the manner in which Eisenstein constructed a method for audiovisual correspondence has been referred to in René Guillere's essay "*Il n'y a plus de perspectives,*" which was quoted by Eisenstein in "Synchronization of senses." Guillere claimed that modern aesthetics transformed the previous artistic structure in two stages: first, "a repetition for reinforcement and greater intensity to the contrast," rather than "a seamless structural design which ordered the parts into a whole" in the past, like a line of unbroken melody; second, "absence of perspective," influenced both by paintings such as Cubist and music such as jazz, in which every background has been brought to the foreground.[31]

Eisenstein contended that abstract and objectless coloration in vision represents a concordance with the abstractness of sound. The correspondence was attributed to the intensity of human emotions through repetition or contrast, which profoundly inspired Eisenstein's innovative use of color and polyphonic structure in his films. The repetitive use of red, gold, blue and black in the color scene in *Ivan the Terrible, Part II* (1958), the repetition of the word "Brothers!" in *The Battleship Potemkin* (*Bronenossez Potjomkin*, Sergei M. Eisenstein, 1925) and the repetitive identical bars of music in *Alexander Nevsky* (1938) all serve as a means of "heightening intensity" and "promot[ing] the creation of an organic whole," as Eisenstein himself stated. [32]

For simultaneity, René Guillere's "absence of perspective" suggested that both the vertical and the horizontal should be simultaneously at the foreground, like Cubism. Likewise, in music the performances of all instruments are the major vocal lines, such as jazz,

> Classical storeys, laid on top of another; horizontal and vertical planes, which created an architecture of noble proportions: palaces with terraces, colonnades, staircases of monumental design, long vistas. In jazz, everything is brought into the foreground… It applies equally to pictures, to stage sets, to film, to poetry: a total rejection of conventional perspective, with its single fixed viewpoint and its converging lines.[33]

This idea of equivalency of all these elements has been expressed in Eisenstein's "The Montage of Attraction" and the subsequent "An Unexpected Juncture" about

[31] Ibid., 341, 345.
[32] Ibid., 341.
[33] Ibid., 342.

his experience of Kabuki in Moscow, which were written in the same year as "Statement on Sound." He observes, "[T]he Japanese have shown us a different and extremely interesting form of ensemble, the *monistic ensemble*. Sound, movement, space and voice *do not accompany* (or even parallel) one another but are treated *as equivalent elements*…"[34] This equivalence was related by Eisenstein to the Japanese calligraphy as a "*fusion*" image of varied senses in "a *non-differentiation of perceptions, the well-known absence of a sense of 'perspective'*."[35]

This "non-differentiation of perceptions" stems from the commensurate nature of sense organs for the theatrical elements of Japanese theatre, that fuse into a sum of stimulants to the brain in an affective function.[36] Eisenstein described his experience of Kabuki as a form of synaesthesia,

> Instead of accompaniment the Kabuki reveals the method of *transference*: the transference of the basic affective intention from one material to another, from one 'category' of stimulant to another.
>
> Watching the Kabuki, you involuntarily recall the novel by an American writer about a man whose auditory and optical nerves were transposed so that he perceived light vibrations as sounds and air tremors as colors; that is, he began to *hear light and see sounds*. The same thing happens in the Kabuki! We actually 'hear movement' and 'see sound.'[37]

This totality of sight and sound perpetually strives to reach correspondence and synaesthesia, the direct bodily experience and openness of all senses in the experience of film, prior to any intellectual analysis or attribution as to the meaning of the content. Different from Hegelian Idealism, Eisenstein's attitude toward sight and sound is not the negation of corporality; rather both are "attainable" through the body. Different from Christian Metz's "subject-predicate structure," sound or color is not a sub-dimensional feature of cinema, but both should be equally synchronized in the foreground, the synthesis of sound and image, presenting all the elements at the same time. Eisenstein's synchronicity of sight and sound is thus a multisensorial production method and perceptive experience under his own definition of synaesthesia and equal correspondence in the modern arts.

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[34] Ibid., 117.
[35] Ibid., 117.
[36] Ibid., 117
[37] Ibid., 118.

4.4. Eisenstein's Definitions of Synaesthesia

Synaesthesia has been extensively discussed in the first two chapters of *The Film Sense*, especially as it concerns chromesthesia, the correspondence between color and sound. Eisenstein emphasized that the pathological experience of synaesthesia is accessible and expressive rather than the spiritualized synaesthesia, such as that of Scriabin. He provided two definitions of synaesthesia:

1. The production from a sense-impression of one kind of an associated mental image from a sense-impression of another kind;
2. Synaesthesia is the ability to unite in one whole a variety of feelings gathered from different sources through different sense organs.[38]

The first definition is often used to discuss synaesthesia as a cross-modal experience stimulated by one sense which causes another, different one. It can be separated into two different areas. First, on a physiological and neuroscientific level, the notion that the experience is "involuntary" or "unconscious" and outside of human will has been emphasized. In a small number of human beings and in certain circumstances, it may be elicited through drugs. Vivian Sobchack quotes from psychoneurologist Richard Cytowic, who defines synaesthesia in a medical sense as an "*involuntary experience* in which the stimulation of one sense cause[s] a perception in another."[39] Meanwhile, in psychological and artistic circles, synaesthesia is related to the "intersensory association and metaphorical thinking" within artists and musicians.[40] Bulat Galeyev analogizes these two synaesthesia as hallucination and imagination in their respective psychiatric and aesthetic natures, just as absolute pitch and relative pitch in music as the difference between the gifted skill and trained one.[41]

Since synaesthesia at a physiological level may now be accessed through scientific methods, artists like Scriabin, Kandinsky and Rimsky-Korsakov, who claimed to be synesthetes or to be interpreted as synesthetes in their biographies,

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[38] Eisenstein, *Nonindifferent Nature*, trans. Herbert Marshall (Cambridge: Cambridge University Press, 1976), 297.
[39] Richard E. Cytowic. *The Man Who Tasted Shapes: A Bizarre Medical Mystery Offers Revolutionary Insights into Emotions, Reasoning, and Consciousness* (New York: Warner Books, 1993), 52. For more recent works on synaesthesia, see John E. Harrison and Simon Baron, eds., *Synaesthesia: Classic and Contemporary Readings* (Cambridge: Blackwell Publishers, 1997), and Kevin T. Dann, *Bright Colors Falsely Seen: Synaesthesia and the Search for Transcendental Knowledge* (New Haven: Yale University Press, 1998). Cf. Vivian Sobchack, *Carnal Thoughts: Embodiment and Moving Image Culture* (Berkeley, CA: University of California Press, 2004), 67, and the notes on the same page.
[40] Bulat Galeyev, "Open Letter on Synesthesia," *Leonardo* 34 (2001), 362.
[41] Ibid, 363; Jack Ox, "Introduction: Color Me Synesthesia," *Leonardo* 32 (1999), 7.

have been called into question within the neurological sense of synaesthesia. In Scriabin's era, the natural sciences played an unprecedented role in providing either a physiological or psychological explanation of synaesthesia. To date, the paradox and the debate of aesthetics and science, art and technology — at a time of digitalization of media and the arts — has intensified and remained on the issue of synaesthesia and Scriabin himself, a representative advocating mysticism as well as musical principles and instrumentalization.

Galeyev and Vanechkina's article "Was Scriabin a Synesthete?" and Galeyev's open letter to *Leonardo* both suggest that synaesthetic art may be created by synesthetes, or a synaesthetic experience may be elicited in an audience by artists without synaesthesia. This means, for example, the vision that a musician hopes to stimulate through music may not actually occur in the audience member's retina or psyche; instead, it may occur by means of a symbolic and sematic conception of tonalities. The advocacy in favor of dichotomizing this term indicates a resistance outweighing the importance of discovering whether Scriabin is a synesthete. It also neglects the manner in which Scriabin formalized the synaesthesia effect in audio-visual experience and the intermedial factors contributing to an understanding of his composition.

Eisenstein admitted the existence of pathological synaesthesia, which played an effective role in achieving cross-modal hallucination and causing a subtle experience for thought and artistic creation. Rimbaud and Huxley, for example, were known to be synesthetes with the aid of drugs. Eisenstein recorded his encounter and observation of Comrade *S* whom was introduced to him by psychologists Lev Vygotsky and Alexander Luria: "Comrade *S* also possessed the gift of *synaesthesia,* the ability to *see sounds as colors and to hear colors as sounds*…He does not see *vowels as being colored* but only *as gradations of light*. *Color only enters with consonants*" (emphasis in original).[42] Eisenstein was surprised by the synaesthetic experience of Comrade *S,* who connected consonants and color rather than experiencing the vowel–color correspondence expressed in Rimbaud's poem and Rene Ghil's table of color-and-sound relations. Vivian Sobchack contends "the sense-impression" in aesthetic appreciation and the contribution of pathological synaesthesia propels the metaphorical use in various art forms to some extent,

[42] Eisenstein, *SWII*, 368.

> Furthermore, in common usage, synaesthesia refers not only to one bodily sense being involuntarily, if consciously, experienced in terms of another, but also to the volitional use of metaphors in which terms relating to one kind of sense-impression are used to describe a sense-impression of other kinds. This move from an involuntary, immediate, eidetic exchange *within* the sensorium to a conscious, mediated, constructed exchange *between* the sensorium and language not only reminds us of the aforementioned 'synaesthesia-loving Symbolist movement.'[43]

Eisenstein's second definition of synaesthesia refers to a medium as a continuum in which senses simultaneously and equally perceive through the human body. The word "synaesthesia" is derived from a combination of Greek words: σύν (*syn*), "together" or "unity"; and αἴσθησις (*aisthēsis*), "sensation." If translated directly from Greek, synaesthesia means the co-existence of various senses rather than the application of a sense as a stimulant for another sense. In physiological phenomena, this definition is close to "coenaesthesia" cited by Vivian Sobchack, who quotes from Richard E. Cytowic and Diane Ackerman:

> The neologism of the film viewer as a "cinesthetic subject" also plays upon a second and less well-known scientific term used to designate a bodily condition more common than clinical synaesthesia: *coenaesthesia*. Neither pathological nor rare, coenaesthesia names the perception of one's whole bodily state as the sum of its somatic perceptions and refers to a certain pre-logical and nonhierarchical unity of the sensorium that exists as the carnal foundation for the later hierarchical arrangement of the senses achieved through cultural immersion and practice. Thus, the term is used to describe the general sensual condition of the child at birth. In this regard, not yet fully acculturated to a particularly disciplined organization of the sensorium, young children have demonstrated a greater "horizontalization" of the senses and consequently a greater capacity for cross-modal sensorial exchange than have adults.[44]

According to Vivian Sobchack, the two structures and conditions of human sensorium, synaesthesia and coenaesthesia, are both engaged within the film experience. In synaesthesia, senses may be exchanged and are transferable: seeing becomes hearing and vice versa. In coenaesthesia, seeing and hearing are equally externally perceived, but are later hierarchized through the power of cultural and historical references. Furthermore, excepting the senses of sight and sound in cinema,

[43] Sobchack, *Carnal Thoughts*, 68.
[44] Ibid., 68.

which remain dominant, senses such as touch, smell and taste may be stimulated by sight and sound through the function of synaesthesia or may also appear simultaneously through those of coenaesthesia.[45]

Eisenstein used the first definition of synaesthesia to seize upon some principles in one medium and apply them to innovate a new form in another medium. The second definition explained correspondence in a medium in which the sensory inputs are all equivalently ranked and accessible. For example, timbre functions as invisible, objectless and metaphorical color. These attributes of timbre are applied to visual color. Colors are metaphorically used as costumes (black, red and gold, for example) and are sometimes detached from objects as abstract coloration, such as the color blue in *Ivan the Terrible, Part II*. Under the second definition of synaesthesia–coenaesthesia, the color scene is the whole which unites all the senses from different sources: image and color (visual), music (audio), dance (visual, movement and reflexology). All these senses come into the foreground and correspond with each other. For example, colors change to correspond with the shift of dancers in colored costumes and dancers stamp their feet following the rhythm of the music. Synaesthesia thus becomes methodological: it not only manifests transferable or equally perceptible phenomenon among senses, but an operative instruction of mutual references and multisensorial cooperation.

4.5. Eisenstein's Phenomenological Body and Senses

Eisenstein's exploration of senses and thought inspires Vivian Sobchack in her article "What My Fingers Knew?" In her article, she calls for the importance of sensory thought and intelligence of emotion in cinematic experience, and her analysis bridges so-called classical film history: Münsterberg, Arnheim, Balázs, Kracauer and Epstein, who explored the aesthetic value of cinema through the nature of cinematic image; the phenomenological method since 1990s advocated by Alan Casebier's exploration of Edmund Husserl; the author's own excavation of Merleau-Ponty's intersubjectivity and embodiment; and Laura U. Marks' Deleuzian haptic and materiality for the experience of cinema. Between the 1960s and the beginning of so-called modern cinema, Barthesian textual analysis, Althusserian ideology, Lacanian psychoanalysis, Metzean semiotics and linguistics, feminism and post-

[45] Ibid., 67.

colonialism have persistently influenced film studies. Meanwhile, phenomenological film theories considered "the prevalent linguistic and psychoanalytic understandings of the cinema as grounded in conventional codes and cognitive patterning and grounded on absence, lack, and illusion."[46]

Phenomenological epistemology in cinema studies, however, has emerged earlier than the realm of ideology, psychoanalysis and cultural studies. As observed by Erica Carter, in *Visible Man* (1924), Béla Balázs conceptualized his "visible man" through Kant's "apperception," being "a mental process that brings sensory awareness of empirical phenomena into association with inner mental processes" to distinguish with sense perception *tout court*.[47] Echoing William James' refutation of empiricist dualism, Béla Balázs also considered perception not as being a process before symbolic identification, but "*already symbolic*," mobilized along with "mental escorts … memories, ideas, and interests," and advanced the theory of images and visible bodies as a Bergsonian dynamic process.[48] Thus visible man, its physiognomy and the physiognomy of all objects, are not to be read through linguistic signs of Christian Metz, but to be embedded within categories of perception having symbolic meanings within time and space as the categories of our understanding, never being separable.[49]

Siegfried Kracauer's *Theory of Film: The Redemption of Physical Reality* (1960), was exceptional not in respect of its cinematic realism and sociological sensibility, but its phenomenological attitude, considering cinema as "a sensory-perceptual matrix of experience."[50] At the beginning of this book on the "material existence of film," he emphasized its indexical quality, similar to photography, but also remarked on the senses as the material reality of the spectator "with skin and hair [*mit Haut und Haar*]" beyond the "visible world around us."[51] He stated, "The material elements that present themselves in film directly stimulate the material layers of the human being: his nerves, his senses, his entire physiological

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[46] Ibid., 60.
[47] Erica Carter, introduction to *Béla Balázs: Early film Theory: Visible Man and The Spirit of Film*, ed. Erica Carter and trans. Rodney Livingstone (New York and Oxford: Berghahn Books and *Screen*, 2010), xxiv.
[48] Ibid., xxv
[49] Béla Balázs, *Béla Balázs: Early film Theory: Visible Man and The Spirit of Film*, ed. Erica Carter and trans. Rodney Livingstone (New York and Oxford: Berghahn Books and *Screen*, 2010), 56
[50] Mirian B. Hansen, *Cinema and Experience: Siegfried Kracauer, Walter Benjamin, and Theodor W. Adorno* (Berkeley, Los Angeles, London: University of California Press, 2012), 255.
[51] Ibid., 261.

substance."[52] In the chapter entitled "The Spectator," Kracauer quoted an anonymous French woman, who said, "In the theatre I am always I, but in the cinema I dissolve into all things and beings." [53] In a subdivision of this chapter, "lowered consciousness," Kracauer contended that cinema is capable of releasing the spectators from consciousness, dissolving their identities and immersing them through its camera into its Husserlian *Lebenswelt* ("life world").

Lebenswelt, indebted to Heidegger's "being-in-the-world," drove Edmund Husserl on a different path, away from his earlier transcendental reduction that established the descriptive natural attitude, especially for film phenomenologists, as a methodological basis. Husserl's phenomenological method is to bracket presupposition, which reduces the social attributes and cultural knowledge of objects given to us, and then moves to its inner core as the important phrase, "*zu den Sachen selbst*" ("*to the thing itself*"). Consciousness, as a subjective experience to access knowledge, is "co-constituting objects in the world — is to analyze descriptively those acts of consciousness through which the object presents itself."[54] But *Lebenswelt* is to admit that consciousness is not pure, but historically, socially and culturally constituted, as Balázs claimed, and that perception has always been symbolically formed. Rather than penetrate into the inner core of objects, *Lebenswelt* provides a world in which subjects may share their own personal emotions with each other, but not individually. Thus in this world, intersubjectivity may be achieved through the commonality of perceptive experience, and then by approaching objects (as subjects from their own perspectives) beyond their appearance, since the objects are self-manifested and they open their own Being and existence to exchange with subjects (as objects and vice versa), in the sense advocated by Heidegger.

Merleau-Ponty claimed in "The Film and the New Psychology," a lecture delivered in 1945, "[T]he movies are peculiarly suited to make manifest the union of mind and body, mind and the world, and the expression of one in the other … The philosopher and the movie maker share a certain way of being, a certain view of the

[52] Siegfried Kracauer, "Marseille Notebooks". cf. Miriam B. Hansen, introduction to *Theory of Film: The Redemption of Physical Reality* (Princeton: Princeton University Press, 1960), xxi.
[53] Kracauer, *Theory of Film*, 159.
[54] Gabrielle A. Hezekiah, *Phenomenology's Material Presence: Video, Vision and Experience* (Bristol and Chicago: Intellect, 2010), 7.

world which belongs to a generation." [55] His speech validated cinema in its philosophical grounding, being the *Lebenswelt* accessed through the spectator's mind and body. This phenomenological epistemology has influenced post-war French cinema theories, especially André Bazin, who questioned the subject–object dualism in traditional art forms. Annette Kuhn re-reads Bazin as a phenomenologist whose "criticism as grounded in a view of the distinctiveness of cinema's being as resting on how the world inside the edges of the frame reveals itself to us, and how we may enter into the world in the act of watching a film." This differs from Western paintings in which perspective as "the original sin" divides the frame into subject and object, while the film screen unites them.[56]

Merleau-Ponty's existential phenomenology highlights the perceptible experience of body and embodiment as a means to reach the outer world, while the intersubjectivity of the body performs the "active-reactive echo" as a form of reflection in the *Lebenswelt*. [57] Spencer Shaw compared the subjectivity and consciousness that both Husserl and Merleau-Ponty canvassed: "Husserl's transcendental subjectivity as an anonymous, superior ego, comparable to the supra human camera eye, and Merleau-Ponty's more inferior, impersonal version of the transcendental"[58] Merleau-Ponty attempted to avoid the idealism and human cogito of Husserl, instead commenting that Husserl's inner-time consciousness was linked with the "expansive, unconscious memory to the body," just as he remarked on Proust as a "*mémoire involuntaire*."[59] This "impersonal" bodily vision allows the absence of consciousness from the subject and becomes an objective viewing:

> Vision is not a certain mode of thought or presence to self; it is the means given me for being absent from myself, for being present at the fission of being from the inside – the fission at whose termination, and not before, I come back to myself.[60]

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[55] Maurice Merleau-Ponty, *Sense and Non-Sense*, trans. H. Dreyfus and P. Dreyfus (Evanston, Il: Northwestern University Press, 1964), 58-59.
[56] Annette Kuhn, "Living within the Frame," inaugural lecture delivered at Lancaster University, 11 June 2003 (Lancaster: Lancaster University, 2003), 6.
[57] Spencer Shaw, *Film Consciousness: from Phenomenology to Deleuze* (Jefferson, North Carolina and London: McFarland, 2007), 25.
[58] Shaw, *Film Consciousness*, 5.
[59] Ibid, 5.
[60] Maurice Merleau-Ponty, *The Primacy of Perception: And Other Essays on Phenomenological Psychology, the Philosophy of Art, History, and Politics*, ed. James M. Edie, trans. William Cobb (Evanston, IL: Northwestern University Press, 1964), 186.

As in the discussion of Hegelian sight above, Cavell similarly claims that seeing an object only works on its surface, not its sight. However, this may be questioned in a phenomenological context, in that the object on screen and the camera view are capable of sight, yet conversely may become the subject of viewing. Both the spectator's bodily vision and the film's mechanical vision allow for "a pre-personal perceptual consciousness through the camera eye (I)."[61]

Similarly, the hint of reversibility of subjective and objective view may be found in Eisenstein's explanation of the effect of "pathos," which brings the viewer to the point of ecstasy, "going out of a normal state":

> [P]athos is what force the viewer to jump out of his seat. It is what forces him to flee from his place. It is what forces him to clap, to cry out. It is what forces his eyes to gleam with ecstasy before tears of ecstasy appear in them. In word, it is everything that forces the viewer to "be beside himself…But this is not sufficient: 'To be beside oneself' is not 'to go into nothing.' To be beside oneself is unavoidably also a transition to something else, to something different in quality, to something opposite to what preceded it (no motion – to motion, no sound – to sound, etc.)."[62]

Although Eisenstein's pathos was not intended to suggest a reversed viewing of subject–object, he held the emerging attitude toward extracting oneself out of subjective consciousness, just as Merleau-Ponty considered vision as a means of "being absent from myself." This mutation between outward and inward is precisely Sobchack's *cinesthetic body* of the "reversibility" and "reciprocity" of subjectivity and objectivity, which contains both conscious and sensorial experience on-screen and offscreen.[63] That is, the body exceeds the two-dimensional screen (visual) to reach another spatially-sensorial experience (touch or affect) and a temporal one in a fourth dimension (sound).

In *The Battleship Potemkin* (1925), there is a quick montage set with dishes smashing, consisting of eight shots (Figs. 1–8) in four seconds. Figs. 1, 3, 4 and 7, which show close-ups of the face and waving arms of the sailor, trigger the intensity of emotion and affect of spectators who identify themselves with the sailor as if they were also smashing the dishes. On the contrary, Figs. 2, 5, 6 and 8 are the medium shots that include the surroundings other than the sailor, which distance spectators

[61] Shaw, *Film Consciousness*, 25.
[62] Eisenstein, *Nonindifferent Nature*, 27.
[63] Sobchack, *Carnal Thoughts*, 72.

from the sailor. Compared to shot–reverse-shot, this sequential set of action movements does not make spectators "be beside themselves" through axisymmetric shots, but by shifting between varied depths of field, creates an interchange between subjectivity and objectivity within the spectators.

Figs.1–4 Figs.5–8

The Battleship Potemkin (*Bronenossez Potjomkin*, Sergei M. Eisenstein, 1925)

Eisenstein's other phenomenological approach is the "felt" experience. He suggested the "new formula" for perceiving overtonal montage in his article, "The Fourth Dimension in Cinema," stating, "[f]or the musical overtones (a beat) the term 'I hear'

is no longer strictly appropriate. Nor 'I see' for the visual. For both we introduce a new uniform formula: 'I feel'."[64] This "felt" experience as the embodied viewership was similarly addressed by Vivian Sobchack, who observed, "Pre-reflective bodily responsiveness to films is a commonplace. That is, we do not experience any movie only through our eyes. We see and comprehend and *feel* film with our entire body being, informed by the full history and carnal knowledge of acculturated sensorium."[65] In "An Unexpected Junction", which concerned the genre of Kabuki, Eisenstein had already expressed this "new formula" of perceiving film of sound as a response to the earlier "Statement on Sound":

> In our *Statement* on sound, cinema we wrote about the contrapuntal method of combining visual and sound images. To master this method you have to develop within yourself a new *sense: the ability to reduce visual and sound perceptions to a 'common denominator'.*"[66]

The "felt" experience, the sum total of perceptions, is what Sobchack calls "carnal foundations of cinematic intelligibility." The hybrid of physiological sensations such as seeing and hearing combines with affect to work on the cortex of brain generating psychic activities, feeling or passion, the "principle characters of the brain-world."[67] Deleuze echoed Eisenstein, saying, "[T]he shock wave or the nervous vibration … means that we can no longer say 'I see, I hear,' but I FEEL … it is this set of harmonies acting on the cortex which gives rise to thought, the cinematographic I THINK."[68] This film experience, as Jacques Rancière says about a de-hierarchized aesthetics, is "a membrane between the sensible and the thinkable," capable of opening both the direction "outward" and "inward" between thought and material.[69]

Deleuze's idea of "I think" serves to differentiate Eisenstein from other phenomenological attitudes of cinema. Cinema is not only a *Lebenswelt* accessible for perceptive communication and correspondence, but also represents and functions as a mechanism of a brain, the organ which processes both senses and thoughts, as well as ideas, memories and logic. It represents the function of symbolic association

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[64] Eisenstein, *SWI*, 186.
[65] Sobchack, *Carnal Thoughts*, 63.
[66] Eisenstein, *SWI*, 119.
[67] Ibid., 201.
[68] Gilles Deleuze, *Cinema 2: The Time-Image*, trans. Hugh Tomlinson and Robert Galeta (Minneapolis, MN: University of Minnesota Press, 1989), 158.
[69] Jacques Rancière, "What Aesthetics Can Mean," trans. Brian Holmes, in *From an Aesthetic Point of View: Philosophy, Art and the Senses*, ed. Peter Osborne (London: Serpent's Tail, 2000), 19.

and analogy, like the montage of the slaughter of an ox and the killing of strikers in Eisenstein's *Strike* (1925). It builds up a dialectical relation of social conflicts in *The General Line* (*Generalnaya liniya*, also known as *The Old and the New*, *Staroye i novoye*, Sergei M. Eisenstein, 1929), which is further discussed in the final chapter. Deleuze identified these examples of "thought-montage" as Eisenstein's first moment from perceptions to concepts, saying, "[T]he shock has an effect on the spirit, it forces it to think, and to think the Whole."[70] However, Deleuze himself admitted that the second moment, from concepts to affect, was not the further development of Eisenstein's theoretical stage, but co-existed with the first moment in his films of different periods. In fact, affect appeared at the very beginning of Eisenstein's theoretical life, from expressive movement which persistently transformed into the basis of the idea of attraction, multisensory experience and organic unity. Hence, Eisenstein considered the psychic as "merely the physiological process of *a higher nervous activity.*" Like Eisenstein's theoretical world, "thought-montage," or "intellectual cinema," was not a de-sensorialized, de-materialized, idealistic further stage of cinema but reached a symbiotic relationship of mind and body, sense and thought.

Cinema reveals itself by physical senses accessed by humans through their own bodies. In a phenomenological sense, because of its reversibility of subjectivity and objectivity, the body is a means not only to be aware of being in the physical and material world. Rather, it is also a means of "being-in-the-film," similar to Heidegger's "being-in-the-world," a *Lebenswelt* in which body may share common perceptive experiences with those in films. However, in Eisenstein's understanding, cinema is also a brain performing both sensorial input and "intellectual process," exactly as Deleuze considered modern cinema as the third world which bridged the break between the human world and the physical world through a "virtual mental form" that is "closer to postmodernism's cult of virtual."[71]

Summary

Eisenstein's synchronicity of sight and sound was built upon perceptions and contents, and thus his sound could not be defined by Hegelian Idealism, but rather decomposed into the structure of its physical attributes as well as those of sight. It is

[70] Deleuze, *Time-Image*, 158.
[71] Kovács, *Screen Modernism*, 44.

similar to W.J.T. Mitchell's current idea of intermediality, being the dual structures of media, the modal channels and the semiotic meaning. In line with Mitchell's idea that "there is no pure media", Eisenstein did not insist that the visual was the specificity of media. Noël Carroll also questioned the issue of excellence and differentiation of media as the foundation of specificity.[72] Hence, facing the introduction of sound into film, in spite of his initial pessimism, Eisenstein later shifted to a positive attitude toward the collaboration of sight and sound. More specifically, he embraced image and music, which excluded dialogue and speech from consideration, potentially to maintain inner harmony in the silent period. Sight and sound serve a purpose of intensification in equal importance and on the same plane, lacking background and foreground, which diametrically contradicts today's normative proposition that sound is "background music."

Sight and sound construct cinema as an audiovisual medium, and affect and phenomenology further endorse cinema with multisensory experience and intelligence. Eisenstein's ideas of "to be beside oneself" and "felt" experience reflect a typical phenomenological attitude, echoing Merleau-Ponty's theories of intersubjectivity and embodiment. The reception of sight and sound is a compound result rather than separable, creative brain generating psychic activities, and conversely, cinema itself is a mechanism of the brain with an intellectual process. In the final chapter, the "felt" experience is embedded into its original context in a discussion of overtonal montage, which combines Gestalt psychology and dialectical principles, reflecting cinema of both body and brain.

The correspondence between sight and sound was, for Eisenstein, rooted in synaesthesia, an aesthetic concept inherited from Wagner and French Symbolists in the first half of nineteenth century. Yet, it has been gradually questioned on the basis of scientific validation in experimental psychology and pathology and, paradoxically, surrounded by an atmosphere of supernaturalism. Extraordinarily, Eisenstein used the symbolic function of this notion, mainly timbre in chromesthesia, in terms of the autonomous color of its meaning beyond the visual, against the prevailing Technicolor in Classical Hollywood films, which is the theme of the following chapter.

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[72] W. J.T. Mitchell, "There are No Visual Media," in *Media Art Histories*, ed. Oliver Grau (Cambridge, MA: MIT Press, 2007); Noël Carroll, *Philosophical Problems of Classical Film Theory* (Princeton, NJ: Princeton University Press, 1988).

Chapter 5: The Invisible Color: the Symbolic and Affective Coloration

> …in general a visible, is not a chunk of absolutely hard, indivisible being…but rather a sort of straits between exterior and interior horizons ever gaping open…a certain differentiation, an ephemeral modulation of the world – less a color or a thing, therefore, than a difference between things and colors, a momentary crystallization of colored being of visibility.
>
> —— Maurice Merleau-Ponty, *The Visible and the Invisible*

Before Eisenstein conducted his first color experiment in *Ivan the Terrible, Part II (*1958), [1] Technicolor had been popular for a decade in classic Hollywood films, whether in *Gone with the Wind* (Victor Fleming, 1939), in which color represents a visual equivalence with the historical scenes in the book, or *The Wizard of Oz* (Victor Fleming, 1939), in which color serves to enhance the "spatial-temporal consistency" of the real world and make-believe in children's tales.[2] Eisenstein said in a 1948 interview, "Color/ in film/ begins where it no longer corresponds to natural coloration."[3] Although the Technicolor in Classical Hollywood film is not naturalistic color in a strict sense, Eisenstein expressed this idea of cinematic color to go beyond the idea of duplicating daily perception.

This chapter will dwell on the color–sound relation as a form of synaesthesia, beginning with an overview of the relevant scientists, musicians and theorists at the turn of twentieth century. Synaesthesia paradoxically included both experimental science and occult tradition with color–sound interrelation, "timbre" in French and "*Klangfarbe*" in German, which influenced the exploration of the invisibility of visual color in its symbolic and affective function. Eisenstein's application of and objectless color and leitmotif, color, music and dance all equally and simultaneously contribute to thematic meanings, following the idea of "lack of perspective" as discussed in the previous chapter. Color, like music and dance, is an autonomous element establishing the polyphonic structure of montage in *Ivan the Terrible, Part II*

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[1] It is necessary to point out that Eisenstein finished the editing of *Ivan the Terrible, Part II* at the end of 1945, but after more than 10 years, it was then allowed to be released.

[2] Stanley Cavell, *The World Viewed: Reflections on the Ontology of Film* (Enlarged Edition) (Cambridge, MA: Harvard University Press, 1979), 81.

[3] I. Veissfeld [Vaisfeld], "Mon dernier entretien avec Eisenstein," *Cahiers du cinéma* 208 (1968), 21. Cf. Håkan Lövgren, "Eisenstein's Pushkin Project," in *Eisenstein Rediscovered*, ed., Ian Christie and Richard Taylor (London and New York: Routledge, 1993), 127.

*(*1958), rather than as a sub-division of sight in Metz's "primitive substantialism."[4]

Color is visual, but in music, timbre is invisible and metaphorical. Musicians and Symbolists attempted to establish a schema for color–sound association, but color for Eisenstein reveals the polysemantic, indeterminate meanings. Eisenstein applies this idea of symbolization and abstraction of color into cinema in an unprecedented manner at the end of *Ivan the Terrible, Part II (*1958) and his unrealized Pushkin project. In Roland Barthes' terms, color has not only the "obvious meaning" — the second meaning — but also the "obtuse meaning," being the third meaning of phenomenological tendency. Barthes admitted that the third meaning carries a certain emotion, and this indescript signification appeals to a multisensorial address concealed in the visual color, yet exceeding optical vision and beyond semiotic interpretation.

5.1. Timbre and its Occult Tradition in the Time of Modernity

Music and image have mutually referred to one other, having regard to their respective particular materiality and historical genres. For example, timbre, texture, Impressionism and Pointillism are all derived directly from painting, yet are frequently discussed in music. Rosicrucians, who explored the relation of color and sound in the Middle Ages, later became the name of a North American journal, *Rosicrucian Digest*, which published discussions among artists, scientists, musicians in the 1930s concerning the interrelation between color and music and the proposal to build a "Color Organ."[5] The attempt to mechanize a "Color Organ" began in the eighteenth century. French Jesuit monk Louis Bertrand Castel proposed the idea of a "ocular harpsichord" ("*Clavecin pour les yeux"*) and a "light organ" ("*clavecin oculaire"*). The enthusiasm toward creating color–sound instruments lasted throughout the nineteenth century to the 1960s and 1970s, when electronic devices were introduced into technology that are capable of generating a colored-light response to music, such as Sarabet, Chromopiano and Lumia.

Perhaps due to the liaison with Rosicrucianism, the exploration of the color–

[4] Timbre has appeared in the mid-eighteenth century. The German word Klangfarbe most of time equals to the French word timbre. Gustav Schilling considered Klangfarbe as "a direct translation from timbre." In the nineteenth century, Klangfarbe was defined as "characteristics sound of musical instruments" in a German context. See Julia Kursell, "Experiments on Tone Color in Music and Acoustics: Helmholtz, Schoenberg, and *Klangfarbenmelodie*," in *Music, Sound, and the Laboratory from 1750-1980*, ed. Alexandra Hui, Julia Kursell, and Myles W. Jackson, *Osiris* 28 (2013), 194.

[5] R. Bruce Elder, *Harmony + Dissent: Film and Avant-Garde Art Movements in the Early Twentieth Century* (Wilfrid Laurier University Press, 2008), 45.

sound relation in the early twentieth century maintained a more or less occult tradition. Remarkably, Scriabin and other music theorists researched the principles of the cross-modalities between sight and sound, while Eisenstein explicitly demonstrated a disassociation from the occult tendency. Instead of the overview of the entire history of the color–music relation, certain representative musicians, artists and theorists mentioned in Eisenstein's writing are analyzed, such as Scriabin and Kandinsky, who mainly intrigued Eisenstein in terms of their importance to the issue of synaesthesia and their influence on Eisenstein's color theorization.

In the nineteenth century, scientists focused the research of sound on its calculable properties. Hermann von Helmholtz, in *On the Sensation of Tone as Physiological Basis for the Theory of Music* (1885), defined a more restricted aspect of *Klangfarbe* in its musical context to emphasize physical hearing, namely, "*musikalische Klangfarbe*," a stationary and periodic sound primarily made by instruments.[6] Gustav Schilling denoted *Klangfarbe* as "mostly the accidental properties of a voice,"[7] which reflected the popular opinion on *Klangfarbe* as a non-central effect of music at that time. This hierarchy of tone and its color was questioned by Arnold Schönberg in 1911, on the subject of tonal harmony: "I think the tone becomes perceptible by virtue of tone color, of which one dimension is pitch. Tone color is, thus, the main topic, pitch a subdivision. Pitch is nothing but tone color measured in one direction."[8] His practices of *leit*-timbre or *leit*-color in personages and instruments turn *Klangfarbe* into "the autonomous compositional element with its varying instrumentation constituting *Klangfarbenmelodie*."[9]

The friendship between Schönberg and Kandinsky resulted in a consensus on music–color relations. Kandinsky, as an accomplished cellist and violinist, was significantly inspired by music in his artistic creation and reflection. After listening to Schönberg's *Second String Quartet Op.10* in 1911, Kandinsky created *Impression III (Concert)* representing the abstractness and emotion he perceived in Schönberg's

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[6] Kursell, "Experiments," 199.
[7] Gustav Schilling, *Encyclopädie der gesammten musikalischen Wissenschaften oder Universal-Lexikon der Tonkunst, Vol. 6*, ed. Gottfried W. Fink, Friedrich de la Motte Fouque and Georg C. Grasheim (Stuttgart, 1838). Cf. Kursell, "Experiments," 194.
[8] Arnold Schönberg, *Theory of Harmony*, trans. Roy E. Carter (Berkeley, CA: University of California Press, 1978), 421.
[9] Irina L. Vanechkina, "Where does 'the Blue Rider' Gallop? Schönberg, Kandinsky and Scriabin on the Synthesis of Art," in *Schönberg and Kandinsky: An Historic Encounter*, ed. Konrad Boehmer (New York and London: Taylor & Francis, 1997), 98; Alfred Cramer, "Schönberg's Klangfarbenmelodie: A Principle of Early Atonal Harmony," *Music Theory Spectrum* 24 (2002), 1.

musical pieces. The abstractness that he appreciated in music is what he sought in paintings, which impossibly provides viewers the same freedom of imagination as music provides for listeners. Thus, he suggested a "new symphonic construction" of painting that composed a painting just as music is composed, in two ways: symphonic and melodic, or in terms of texture, the polyphonic and the monophonic. [10] His series of paintings, *Composition*, was also inspired by Schönberg's atonal music, and applied polyphonic composition to the visual effect.

Kandinsky primarily concentrated on the metaphorical and associative values of colors, particularly his concern with the same pair of polar opposites — blue and yellow — based on Goethe's theory of color. Kandinsky also mentioned that color has a synaesthesia effect that conjures up the memory of another physical agent, such as taste, scent and touch.[11] Despite a mystical tone expressed in his writings and his frequent quotations from the works of Madame Blavatskaya and Rudolf Steiner, he never became a member of the Theosophical Society and his occult interest was more inclined to cosmology rather than mysticism. [12] Cosmos was centered in Kandinsky's idea of music and art. He once stated that in his cosmology of art, "every work of art comes into being in the same way as the cosmos — by means of catastrophes, which ultimately create out of the cacophony of the various instruments that symphony we call the music of the spheres."[13] The power of cosmos intrigued him in the astronomical sense, and his *Composition VII* was inspired by cosmic harmonies to create "cosmic convulsion."[14]

Like Schönberg, Scriabin advocated the emancipation of keys and pitches from restriction. He made a profound contribution to modern music, not only with his revolutionized piano compositions, but also as the first musician to abandon key signatures for serial music.[15] His light symphony *Prometheus: The Poem of Fire* is one of the most important experimental practices in synesthesia. Specifically, he named synaesthesia as "color hearing," or "to see the sounds of certain instruments or certain tonalities as various colors."[16] Scriabin tried to find some physical and

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[10] Magdalena Dabrowski, *Kandinsky Compositions* (New York: Museum of Modern Art, 1995), 11.
[11] Kenneth C. Lindsay and Peter Vergo, introduction to "On the Spiritual in Art," in *Kandinsky: Complete Writings on Art*, ed. Kenneth C. Lindsay and Peter Vergo (Boston, MA: Da Capo Press, 1994), 116.
[12] Ibid., 117.
[13] James Leggio, *Music and Modern Art* (New York: Routledge, 2002), 101.
[14] Ibid., 101.
[15] Greta Berman, "Synesthesia and the Arts," *Leonardo* 32 (1999), 16.
[16] Ibid., 17.

physiological explanation for synaesthesia, which could be generalized among ordinary people, but not in extreme cases of psychiatric phenomena. He stated, "It cannot be personal, there must be a principle, must be oneness. A freak of chance — is a ripple on the surface, and the essential must be common."[17] The commonality is rooted in the spectrum and atomic-structure of color and sound, upon which he built up a system of color-tonal analogies. His alignment of three colors as a cycle of "allied colors" was an analogy for a five-tone cycle known as the "allied tonalities."[18]

Similar to Goethe's "On the Order of Colors and Their Relationship to Each Another" ("*Über die Einteilung der Farben und ihr Verhältnis gegen einander*") in *Theory of Colors* (*Zur Farbenlehre*, 1810), Scriabin also proposed a religious symbol to indicate the stability and harmony of the structure, a cycle. As Goethe represented yellow as the brightness and blue as the darkness, "all other colors can be grouped between these … colors can be organized in a circle," to reach a totality and constancy in the cosmos.[19] Concerning the division of color-pitch schema, Bauhaus teacher Johannes Itten developed Goethe's color circle into a twelve-color wheel as the twelve-tone with semitone notes of the musical scale in *On Tone-Colors* (*Über die Klangfarbe*, 1918). This color wheel "interpreted the divisions of Goethe's color circle as mathematical allocation scheme for music and painting."[20] His student, Josef Matthias Hauer (1883–1959), was inspired by Goethe's theory of color and Itten's analogy of twelve color and tones, and invented the "twelve-tone law." It maintains the twelve equated-tempered notes, but to "avoid the fixed sequence of pitches that as the basis of Schönberg's system," he employed the idea of "Reihe" with "continual repetition of a complete overtone series."[21]

All these color–sound theorists associated their symbolic systems with their religious or mystic beliefs or intentions. Scriabin is assumed to be a member of "Sons of the Flames of Wisdom," a subgroup of Theosophy, honoring Prometheus.[22] As a follower of Mazdaznan, Itten also ascribed colors with moral and spiritual values: red was love; blue was faith; and violet, the combination of the two colors,

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[17] Leonid Sabaneyev, *Reminiscences about Scriabin* (Moscow: Muzsector Gosizdata, 1925), 48, cf. B.M. Galeyev and I.L. Vanechkina, "Was Scriabin a Synesthete?" *Leonardo* 34 (2001), 358.
[18] ibid, 358.
[19] Elder, *Harmony + Dissent*, 140.
[20] Ibid., 157-158.
[21] Ibid., 158-159.
[22] Faubion Bowers, *Scriabin: a Biography of the Russian Composer, 1871–1915, Vol.2* (Tokyo and Palo Alto, CA: Kodasha International, 1969), 17.

was piety.[23] Hauer suggested the twelve equal-tempered tones were beyond the intuitive pure tones in nature, "the result of a 'spiritualization' of what nature provides — a means of transcending the given realm of coarse matter and attaining the perfect realm of the spiritual."[24] Both Itten and Hauer believed that the proportional division of color and sound may be formed through the principle of physics and perception, but there exists a transcendental world with a capacity to form a more exquisite and stable order beyond the rough spectrum.

Eisenstein was dismissive of Scriabin and Kandinsky's mysticism and spiritualism, the Russian Theosophy and the occult tradition of synaesthesia. When encountering Rosicrucianism during a lecture about "The Problems of Irony" in Minsk in 1920, he was uninterested with discourse that "constantly revolved around divinities, God, and divine revelations," and at the very end, he was being told that 'there is no God for God is He,' and that was something he liked.[25] Though he admired Scriabin's attempt, like Wagner, to "demolish the contradictions between picture and sound, between the visual world and the audible world," he insisted that cinema should operate within the human experience, rather than lead to a generalized mysticism:[26]

> It lies also in the fact that cinema is called upon to function within a human module, within the limits of the human mind and emotions, without going, as Scriabin does, beyond the bounds of man. By this I do not mean into the realms of humanity in general but into cosmos, into super-sensuality and super-consciousness, where it inevitably borders on mysticism and solipsism.[27]

Nevertheless, Eisenstein's audiovisual practice and synthesis of arts in his later life echoed those of the above-noted musicians: like Schönberg's *Klangfarbe*, Eisenstein also regarded color as an "autonomous compositional element" to become the "*leit*-color" in cinematic practice; like Kandinsky, who applied the abstractness of music to a visual abstractness, Eisenstein discovered the objectless color in Kandinsky's music program and implemented symbolic color for cinematic usage; like Scriabin, who intended to combine music, dance, color and even taste, touch and smell into his

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[23] Elder, *Harmony + Dissent*, 158.
[24] Ibid., 159.
[25] Eisenstein, *SWIV*, 78-82.
[26] Eisenstein, *SWII*, 337,
[27] Ibid., 121

last unfinished piece *Mystery*, Eisenstein was inspired by his theory of synaesthesia, and formed his own system of synchronization of the senses.

Along with the transformation of painting and the emergence of cinema, music had its own upheaval. The synchronization of art forms lies not only in the aggregation of art forms, but also between the arts and technology, the aesthetic and the scientific, mysticism and Modernism. The trend has shifted from the obsession of Wagner's *Gesamtkunstwerk* in the nineteenth century to the gradual involvement of scientific objectivity in the materiality of arts, though Wagner's operas were the initial inspiration for many musicians to compose synaesthetic-oriented music. But musicians' definitions and practices of timbre gradually changed to emphasize the importance of subjective perception, which exceeds the scientific outcomes of acoustic experiments and the restrictive divisions of pitch.

The subjective perception of color was historically rooted in Goethe's color theory, which was a reference for most musicians and music theorists from the late nineteenth century to the early twentieth century. For them, it related to the notion of synaesthesia and the Symbolists' correspondence. Goethe's focus on color, as Jonathan Crary expressed in *Techniques of the Observer*, initiated a visual abstraction of subjectivity and autonomy severed from the external referent in the first half of the nineteenth century, becoming the precondition of modernist painting and visual mass culture.[28] This subjective vision is the inseparability of two models presented as "distinct and irreconcilable" — "a physiological observer who will be described in increasing detail by the empirical sciences in the nineteenth century, *and* an observer posited by various 'romanticisms' and early modernisms as the active, autonomous producer of his or her own visual experience."[29] The two irreconcilable models of color are also the paradoxical roots of synaesthesia during this period of time. However, this paradox accompanied a transition from visual proof and evidence validated by empirical science to the exploration of the internal physiological and psychological mechanism of spectators as an impulse of bodily movement as well as a visual experience, such as the affect studied by Luria, Vygotsky and Lewin as discussed in the first chapter.

Timbre, with its symbolic meaning in music and its influence on audience

[28] Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, MA: MIT Press, 1990), 14.
[29] Ibid., 69.

emotion and mood, is one of the resources referred to for its symbolization and abstraction of Eisenstein's visual representation of color in film. This de-materialized and de-objectified color transgresses the spatial boundaries of vision and the limitation of lines and perspectives, and affects the spectators from the exterior visual perception to the interior effect. It is indebted to synaesthesia, despite its occult tradition. The internality of both affect and spirituality drives visual color into a subjectivity of perception, through which the perceived color does not directly access the natural color in the material world. Rather, it is mediated and filtered by human subjectivities.

5.2. The Color–Sound Schema and the Objectless Color

Eisenstein found the ideal synchronization of image and sound in Disney animation, in which the animals' bodies not only metamorphose in accordance with the tempo of the accompanying music, but also imitate the timbre of the instruments, "superimposing the 'drawing' of a melody on top of a graphic drawing".[30] He considered it as the remarkable "intonational gesture" which causes flexible outlines to be interwoven with the music,

> It is in his cows and horses that the line depicting their necks expend and contract. His are the peacocks whose tails wriggle and twist so elastically, in time not only to the rhythm but to the tonal picture of Offenbach's 'Barcarolle.' It is the legs of his Mickey Mouse which shiver in imitation of the timbre of the instrument that is arousing our horror!...The great secret of Disney's power, a power which is inimitable…For only Disney possesses the secret of making the moving flow of a line catch more than rhythm: he can make it catch the tonal progression of a melody.[31]

In Disney animation, the graphic lines interweave with the lines of melodies, but the relation between color and sound has been neglected. Color is an amorphous, extraneous element used in characterization and set designs, but never interacts with melodies and rhythms in a synaesthetic sense, that is, where *visual color plays the same symbolic and emotional function as timbre*. In films, no elastic shapes and lines may be achieved as seen in animation. Therefore, "the problem of true synchronicity of sound and image — in other words the most basic problem of sound-film montage

[30] Robert Robertson, *Eisenstein on the Audiovisual: The Montage of Music, Image and Sound in Cinema* (London: I.B.Tauris, 2009), 169.
[31] Eisenstein, *SWII*, 254-255.

— can only be resolved by color,"

> …So what can be done when you want to achieve that same ideal synchronicity when filming real things? The only available resource is the changing interplay of graphic shapes within the shot and in montage, the contrast of textures, and the play of light on shapes and textures…for the interplay of shapes and texture, and the play of light upon them, are also transition from movement in the crude sense of locomotion to a higher stage of movement: to movement as the oscillation of light particles, with which shapes and surfaces play, as it were, a special form of ping-pong. If we then take one more step into the stage of yet more subtle forms of particle oscillation, we have entered the realm of…color. For the differential oscillation of light particles is also the tonal gamut of difference of color! Only the full gamut of color is capable of combining totally with all the elements of melody, timbre and rhythm of that most perfect form of sound: in a word, music.[32]

This correspondence is not limited to color-and-sound relations, but extends to dance and music. In the color scene in the *Ivan the Terrible*, *Part II* (1958), the accents in music interweave with the accents in dance. Eisenstein also appreciated Prokofiev's association of timbre with "tonal camera angles", stating, "[H]e clothes it in the tonal camera angles of instrumentation, making it sparkle with shifts of timbre, and forces the whole inflexible structure to blossom forth in the emotional fullness of orchestration."[33] In the latter part of this passage, Eisenstein expressed two points of view similar to the theorists and musicians mentioned above: the spectrum ("the full gamut") and the atom in physics ("light particle"). Both light and acoustic phenomena are based on vibration in a different band of physical wavelengths.

However, he refuted a rigid "once-for-all rule," being the absolute correspondence between sound and color, which parallels a timbre or a musical tone with a particular shade of color. In particular, Eisenstein analyzed the yellow color in Kandinsky's musical program on color, "The Yellow Sound" and itemized several uses of yellow in art, literature and religion in which a yellow or gold color could be associated with both positive and negative meanings in concrete situations. He criticized their rigidness in using color in an absolute schema of correspondence by "ascribing such independent and self-sufficient meanings to the color itself and separating the color *from the concrete phenomenon which actually provides it with*

[32] Ibid., 256.
[33] S. M. Eisenstein, *Notes of a Film Director*, trans. X. Danko (London: Lawrance and Wishart, 1959), 163.

the accompanying set of conceptions and associations." [34] Eisenstein preferred Goethe's view of sound and color, as expressed in *Farbenlehre*, namely, that "color and sound do not admit of being directly compared together in any way, but both are referable to universal formula." [35] He similarly commented on Rimbaud and Böcklin's color-alphabet schema mentioned in the last chapter,

> *…we do not submit ourselves to any 'immanent laws' of absolute 'connotations' and relationships between colors and sounds, or to any 'absolute' correspondence between them and specific emotions, but that we prescribe to colors and sounds the task serving the purposes and emotions that we find necessary*.[36]

To differ from the color representation in Technicolor films and the "once-for-all rule" in correspondence, Eisenstein used color, as with music, to synchronize emotion and content in the color sequence of *Ivan the Terrible*, *Part II* (1958), a scene with a mixture of dance, music and color (Figs. 1–5). Red, gold, blue and black proceed, shot by shot, separately presented and devoured by the next color. As he explained to students of film direction concerning the color red,

> Suppose it is a dance scene. At first all the color themes are tied up in a knot. Then the red theme is gradually teased out, then the black, then the blue. What counts is that they are *torn away from their original association with an object*. Suppose that the red them begins with a red sleeve; it is repeated with the red background of candles; when Vladimir Andreyevich goes to his death, the theme is picked up by the red carpet, which is cut up by the set and breaks off at the door. You need to distance yourself from the various red object, take their overall redness and combine the objects according to their common feature. The Tsar's red shirt also works there in its hue in a certain section.[37]

The color red as "*torn away from [its] original association with an object*" was well-represented in one of Henri Matisse's paintings, *The Red Studio* (1911). This painting later inspired Mark Rothko's series that was originally created for the Four Seasons Hotel restaurant, albeit later disavowed. As Matisse said of his own piece, "where I got the color red — to be sure, I just don't know … I find that all these things … only become what they are to me when I see them together with the color red."[38] The

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[34] Eisenstein, *SWII*, 363.
[35] Ibid., 256.
[36] Ibid., 370.
[37] Ibid., 326.
[38] Henri Matisse, "The Red Studio", Museum of Modern Art, accessed March 28, 2016,

red color saturates the furniture in his studio except his own artwork, from the earliest to the most recent. For Matisse, color is "an agent of expression" as the color red exists independently, without attachment to any objects as an attribute, but on the contrary, divides the material space of his studio and his artistic universe.

This division is not a division of perspective, rather it breaks through the lines of perspective to demolish depth, and create a cohesion of foreground and background for a pure red surface. This is a precondition of the haptic affect, as Laura Marks advocated for a multisensory experience. As Joshua Yumibe states, the color is "uncontainable," and through its flatness rather than the depth of perspective, color can "exceed optical vision to make an image tactile and haptical," inviting one "to approach its surface and run one's hand – or one's eye acting as a hand – across the textures of the image."[39]

Henri Matisse
The Red Studio (1911)

Roland Barthes described Eisenstein's images in three stages: the *informative* level as the first meaning, the *obvious* symbolic level as the second meaning, and the *obtuse* level as the third meaning. At the obvious level, Barthes claimed "Eisenstein's 'art' is not polysemous: it chooses meaning, imposes it, hammers it home ... it does not distract but accentuates the meaning … the obvious meaning is always, in Eisenstein, the revolution."[40] Color has been imposed and accentuated to convey obvious meanings, such as the color red in *Ivan the Terrible, Part II* (1958). This use of color echoes Eisenstein's advocacy for the association of color with the shifts of themes and contexts, rather than a rigid one-to-one principle as seen with the color yellow,

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http://www.moma.org/collection/object.php?object_id=78389.
[39] Joshua Yumibe, *Moving Color: Early Film, Mass Culture, Modernism* (New Brunswick, NJ: Rutgers University Press, 2012), 9-10.
[40] Roland Barthes, *Image-Music-Text*, ed. and trans. Stephen Heath (London: Fontana Press, 1977), 56.

mentioned above. These referents, expressed in Barthes' terms as "the signified," are still obvious as the second meaning, but are open to polysemous meanings. Red appears in the color scene of *Ivan the Terrible* as the flame of a candle, a shirt, a carpet, and so on. Eisenstein suggested red should be perceived as an ever-changing motif according to the developing drama. The color red represents the concrete object, the blood, but also symbolizes the non-object meanings associated with blood — omen or consanguinity for the relative drama and theme. Eisenstein explained the transition from kinship to murder as follows:

> The red supplies an ominous theme and acts as blood. There is a retort, mentioning blood: 'You and the Tsar are of the same blood: hold this sacred.' Old Basmanov is strongly opposed to Ivan's patronage of Vladimir Andreyevich, and allows himself to intervene in the Tsar's conversation with him. This earns Tsar's reproof. And an argument begins, in which Basmanov tells the Tsar that it was the Tsar himself who taught him how to 'uproot your own saplings,' to which Ivan replies that Vladimir is the Tsar's blood, and that does not concern him: 'You and the Tsar are of the same blood: hold this sacred.' Blood acts as a sign of kinship. Basmanov replies, 'But are you and I not bound by the – split – blood of another?' At these words, there is a red glow and the faces shine red. This is the first time that red appears associated with the theme of spilt blood. Thus the theme has been activated in the necessary direction.[41]

It is worthy of note that *Barthes emphasized the images of photographic stillness isolated from narratives, while for Eisenstein, the meaning stems from juxtaposition and conflict.* Colors having polysemous meanings are created through the images of a sequence. The same principle applies to the third meaning, the obtuse meaning, which "carries a certain emotion … it is an emotion which simply designates what one loves, what one wants to defend: an emotion-value, an evaluation."[42] Barthes quoted Eisenstein's speech, which suggested color in film should not correspond to "natural coloration", and this abstract color carries an intensive ecstasy and affect through the montage of colors in Eisenstein's film.[43]

Before the color scene, the terror and conspiracy of the boyar is suffused in the strong contrast of light and shadow, black and white. After the colored feast scene, when the murder in the cathedral occurs, the film leaps back to black-and-white tone. In the final episode of this film, the color scene returns with a red tone for the

[41] Eisenstein, *SWII*, 327.
[42] Ibid., 59.
[43] Ibid., 61-62.

banquet during the Tsar's speech. Music also assists the burst of color, as Eisenstein stated in the following quotation:

> It happens immediately, in an explosion. The tempo are reduced as much as possible, reduced to a not very intense scene when Malyuta invites Vladimir to the feast. Then there is an explosion of color. And since there is music, there is strong rhythmic impact. If there were no color or music, we would still have shown the first episode in grey, and the second in black and white. There is no difference in principle as regards the rhythmic schema that was devised. You merely have a much greater potential for expressing it. In one case, you could supply this in a brief montage. Here you can do so through music. Instead of black and white, you have a chance to use different colors.[44]

The scenic shifts between black-and-white and color create the effect of "*coup de théâtre*,"[45] "an explosion," calling for the attention of spectators. In Eisenstein's view, black and white is not monotonous color, but a spectrum of various shades of grey, which divides the space in the image, creates depth in the field of vision and functions as a stimulus of emotion, contributing to the theme and plot. The color scene in this film, on the other hand, also calls attention to the use of color in black-and-white film. The shift between black-and-white and color scenes serves the purpose of affective moment, to "participate in the making of a film as elements of dramatic action."[46] That is Eisenstein's central idea of "pathos" and "ecstasy", to make the spectator leap out of oneself: "To be beside oneself is unavoidably also a transition to something else, to something different in quality, to something opposite to what preceded it."[47] Barthes' third meaning has been considered as his own transition from semiology to phenomenology, an emergence of individual feelings and perceptive experience not of a given cultural context. "[A] more associative affective response" is elicited toward images, similar to Benjamin's aura.[48]

Eisenstein believed that the cinematic image of colors does not simply display the filmed objects and their hue. In cinema, the invisibility of visual color is similar to the invisible timbre beyond the informative level. This synaesthesia in cinema is not a visual color stimulating an acoustic experience, but an emphasis on the

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[44] Eisenstein, *SWIII*, 327.
[45] Robertson, *Eisenstein on the Audiovisual*, 182.
[46] Ibid., 183.
[47] Herbert Eagle, introduction to *Nonindifferent Nature*, by S.M. Eisenstein, trans. Herbert Marshall (Cambridge: Cambridge University Press, 1987), x.
[48] Kathrin Yacavone, *Benjamin, Barthes and the Singularity of Photography* (New York: Continuum, 2012), 142.

symbolic and affective function of timbre. Robert Robertson thinks that Eisenstein has "developed the color/sound type of synaesthesia into a *conceptual* synaesthesia, where the involuntary and unconscious phenomenon becomes a deliberate audiovisual technique, used to express a complex combination of emotion and idea."[49] Eisenstein also utilized musical terms and notions with visual images through leitmotif, which has been applied into vision as color leitmotif.

5.3. Color Leitmotif in *Ivan the Terrible, Part II* and the Unfinished Pushkin Project (*The Love of a Poet*)

At the same time as the German-Soviet Non-Aggression Pact was signed in August 1939, Eisenstein was assigned to direct *Die Walküre* at the Moscow Bolshoi Theatre. This experience impressed upon Eisenstein not only the idea of *Gesamtkunstwerk*, which enhanced his interest in the organic synthesis of arts, but also Wagner's use of leitmotif, which inspired him to transform it from a musical strategy of composition into a use of color in film. In a lecture to a student of film direction, in response to a question concerning leitmotif, he expressed his opinions on the issue of leitmotif and his experience in directing *Die Walküre*:

> Do you know what a leitmotif is? When a sword is mentioned in Wagner's *Die Walküre*, the theme of sword is played in the music. There is a part in Act One where a sword is struck into a tree, and this sword must be pulled out at the end. And just as the hero approaches the sward, the orchestra starts playing particular elements of the theme of the sword. And at the end, when he pulls this sword out, the theme is played in its entirety. There is also a leitmotif connected with the theme of Wotan and Siegmund. When Wotan grieves over his abandonment by his father, his theme begins. The music is 'affixed' to each element. Wagner does this magnificently, but in some cases this taken to absurd lengths. This the expressive, characteristic theme. For color resolutions, it would be too primitive. Something along these lines was done in the Maly Theatre. There the young Basmanov wore blue, or white Malyuta red – that is each had his own color. This is a particularly primitive device.[50]

The most identifiable forms of leitmotif with a signature tune are fixed to one character or an object, famously Siegfried, Wotan and the Sword, and act as a reminder of the appearance of a specific character and an object, such as the passage above. Eisenstein suggested leitmotif should be represented not only by the character,

[49] Robertson, *Eisenstein on the Audiovisual*, 156.
[50] Eisenstein, *SWIII*, 328.

but also a theme or action. However, Eisenstein thus oversimplified Wagner's leitmotif as being limited only to characters, since the connections between leitmotif and theme or action in Wagner's opera have been also identified and recognized.[51]

The experience of directing Wagner's opera inspired Eisenstein's consideration of a certain color as a leitmotif to accompany a developing theme or action. This theme or action may occur in relation to any character, or a character of changing color alongside a change in the theme. For example, the color red, as discussed above, provides an ominous theme to foreshadow the subsequent conspiracy and murder. But red is not anchored to Ivan in order to manifest his character. Rather, it scatters to various elements such as on dancers' clothes, in flames and on carpet. As Eisenstein explained,

> What mattered to me was not that Ivan had a red or a black resolution but that at a particular moment in the drama's progression *Ivan the Terrible* should be seen in a corresponding color resolution. At first he wears a red shirt. But by the time the drama has moved to the next stage, Ivan is in another color - black. The moments on which the color falls are important. At first Vladimir Andreyevich is in pink and gold. When the drama starts, he begins to cross over to gold. It is not the case that each has his own color character. When theme passes through a specific character, he appears in the correct color resolution. This is the thematic line of the process.[52]

The color movement in *Ivan the Terrible*, as noted in his letter to Lev Kuleshov, "ceases to be mere progression of colors, acquires an imagist significance and takes upon itself the task of expressing emotional shades."[53] In the film, the successive appearance of colors from blue, red and gold, are finally all swallowed by black. This corresponds with the progression of themes and emotions. Eisenstein explained how the shifts of color were used on Ivan and Vladimir in the advancing narrative of *Ivan the Terrible, Part II* (1958):

> The theme of black is the most interesting in this respect. It is here associated with death, appearing at first only in minor details, almost dividing the red from the gold. But what happens just before death steals up on Vladimir

[51] It is controversial about Leitmotif since Wagner himself never used the word to describe a certain piece of melody or designated a melody with a symbolic meaning. Hans von Wolzogen is considered to have overly interpreted some themes in Wager's works, but to identify the Leitmotif in Wagner's music continues to appear in Wagnerian critics' works. See Robert Donington: *Wagner's 'Ring' and its Symbols: the Music and the Myth* (London: Faber and Faber, 1963).
[52] Eisenstein, *SWIII*, 328.
[53] Eisenstein, *Notes of a Film Director*, 128.

> Andreyevich? Here there is already a premonition of death. Before dawn, people go to pray at matins. They wear their ceremonial gold robes. Gradually monks' habits move towards the gold, and the gold is swallowed up by the black.
>
> Vladimir Andreyevich is dressed in royal robes. Up to a certain point, the Tsar wears a red shirt; thereafter, a black fur coat. Then its color changes, to a monk' habit. The next episode, filmed in black and white, continues the 'black theme' by means of the overall expressiveness. Black and red are interwoven. The gold vanishes, and the blue vault of the sky with gold appears, as a symbol of the purpose behind everything that is happening, as the decisive atmosphere that stands higher than what has to be done.[54]

Another progressive use of color is a set of shot–reverse-shot of a scene where Vladimir, it in the Tsar's clothes, walks into the cathedral (Figs. 5–10). As a break with the previous gold and red tone, the image turns almost totally black, and then the light gradually returns with a blue color cast upon Vladimir's face. The reverse shot shows someone stealthily crossing the cathedral in a black-and-white image, and then the shot shifts back as a close-up of Vladimir with a color change from blue to gold. Finally, at Ivan's urging, Vladimir enters the cathedral in the black-and-white world. This process applies a change of colors to show the variation of emotions and omens, and the division of safety and danger: black-and-white and blue represent the danger, a conspiracy of boyars and a trap set by Ivan, and gold is the final warmth from the previous scene, albeit immersed in black.

The color scene in *Ivan the Terrible, Part II* (1958) was the first experiment of Eisenstein's color theory and aesthetics, tentatively extended into the production of *Ivan the Terrible, Part III*, which was lost and presumed destroyed. However, Eisenstein's color theories have emerged in the unfinished Pushkin project, *The Love of a Poet*, an autobiography of his passionate love affairs in Odessa until the time of his death in a duel by Black Creek. Eisenstein finished the storyboard on March 4, 1940, and asked Prokofiev to compose the musical score, but was unable to complete the film in his lifetime.

Nevertheless, the remaining script and storyboard reflected Eisenstein's idea of color leitmotif and were prepared to become a complete feature film. The story was intended to narrate Pushkin's life through a "gradual loss of color" indicating the progress from life to death.[55] Eisenstein was fascinated by the idea of "gradual loss

[54] Eisenstein, *SWIII*, 326.
[55] Lövgren, "Eisenstein's Pushkin Project," 129.

of color" from the reduction of colors to white, grey and black as "a cyclical pattern" in Gogol's works, which was described in Andrei Bely's monograph, *Gogol's Mastery*,

> A *biography* of Pushkin in color would result in the same vivid color dramaturgy, the same motion of a color spectrum in the key of the poet's developing life story as the one displayed in Gogol's output – not in his biography, but in the sequence of his works. [56]

The most emphasized color in the Pushkin project is white, having the opposite meaning than typically seen in the Western tradition. As Eisenstein stated, [H]ow nice that evil is not black but white."[57] In the article "On Color," written in 1937, Eisenstein questioned the stereotypical symbolic association of black and white:

> The black and white color in the film did not come together as a synthesis at all but were more sharply separated: furthermore, they were fixed to the moral categories of 'good' and 'evil,' which the excessively generalized characteristics of the pro- and anti-Soviet representatives of class forces in the countryside had grown into…Black was the night over *Bezhin Meadow* and like a white, other-worldly spectre the injured Stepok wandered through it to its death.[58]

This counter-use of white does not alter Pushkin's funereal color in the project. As is the funeral tradition in the West, Pushkin was dressed in black, rested in a black coffin, and was visited by Karamzina, clothed entirely in black. Black, indicating the end of Pushkin's life, is the end of all colors without the cultural label of morality. In contrast with black, white as danger and evil persistently appears throughout the entire film as representative of Pushkin's inexorable fate. In the early portion of the film plan, a Gypsy fortune-teller warns Pushkin to "beware of a man in white," which gives rise to superstitious and fateful "whiteness" as the central motif:

> The prediction: 'Beware of a man in white.' Pushkin laughs. In this series the motif is established. The motif is clothed in the words: 'Old husband, terrible husband….' He rides across the steppe. (His white shirt is flying open. Close-fitting black pants.)[59]

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[56] Ibid., 129.
[57] Ibid., 129.
[58] Eisenstein, *SWII*, 266.
[59] Lövgren, "Eisenstein's Pushkin Project", 130.

The meticulous use of color in *mise-en-décor* and *mise-en-costume* was emphasized in Eisenstein's explanation above and may also be found in the color scene of *Ivan the Terrible, Part II* (1958). Eisenstein emphasized the color of Pushkin's shirt and pants in a black and white contrast. In the theater scene in Petersburg, all those having roles of danger and evil are dressed in white: The Tsar-Nicholas I, Boris Godunov, Natalia and the ballerina Istomina in Pushkin's *Eugene Onegin*. For visual effect, white stands in striking contrast to red, such as "Boris Godunov dressed in white on the red carpets in the cathedral, and Nicholas I in the theatre in a similar color combination, or Natalia's red muff and the red reflection striking her white hands through the red stained-glass window at Pushkin's home."[60] White as color leitmotif, like musical leitmotif, appears impossible to ignore, with these images appearing from time to time as a constant reminder.

Eisenstein portrayed Natalia as "an instrument of death," "a means of killing the poet," a symbol of "whiteness" and the color of evil and destruction.[61] Natalia is the *femme fatale*, but this represents another reversed use of color and its stereotype compared to later traditional images of the *femme fatale*. For example, in *The Bride Wore Black* (*La Mariée était en noir*, François Truffaut, 1968), Jeanne Moreau dressed herself all in black as an image of revenge and seduction, in contrast with her white wedding dress. She finally drove to death the five men whom had killed her husband on her wedding day. Most *femmes fatales* appear as alluring and mysterious women in a dark atmosphere, leading the male protagonists into a dangerous or deadly situation. But Natalia is "mindless marble statue" who lacks the motivation and willingness to bewilder and kill the poet.[62] She looks as innocent as her pale violet and white dress, yet unconsciously becomes the fatal factor. Eisenstein intentionally made all of the roles into flat symbols of white, red and black with corresponding implications of danger, guilt and goodness. Nicholas I, Boris and Natalia all contribute to the same requirement for a certain theme, rather than present their respective characteristics.

Eisenstein illustrated his color theories with his film projects: manifesting the inner drama rather than the duplication of colors perceived in daily life. Color leitmotif functions with the same symbolic meaning as Wagner's musical leitmotif,

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[60] Ibid, 132.
[61] ibid, 133, 137.
[62] Ibid., 137.

yet is not limited to a rigid synaesthetic relation. Red and black in *Ivan the Terrible, Part II* (1958) as well as red and white in the Pushkin project are omens of danger, wickedness, plotting and death. These are not linked to a specific character, but perform as the dramaturgic means to advance the theme, identified in Kristin Thompson's analysis of *Ivan the Terrible*, as full of "floating motif."[63] Compared to Eisenstein's first non-black-and-white color use in *The Battleship Potemkin* (1925), which was a red flag, color was no longer simply ascribed to a specific symbolic object having a revolutionary meaning, as Roland Barthes observed, but was separable from a fixed representational purpose.

5.4. Color, Music and Dance as the Lines of Polyphonic Structure

The correspondence between music and color can stimulate an action or a theme in a dramaturgic moment. In the color scene of *Ivan the Terrible, Part II* (1958), the color blue glimmers in the early part of the scene when Basmanov sings a bloodthirsty, yet melodic song about killing the boyars with axes (Fig.11), as well as when Ivan sees Vladimir wearing golden robes and sitting on the throne (Fig.12). The melody of Basmanov's song becomes the musical leitmotif of the thematic elements of blood, danger and conspiracy, and later repetitively appears with a dark and low timbre, accompanying Vladimir close to the trap and to death.

Music and color not only correspond to each other for harmonious effect, but also for conflict and contradiction. Gold is originally associated with the imperial and holy power, and the hilarious festival theme of the previous dance scene. Eisenstein interpreted Vladimir in a royal raiment as "mockingly," but "it is not the color that provides the mockery, but the music," which, within the theme of this argument, separates the gold color from the previous theme of the festival in gold:

> The theme of the argument proceeds utterly magnificently, like a war theme, an *oprichnik* theme. Then it undergoes an ironic change; that is, the musical imagery is repeated in a mocking resolution: the fourth couplet has no words and the Russian theme is resolved with three saxophones. Thus the gold is stripped off musically, not visually. The stress is placed on the area of expressiveness. Sometimes you can help with speech, and sometimes with music.[64]

[63] Kirstin Thompson, *Eisenstein's "Ivan the Terrible": A Neoformalist Analysis* (Princeton: Princeton University Press, 1981), particularly see Chapter four, "The Floating Motif," 158-172.
[64] Eisenstein, *SWIII*, 327.

Eisenstein designated this concordance between music and color as "chromophonic," a typical harmony or dissonance in the vertical dimension.[65] However, color itself also moves through the shots horizontally, and within the colors of gold, red, black and blue. The lines of color proceed as independent themes just as the lines of voice in music and permeate into each other, which results in a multi-colored polyphony. In a lecture to his student directors in 1947, Eisenstein explained the following:

> A golden line is swallowed up by a black one. Parallel to this, a red line expands and a blue one starts somewhere. This is a typical polyphony, with many voices. As regards the color tonality of individual frames, each time it is connected to the principle of a chord. Take shot 76 in Ivan, for example; the gold has been practically devoured: the black has grown, and the blue has only just started and the frame must be balanced internally.[66]

In his memoir, Eisenstein considered his own drawing as "the trace of a dance," an affirmation of adding dance as a line of movement.[67] Kandinsky also demonstrated that the dance was the further development of Wagner's *Gesamtkunstwerk*, stating, "the movement of line directs the movement of human body, which also becomes into line."[68] He had a great admiration for Gret Palucca, the expressive dancer of her time, and translated her movement trace into lines of drawing. Bodily movement as another line interwoven into a polyphonic structure is one of the elements, such as color and music, contributing to the color sequence of *Ivan the Terrible*.

In the dance scene, dance first arises with a group of dancers dressed in gold and red, and then the dancers dressed in black enter from the left background to the right foreground, followed by the gold-dressed dancers swirling from right to left. Eisenstein described this sequence as the "almost pure abstract spots. Each frame has been made almost black and white. You see the turn of gold brocade on the sleeve. The next turn is the red sleeve, the next is a hop. A splash of color, a dance of spots."[69] It manifests an idea of linear metamorphoses represented by music, dance, and color through montage. Colors of shots establish the links with the movements of the human body and the movements of music. For example, the black-clad dancers making the sound of a foot striking the floor are associated with the accentuated

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[65] Eisenstein, *SWII*, 337.
[66] Eisenstein, *SWIII*, 333.
[67] Eisenstein, *SWIV*, 583.
[68] Nicoletta Misler, "A Chorological Laboratory," *Experiment* 2 (1996), 170, 172.
[69] Eisenstein, *SWIII*, 326.

beats, but for the red- and gold-clad dancers, the dances flow lightly with staccato beats.

This scene is accompanied by music in 2/4 time beat, as reflected in folk dance with the stressed beat (a lifting hop and a stronger foot strike) and the unstressed beat (a diminished hop and a lighter foot strike). The lengths of shots also accord with the lengths of the phrase of music. Although the beat makes it simple to perform a dance, Prokofiev composed the melody in an atonal manner. The absence of a root tone seems to drive the music and dance endlessly, as Ivan described it, becoming "faster, faster" until the exhaustion of energy and life. This dance music reoccurs in the latter part of this scene with a procession of black swans in the plates. Although the music is normally presented in a festival and hilarious circumstances, the colors of black, gold and red, and the faster tempo of this music, all elicit intensity when the characters approach danger as a leap from the former black-and-white scenes.

The bodily movement of this dance echoes the Spinoza-Deleuzian kinetic body in its relation of motion and speed of different velocities. In this sense, the body is an infinity detached from the form, number and figure as well as its biological attributes, and the social and culture sphere as the means of expression. Spinoza regarded it as "the simplest body." Deleuze further developed the understanding of body as "a becoming, a series of processes, movements, intensities and flows."[70] Body is considered to be flowing particles, such as sound and color, in their minimal elements. Its movement as the sound particles in music consists of the deceleration and acceleration of particles, and that's how Deleuze defined body — on "a plane of immanence."[71] Quoted by Deleuze, Uexküll described the *Ethics* as a symphony structure of the successive and the simultaneous; the movement of the body resembles the melodic line of the longitudal movement, intersecting with the other body, for instance, the bodies of spectators in cinema, affected or affecting the latitude.[72] In the first chapter, the expressive movement was discussed as Eisenstein's first attempt to theorize bodily affective function for the purposes of acting and theatre. In *Ivan the Terrible*, color, along with the affect of music and dance, again presents itself in a dance scene with its affective function, and this affect is not a

[70] Mariam Fraser and Monica Greco, "What is a Body?" in *The Body: A Reader*, ed. Marian Fraser and Monica Greco (Oxon and New York: Routledge, 2005), 45.
[71] Gilles Deleuze, "Ethology: Spinoza and Us," trans. Robert Hurley, in *The Body: A Reader*, edited and introduced by Marian Fraser and Monica Greco (Oxon and New York: Routledge, 2005), 59.
[72] Ibid., 60-61.

cluster of individual senses, but an integrated result of all the sensorial modalities.

Body, music and color may all be considered as particles in a physical or metaphysical sense. Color and music are constituted by floating particles in the principles of physics, and the body, within Deleuzian-Spinoza philosophy, has lost its form or meaning, being *a mere object of movement like an acoustic or light particle*. If one were to argue that objectless color is the "crystallization of colored being visibility," then this body is the *crystallization of bodily movement* because both have been released from social and cultural context, but remain *a pure existence of being perceived*. In the dimension of time, they become various lines that interweave and permeate each other to serve the polyphonic texture in music. Theme, emotion and drama are expressed in the movement of body, music and color, which with their own means and patterns, through correspondence or contrast, respectively chain the dramaturgic episodes into an audiovisual completeness.

Figs. 1–5

Figs. 6–10

Fig.11 Fig.12

Ivan the Terrible, Part II (*Ivan Grozniy*, Sergei M. Eisenstein, 1958)

Summary

The studies of color–sound correspondence from the late nineteenth to the early twentieth century attempted to establish a mathematical and scientific reasoning, yet also delved into a realm of super-consciousness by means of solipsistic thought. Eisenstein's color theory stemmed from this paradox, yet avoided a generalized mysticism. His principle was not confined to a strict one-to-one representation, but rather remained open to various possibilities. Eisenstein proposed a symbolic meaning of color in cinema rather than ornamentation, just as timbre described music using a symbolic association. Eisenstein also applied Wagner's musical leitmotif into color leitmotif, symbolizing the emotion, action and developing themes embedded in his film works. The polyphonic structure as a musical term has also been

conceptualized as an aesthetical episteme for the elements of film as well as a means to propel or accentuate affect in spectators as one of the intermedial and intermodal practices.

Color is detached from objects, and in Barthes' terms, becomes the obtuse meaning of affect. The scenic shifts in *Ivan the Terrible, Part II* (1958) create ecstasy, "the leap to a new quality," through montage, and convey pathos to the audience. As Merleau-Ponty stated, the visible is "a strait between exterior and interior." However, through its visibility, vision moves towards the internality of human beings and touches the "trembling in human's body," which challenges the hierarchy of the senses that identifies sight as inferior to sound. Eisenstein differed from Scriabin in his belief that the correspondence between color and sound cannot be detached from human perception and emotion. This intense experience proposes "a status prior to thinking" and expresses the semiotic "analogue of the statue" of the formless and objectless, and becomes the psychophysical basis of the previous themes: attraction, metamorphoses and animism.[73]

[73] Eagle, introduction, xiv.

Chapter 6: The Synchronicity of Senses and the Synthesis of the Dialectic Principle

> What wonderful sketches those montage lists were! Like thought, they would sometimes proceed with visual images. With sound. Synchronized or non-synchronized. Then as sounds. Formless. Or with sound-images: with objectively representational sounds….With a black screen, a rushing imageless visuality…With zigzags of aimless shapes, whirling along with these in synchronization. Then racing visual images over complete silence. The linked with polyphonic sounds. Then polyphonic images. Then both at once.
>
> — Sergei M. Eisenstein, "A Course in Treatment"

The previous chapter discussed the polyphonic structure of montage, which involves color, music and dance as the individual lines of physical movement and affective influences. Montage, from horizontal movement to vertical movement, is a process of multiplicity in Eisenstein's montage theory from the single and multiple set-up to sound cinema. As well, it extends the temporality of cinema "in the fourth dimension" to a consideration of spatiality beyond the screen.

This evolution has been reflected in his articles from 1937 to 1940, entitled "Montage 1937," "Montage 1938" and "Montage 1939" (Vertical Montage). "Montage 1937" outlines the general compositional elements in a single set-up image. "Montage 1938" covers montage theory in the silent era from the single set-up described in "Montage 1937" to sequential movement. "Montage 1939" adds music to correspond with the all the elements in a single shot and montage. Both "Montage 1937" and "Montage 1939" call attention to the simultaneity in horizontal movement. This chapter will thus illustrate the "invisible line" — the path of eye movement as the directional instruction of seeing that is concealed in a single shot or image, which later integrates acoustic lines to generate a complete perception and a vertical montage. This was theorized by Eisenstein as the aggregation of the invisible movement of lines embedded in a composition ranging from intra-shot, inter-shot and image–music polyphonic structure.

David Bordwell, in his article entitled "Eisenstein's Epistemological Shift,"

identifies two contrasting periods in Eisenstein's aesthetic theories: The earlier films and writings based on his dialectical model were rooted in reflexology, and the latter were inclined toward organic unity instead of dialectics.[1] There may exist a shift of philosophical and aesthetic emphasis within the course of Eisenstein's theoretical and cinematic life. This shift partly resulted from Eisenstein's reflection on and reaction to the technical movement in film history — the introduction of sound and music. The sound–image relation was taken into consideration in the silent era when sound was not synchronized or composed for the purpose of musical accompaniment during the projection. Respecting a precise compatibility with montage, the music did not actually attract Eisenstein's attention in the silent era. The novelty of synchronized music thus lies in its reception by spectators in their general perception of both image and sound.

At the conclusion of this dissertation, the overtonal montage will be emphasized, which ties the two phrases identified by Bordwell together. Overtonal montage is the musical notion analogized by Eisenstein using the montage method, first explained in "The Fourth Dimension in Cinema" (1929) and reaffirmed in the first part of "Vertical Montage" (1940) — "Synchronization of Senses." the inherent synchronicity of music and image in the silent era as the foundation for the sound cinema. Instead of vertical montage, with its complicated structure and chronological order, this author suggests that overtonal montage may represent the theoretical complexity of the combination of mental and sensual activities of cinema.

Since the late 1930s, overtonal montage is a turning point from purely conflict as affect and attraction in "The Montage of Attraction" (1923) to the organic unity and inner harmony of his aesthetic appreciation in vertical montage. Because of its transition from the dialectic horizontal montage to synchronized vertical montage, *overtonal montage includes the synchronicity of both the senses and dialectic principles*. Eisenstein's theory evolved into a consideration of multisensorial reception of film through the "feel," the off-screen mixture of the senses. The dialectic principle functions as *a metaphysical movement of thought and senses*,

[1] David Bordwell, "Eisenstein's Epistemological Shift," *Screen* 15 (1974–75), 29–46.

indicating a combination of Marxist social conflicts in content and the contrapuntal relation between image and music.

6.1. The Path of Eye Movement as the Affective Vision in the Single Set-up

As mentioned in the fourth chapter, Eisenstein suggested that the senses were non-hierarchical in their overall perception of cinema. This is the method of perceiving polyphonic structure in the vertical montage, "summarizing all its separate elements into a *general perception of the sequence.*"[2] The correspondence between image and sound is questioned by Eisenstein himself, who pondered the simultaneity of image. That is, all the elements appear in space concurrently, or as Stanley Cavell expressed it, "a total thereness." Meanwhile, music is sequentially performed in time and from left to right in space.[3] Eisenstein considered a shot as a "noisy" and "cluttered" "ensemble" that needs to be clarified.[4]

Eisenstein first discussed the composition of a single montage shot in "Montage 1937." The composition is divided into two aspects: the camera-angle and the framing, assigned into *mise en scène* and *mise en cadre*, respectively.[5] In his later article, "On the Structure of Things," Eisenstein further answered the question of the manner in which the criteria of *mise en scène* and *mise en cadre* achieve the organic unity of works corresponding to "the law of *the structure of organic phenomena of nature*."[6] The golden section is one of the criteria applied to the proportional composition of an image as "the principle of the unity and inseparability of the whole and of all its merging parts."[7] Eisenstein cited V.I. Surikov's "The Exile of Boyarina Morozova" as an example, which may be divided into lines by the proportion of golden sections, attracting maximum attention.[8] This golden section causes the most

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[2] Eisenstein, *SWII*, 332.
[3] Stanley Cavell, *The World Viewed: Reflections on the Ontology of Film* (Enlarged Edition) (Cambridge, Massachusetts: Harvard University Press, 1979), 109.
[4] Eisenstein, *SWII*, 11.
[5] *Mise en scène* as a grand and vague term defined by Eisenstein, is to choose a plane or angle of a frame as the first "graphic projection of the character of the action," and *mise en cadre* is to select or distinguish the character from its surrounding, See *SWII*, 15.
[6] Eisenstein, *Nonindifferent Nature*, 11.
[7] Ibid., 16.
[8] Ibid., 24.

attention fall on the open mouth of Boyarina Morozova. While her voice is absent, the pathos of beholders causes the expected words to be "bursting from her lips."[9]

This purposeful composition to guide the viewer's attention was also discussed in another of Eisenstein's articles, "Yermolova", in 1937, in which he described the eye movement of the spectator as occurring in a 180-degree arc, running from the overhead to the base of Valentin Serov's portrait of a Russian actress of theatre, Maria Yermolova. Imagine a spectator's viewing position at the four successive points, which create "a reciprocal interplay" occurring "between the admiration of the enthusiastic spectator in front of the picture and the inspired actress on the canvas."[10]

V.I. Surikov, "The Exile of Boyarina Morozova" (1887)

This reciprocal relation between image and spectator can not only be traced from the principle of the golden section, but also the narrative path in Renaissance paintings, exemplified by Dirk Bouts' *The Dream of Elijah in the Wilderness* (1464–1468) and Domenico Ghirlandaio's *Adoration of the Shepherds* (1485). Both entail "*a literal depiction of a path*" running through the foreground and background, "which the spectator was meant to see in the desired sequence … located at the appropriate points along a path painted for that purpose."[11] This actual path diminishes on the

[9] Ibid., 24.
[10] Eisenstein, *SWII*, 89-90.
[11] Ibid., 387.

canvas and becomes the path of the eye, which transforms from the sphere of visualized depiction and narrative purpose into the sphere of invisible composition. Like the division of the golden section in *The Exile of Boyarina Morozova*, the path becomes the artist's compositional strategy of attracting and directing the beholders' attention. Eye movement is the estimated psychological connection between the viewing subject and the viewed object.

In Rudolf Arnheim's Gestalt psychology, it is not sufficient to describe this tendency of movement in immobile objects by physical "movement" or "motion," but should be called "dynamics," as indicated in a chapter title of Arnheim's *Art and Visual Perception: a Psychology of Creative Eye*. Quoting T.S. Eliot, he notes that a Chinese jar "moves perpetually in its stillness."[12] This feeling of movement of the immobile in the philosophy and psychology of that time was also explained by Associationists in the 1920s as the reflection of artist's "past acquaintance with things of actual locomotion" and "his own body kinesthetic reactions."[13]

Arnheim was skeptical of the two reasons. First, the Associationists stressed the memory of "the laws of space, time, and causality which relate to individual percepts."[14] They judged the dynamism in the still images by the traces and location of moving objects in previous visual experiences.[15] This idea was illustrated by the overlapping contours of objects and bodies in Futurist paintings. However, the vague shape, slope direction and *chiaroscuro* in paintings described movement, not the moving objects or movements themselves. For Arnheim, the perception of dynamism is not a projection of the previous experience of movement, but a direct, independent viewing activity of the objects. The second reason seems to observe affect as the inherent mechanism for the feeling of dynamism, but Arnheim affirmed that affect is not the reason for perceiving dynamism through sight, because the contraction of muscles and joints does not cause the brain to perceive it through sensory perception,

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[12] Rudolf Arnheim, *Art and Visual Perception: a Psychology of Creative Eye* (Berkeley, Los Angeles and London: University of California Press, 1974), 413.
[13] Ibid., 413.
[14] Dudley Andrew, *The Major Film Theories: An Introduction* (Oxford: Oxford University Press, 1976), 55.
[15] Arnheim, *Art and Visual Perception*, 413.

but only as the result of physical forces in the body. If the affective feeling in the brain is stimulated through sight rather than through touch, then at the next occurrence, why not ask if *visual perception is also affective as it perceives color and light*?[16]

Dudley Andrew considers Eisenstein's montage theory as sharing a similarity with the Associationists, since both "broke the cognitive process down into sequences of individual imagistic elements related not by syntax as language, but by sheer juxtaposition."[17] This could be an explanation for intellectual montage, which is based on previous knowledge and a system of symbolization. But in his analysis of single set-up in cinema, like Arnheim, Eisenstein advocated affective vision in the tension of the open mouth of Boyarina Morozova and in the dynamism of the spectator's shifts of viewpoint on the portrait of Yermolova.

Dirk Bouts, *The Dream of Elijah in the Wilderness* (1464–1468)

Domenico Ghirlandaio, *Adoration of the Shepherds* (1485)

Dynamism in Modernist paintings was discussed in the first chapter: dynamism develops into a progressive abstraction of figure and contour to describe motion and movement. However, for Eisenstein, neither movement nor dynamism, as Arnheim had expressed, must be described by duplicating the visual memory of moving objects, but exists in the actual, present viewing the contour of the object as

[16] Ibid., 413.
[17] Andrew, *The Major Film Theories*, 55.

perceived by the eye. Nature, which is indifferent, endows the viewed objects with its affective principle, like the golden section. Eisenstein's affect theory later extended from the early bodily theatrical movement to a visual affect that receives the external stimulus and works on the spectator's or beholder's brain. This external stimulus is no longer a moving actor on the stage, but a color or a still object.

6.2. The Inner Synchronicity of Linear Movement in Vertical Montage

In an orchestra, each instrument plays one horizontal movement of music, and the interaction and permeation among various lines of melodies create the polyphonic structure with "a complex harmonic movement of the orchestra as a whole."[18] Similarly, the polyphonic structure in vertical montage also requires "an overall perception of a sequence" to summarize all the separated elements in both music and image within a certain unit, like the *partitura* for the whole orchestra dispersing vertically.[19] Eisenstein defined the vertical montage as the following:

> The overall procession of the montage advanced uninterrupted, weaving all these diverse themes and motifs into a single, cumulative movement. Furthermore, apart from the *general direction* of that movement as a whole, each montage sequence also took strict account of all the vagaries of movement within *each separate motif*.[20]

Eisenstein divided the vertical montage into two steps: various imagistic motifs in silent films, and the correspondence between image and sound in sound films. Regarding silent film, he enriched the idea of *image in total* as the aggregation of factors, such as lighting, movement and costume, from the perspective of their own linear movement through successive sequences. Like the polyphonic texture in music, where each vocal score has its own compositional progression, they simultaneously correspond with each other and become an "overall 'imagistic' resonance of both visual depiction and music."[21] Precisely this phenomenon was illustrated in the fifth chapter by the color scene in *Ivan the Terrible, Part II* (1958), in which lines of color,

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[18] Eisenstein, *SWII*, 330.
[19] Ibid., 332.
[20] Ibid., 331
[21] Ibid., 332.

music and dance perform in a polyphonic structure.

This final chapter further emphasizes that the polyphonic structure of vertical montage stems from linear eye movement in the single shot, as discussed above, to achieve *a synthesis of movement, a combination of the dynamism in the stillness and the physical movement of montage and music*. In the correspondence between image and music, Eisenstein suggested an inner synchronicity between image and music in the fourth dimension: the inherent perception of linear movement. To correspond with the invisible, formless sound, without the aid of metamorphosed lines as appear in animation, the visual images proceed into *the internalization of linearity.* This represents a transition from the visually identifiable movement, as is the path in the Renaissance paintings, to the inner, less immediate movement or dynamism. This inner synchronicity is influenced by the meaning of a sequence:

> The *meaning* of a sequence also unites the *most straightforward method of linking the sequences* - the so-called simple 'thematic selection' made according to the logic of the plot - with *the highest form of all*, when that combination of sequences is the means of disclosing the meaning, when the *basic image of the theme* really emerges through a combination of sequences charged with *the ideas that make up the content of the work*...each "variant" of synchronicity within an overall organic whole is no more than the embodiment of the basic image within that variant's specifically demarcated areas.[22]

Eisenstein provided a negative example of naïve synchronicity: the image of waves in the water is accompanied by the barcarolle of Offenbach's opera, *The Tales of Hoffmann*. The same adequacy of waving is a narrow and direct depiction in an audiovisual sequence.[23] A line is used primarily for the composition of contour in pictures, showing the path of movement. However, Eisenstein advocated *pure linearity* reflecting the nature of movement. Unlike animated film, a linear movement without a graphic line may be achieved in cinematic images. Hence, the inner synchronicity of vertical montage is not merely a combination of linear movement of music and images through successive shots, but also takes into account the linear

[22] Ibid., 336.
[23] Ibid., 372-373.

path within the single shot in the "Montage 1937."

The first gesture could be the color and shades of light, exemplified by Rembrandt's *chiaroscuro* or Van Gogh's color.[24] In the sequence before "The Battle on the Ice," Shot I shows a process of gradual brightening corresponding with the arching of the first two bars of music, without outlining the graphic composition (tonal as the gesture). The visual arch from dark to bright is manifested in Shot III with the same musical composition (linear as the gesture). Shot III is exactly the image composition through *chiaroscuro*, the line of light from the dark to the bright. However, in Shot I, the movement depicted by the growing intensity of the light appears as non-graphic, not two-dimensional, but in a fourth dimension compatible with the ascending tones in pitch. Here the gesture is taking the tonal color as the variant. This variation is a perfect example of dialectic dynamism. Eisenstein wrote in "The Dramaturgy of Film Form" that "a color shade conveys a particular rhythm of vibration to our vision" through the physiological reception of the frequency of the light's vibration.[25] The conflict lies in "the retained and the still emerging frequency and "produces the dynamic of our perceptions and of the interplay of color."[26]

Eisenstein suggested a key factor for the vertical montage: the "*mediation of a single gesture,*" which is not limited to its original meaning, which refers to poses and facial expressions. Rather, it includes "tonal, linear, spatial, acting and volume and the graphic use of volume in the transition" between shots. This is exemplified through Eisenstein's own illustration of the sequence before "The Battle on the Ice" in *Alexander Nevsky* (1938), which is a series of twelve successive still shots in a pullout page with Prokofiev's piano version of the orchestral score.[27]

The second gesture is the above-mentioned path of eye movement concealed in a single shot. This diminished physical path directs eye movement to join together with the movement of the melody, which rises or falls from one key to another or an accent from intense volume to lightness in a musical bar. This correspondence

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[24] Ibid., 377-378.
[25] Eisenstein, *SWI*,166.
[26] Ibid., 166.
[27] Ibid., 378-379, 394.

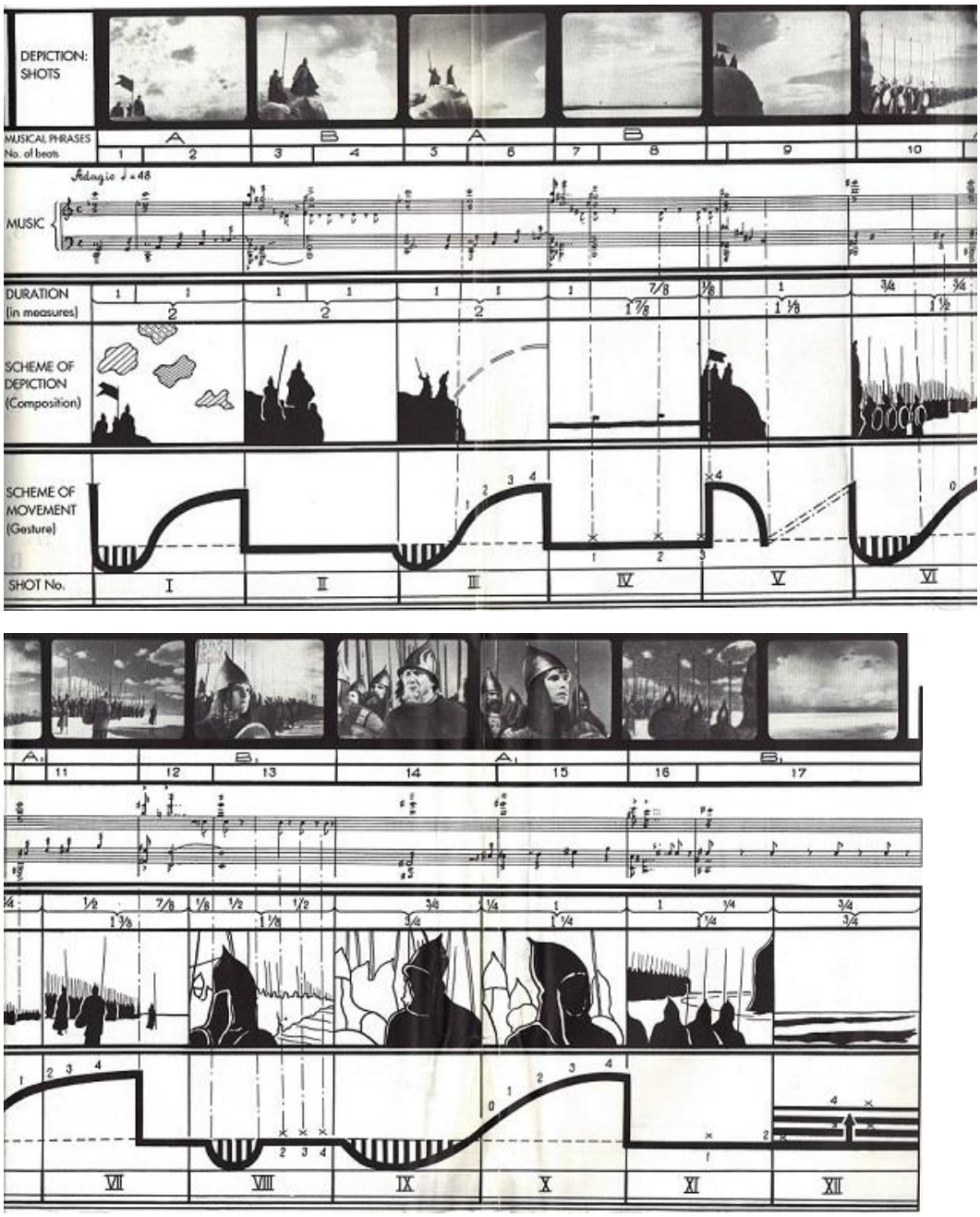
between the movement of the eye and of the music is subordinate to the depiction of musical movement from left to right. Imagistic composition determines the most appropriate point to catch the eye. The eyes then move along the graphic line or "gradation of color tones" as in the intensity of brightness of Shot I, or "grouping or interplay of the figures" as in the composition of Shot VI or Shot VII.[28] In the audiovisual sequence before "The Battle on the Ice," both Shot VI and Shot VII show the troops located in a line in the depth of field from sharp focus to soft focus (spatial as the gesture). A shot with a descending heaviness in vision from the foreground to the background accords with a musical bar from a chord of louder volume to a series of single notes.

In Shot VIII, the close-up of Vasilisa in the foreground is an accent of the image coming to the spectator's attention, and the music vertically corresponds with a chord at the loudest volume. The troops in the background correspond with a series of single tones as the theme of the last shot fades out. This shot strictly obeys the precise symmetrical order between image and music in space, even taking the left space of Vasilisa into account, which adheres with the last quarter of bar 12. The next shot, Shot IX and its musical bar, are composed using the same method, much like Shot VIII, where the chord appears in the middle position alongside the close-up of a face.

Linear movement is also constructed by "*people and their looks, objects, behavior, actions and whole episodes*."[29] Shot X introduces another factor — the "rising intensity of emotion" — functioning through acting and volume as another sort of "gesture."[30] The ascending tension of the battle accompanied with the "arching" of music bar 15 is manifested through the white vapor that is expelled from the soldier's mouth. This variant also functions from shot to shot. Eisenstein pointed out the "fall" from Shot X to Shot XI, or from Shot III to Shot IV, as another gesture — the graphic use of volume. This "fall" means a descending change from a rich and heavier image to an image of simple and contradictory composition. As an

[28] Eisenstein, *SWII*, 388.
[29] Ibid., 378.
[30] Ibid., 394.

example, the close-up of a young soldier transitioning to the back side of a group of soldiers. In the corresponding music, this "fall" is accentuated through a chord, the descending tendency from loudness to softness in volume and from a high key to a lower key. The "fall" or "jump" can be regarded as a dialectic conflict, like a variation of colors, a shift between contradictory compositions of two shots or a contrast between volumes in music.



Alexander Nevsky (*Aleksandr Nevsky*, Sergei M. Eisenstein, 1938)

Vertical montage is not a simple analogy, composing an inter-shot relation using the unit of a shot as a musical note using the montage method. Rather, the movement tendency is a unit, either within a shot or between shots, corresponding with the tendency within a musical bar or inter-bar relation. The tendency of movement is based on "gesture" as a stimulant of movement. Gestures indicate the conflicts and shifts between shots (e.g. from Shot X to Shot XI, or from Shot III to Shot IV) or the variation between frames (e.g. Shot I).

The conflict between stillness in a static shot and the constant flow of music is a set of thesis and antithesis in the dialectic principle, but is resolved through dynamism in a single shot corresponding with music to achieve synthesis — that is, *the movement of combining the affective dynamism (still image) and the physical movement (music)*. Therefore, synchronicity in vertical montage implies a collaboration of the psychological dynamic of stillness (e.g. Shots V, VI and VII), the physical and materialistic movement through the frames (e.g. Shot I) and the emotional and locomotive movement between shots (e.g. from Shot III to Shot IV, or Shot X to Shot XI). All are legitimated as movement through the time-medium, music.

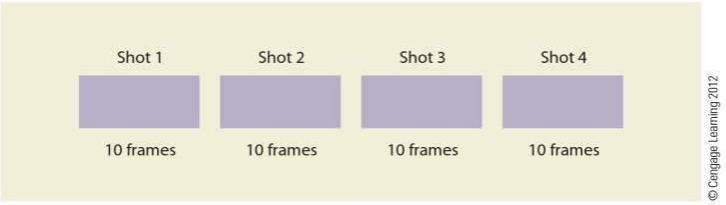
6.3. Musical Montage Method: Conflicts between Content and Form

In the silent era, Eisenstein applied musical structure to his montage method and formed a primary vertical montage with various imagistic motifs analogized in musical terms, yet without synchronized music. Only one year after the publication of "Statement on Sound," Eisenstein's "The Fourth Dimension in Cinema" was released in 1929, which was an article about the musical principles applied to montage structure. The "Statement" did not weight image over sound, but rejected sound as interfering the "inner sound" of image. Eisenstein advocated for vertical montage, being the inner synchronicity of imagistic *gestures*. The "*time-bound* rhythmic function" in the montage and the tonal effect in shot composition have been "a subject which *in itself* potentially contains the entire theory of the interconnection

of picture and sound."[31]

Eisenstein's symbolic color in film represents the release of the schematic pattern of chromethesia, but rhythm and tones in music refer to a more mathematical precision. The taxonomy of musical montage is: rhythm (metric and rhythm), tone (tonal and overtone) and totality (intellectual). They are determined by two aspects: first, the progressive involvement of musical elements compose music from simplicity to complexity, beginning with metric and rhythm, adding pitch and tone, and further accounting for the side-effect of acoustic experience, such as overtones; second, the progressive involvement of emotion and affect into simple mathematical principles. Ultimately, the brain mechanism of association is achieved in intellectual montage.

Metric is a specific musical principle that determines the duration of a tone. Metric montage in film is a series of the *absolute length* of shots, if a shot is analogized with a note in music as the illustrated figure.[32] Eisenstein considered Kuleshov's montage to be representative of metric montage in a musical metric of four-time, march-time and waltz-time (3:4, 2:4, 1:4, etc.) and Dziga Vertov's *The Eleventh Year* (*Odinnadtsatyy*, Dziga Vertov, 1928).[33]



Herbert Zettl, *Sight, Sound, Motion: Applied Media Aesthetics* (Wadsworth: Cengage Learning, 2013)

In contrast to metric montage, rhythmic montage embraces content as an equivalent element in the absolute length of shots in montage. The content disorders

[31] Ibid., 229.
[32] Herbert Zettl, *Sight, Sound, Motion: Applied Media Aesthetics* (Wadsworth: Cengage Learning, 2013), 409.
[33] Eisenstein, *SWI*, 187.

the absolute length of a shot to facilitate a consideration of intensity and integrity of content. Eisenstein mentioned his famous sequence "Odessa Steps" in *The Battleship Potemkin* as an example. The intrusion of a drum-beat destroys the fixed metric montage, and gradually descends to welcome new object — a pram through a switch of rhythm.[34] Similar to the flexible symbolic function of color, rhythm montage does not demonstrate the fixed and equal intervals of time of metric montage, but rather "the alternative play between long and short, stressed and unstressed, etc.," to balance the "dual function" of montage: the semantic and the kinetic. As expressed by Eisenstein,

> Finally, there is the case of rhythmic generalization of the inner content, where its scheme, its formula echoes only the internal progression of the content as it unfolds, fixing it by the alternation and length of the intervals of tension in the internal dynamics of the content.[35]

The content and rhythm resemble a hieroglyph, an indivisible combination of *meaning*, *sense* (visual structure of a character) and *pronunciation* (sound), a specific and exclusive set, a "transcendental result (concept)."[36] However, they may also be seen as being in conflict, because "[t]he flexibility of rhythm sometimes demands microscopic 'cuts', but the depictive function of a piece lies primarily in its being of adequate length."[37] This conflict is similar to the feud between Eisenstein and Andrei Tarkovsky, another Russian director, with respect to the use of long take and montage. In his article "Time, Rhythm and Editing," Tarkovsky clearly expressed his dissent on rhythm and his dismissal of montage, stating, "Rhythm in cinema is conveyed by the life of the object visibly recorded in the frame … Rhythm, then, is not the metrical sequence of pieces; what makes it is the time-thrust within the frames."[38] For Tarkovsky, this time flows through the frame with "dignity" and can

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[34] Ibid., 188.
[35] Eisenstein, *SWII*, 227.
[36] Eisenstein, *SWI*, 182, 164.
[37] Ibid., 229.
[38] Andrey Tarkovsky, *Sculpting in Time: Reflections on the Cinema*, trans. Kitty Hunter-Blair (London, Boston, MA: Farbe and Faber, 1989), 119-120.

reach the "region beyond the spirit."[39] Tarkovsky also opposed the dialectic principle of montage as the nature of cinema:

> The cinema image comes into being during shooting, and exists within the frame ... The idea of 'montage cinema' — that editing brings together two concepts and thus engenders a new, third one — again seems to me to be incompatible with the nature of cinema. Art can never have the interplay of concepts as its ultimate goal."[40]

Nevertheless, Eisenstein's montage method did not stop at metric montage, as Tarkovsky pointed out. Meter determines the length of shot in an equal division of time duration. But it is precisely this rhythm that varies the length of a shot and allows a different amount of time to be thrust into a shot. As Eisenstein noted, "In rhythmic montage it is movement within the frame that impels the montage movement from frame to frame. Such movements within the frame may be of objects in motion, or *of the spectator's eye directed along the lines of some immobile object.*"[41] Clearly, eye movement as one of the foundations of vertical montage in Eisenstein's later theory had already entered his consideration of the dynamism of stillness within the frame in the earlier stages of his film theory, i.e. the late 1920s.

Metric and rhythmic montage has only focused on the inter-shot relation, such as musical notes without key and pitch. To reflect emotions and mood through the vibration of different tones, Scriabin and other musicians established color–tonal correlations that assigned a color to represent a type of emotion stimulated by a certain tone. But the question remained as to the manner in which a tonal effect may be created using the cinematographic techniques in a film. Eisenstein suggested the photographic elements within a shot and its variation through montage. For example, the degree of illumination (light tonality), the focus from the soft to the sharp (graphic tonality) and the various shades of black and white (color tonality) all resemble the shifts of tones in music. They are not classified and designated by the

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[39] Ibid., 116, 120.
[40] Ibid., 115.
[41] Eisenstein, *SWI*, 188.

alphabet as tones, however, but rather are gauged by the eye and personal judgment. This tonality is an impression and emotional effect, which occurs not from the precise measurement as metric montage, but as an "impressionistic measurement," or "a simple delusion."[42]

Montage proceeds in a horizontal movement, similar to melodic movement in music. However, this linear movement exists not only in the successive shots moving in front of the eyes, but also the multiple visual elements that echo the dominant emotions and themes. This movement prepared for the arrival of synchronized music in film to enrich the polyphonic structure. In the horizontal movement, a montage based on a sensory resonance of the sequence is unprecedented, yet it remains unclear in Eisenstein's writing. The overtonal montage should be discussed and clarified in terms of a further exploration of multisensorial experience and its possible connection to phenomenology and Deleuzian philosophy of film.

6.4. The Problem of Analogizing Musical Overtone with Overtonal Montage

The introduction of the overtonal principle into montage was Eisenstein's further questioning of "orthodox montage" based on one dominant principle, e.g., metric, rhythm and tonal montage.[43] In a musical performance, overtone is the final acoustic effect and the musical appreciation of all the notes that have already been played. Eisenstein emphasized the works of Debussy and Scriabin as examples of overtonal effects, though the salient feature of Debussy's work is *Terz* (e.g. C–E or E–G), instead of using a *Kleine Sekunde* to create a harmony and a complete musical structure. The infinite *Terz*, with his emphasis on and explanation of the use of pedals in his scores, creates an effect analogical to an Impressionist painting.

Eisenstein called the overtonal effect the *secondary resonance*, the mutual "interference" of overtone and undertone with their basic tone.[44] It is necessary to point out, however, that overtones can be heard and recorded as an overtonal series, while undertones are created through an arithmetic method and exist only in musical

[42] Ibid., 188.
[43] Ibid., 181.
[44] Ibid., 182.

theory, not in natural acoustics. Hence, in Eisenstein's writings, the "interference" among the overtone, undertone and the basic tones was to designate a set of montages as a certain series of undertones to be relatively *emotionally* or *affectively* symmetrical (conflicts) to the latter set of montages, being a series of overtones in a higher pitch. This may be achieved through focal length, as Eisenstein assigned the variation of focal length just as he did the effect of overtones in music

> It is exactly the same in optics as well. All sorts of aberrations, distortions and other defects that are present and that can be remedied by systems of lenses, can, if calculatedly composed, produce a whole series of compositional effects (changing a 28 lens to a 310).[45]

To a certain degree, Eisenstein sought to produce a similar effect by using successive shots as that produced by a series of overtones that begin with harmony and proceed to disharmony. That is, the shift in focal lengths resembling the secondary resonance in music in terms of its mathematical calculability and predictable imagistic effect in projection. The analogy between focal length and overtone makes the existence of undertones possible. Musical undertone does not exist in nature, but images of a focal length between 28 mm and 310 mm may be arranged in either order. Overtone and undertone in montage represent the full consideration of the unity of acoustic nature and mathematical calculation.

But this analogy between the focal length and overtones has three problems that relate to conceptual compatibility. Overtone is not recorded in the musical score. Accordingly, if the celluloid film resembles the musical score, overtonal effect should be never inscribed in the materiality of film. As Eisenstein claimed, it is "what is spatially unrepresentable in three-dimensional space and only emerges and exists in the fourth dimension (three plus time)."[46] By contrast, focal length has been recorded in the materiality of a shot as a mathematically calculated parameter. Another problem with this analogy between music and image is rooted in the fact

[45] Ibid., 183.
[46] Ibid., 185.

that music is sequential, whereas an image emerges in total. A time-lag exists between a musical note and its overtones. Before the overtonal series occurs, the note has been played and has passed; a corresponding shot must have been seen, followed by the overtonal effect. Since focal length is inevitably inscribed in the cinematic image, there is no time lag between a shot and its focal length — they will be seen simultaneously. The third problem is that a series of musical overtones may have multi-resonance with a note or within overtones, but a shot, if created without using the changing-focus lens, is only capable of one focal length. This means it can only interact with the effect of focal length in the previous shot and the next one. However, one musical note can generate a series of overtones that interacts with its basic tones and the tones heard before or after.

Eisenstein contended that musical overtone may be analogized with a set of montage because of the shared horizontal movement, which is "a real constant only in the dynamics of the musical or cinematic process" with physiological sensations.[47] However, Eisenstein's overtonal montage is "taking full account of all the stimulants in the shot" without a salient dominant as in tonal montage.[48] Despite referring to musical overtones, overtonal montage cannot be stabilized in a series of calculable overtones with precision in mathematics and acoustic physics, but rather offers the spectators *a perception of the sum total.* For example, they hear Debussy's music not recalling the specific melody or a strong emotion, but remember a vague, associable impression stimulated by immanent affect that is not easily detected.

6.5. The Dual Dialectic Principle of Overtonal Montage in *The General Line*

Eisenstein emphasized the feature of musical overtone presented in a series, being a process of harmony to disharmony, as a form of dialectic discourse: "overtonal conflicts, foreseen but not 'recorded' in the score, emerge only through *dialectical formation* when the film passes through the projector or an orchestra

[47] Ibid., 185.
[48] Ibid., 191.

performs a symphony."[49] In montage, it is equivalent to the accentuation of conflict achieved through a depth of field with changing focal length. He employed this technique in some sequences of *The General Line* (1929).

Hegel's dialectic principle is the juxtaposition of a thesis and its antithesis to reach a synthesis. Eisenstein applied this idea in his montage structure, especially in overtonal montage, as well as the political mission of the film *The General Line* (1929). Its original name was *The Old and The New*, which illustrates the collision of traditional inequalities in wealth in agriculture, and the collectivization and industrialization of farming in the Soviet Union. This socio-economic conflict refers to Karl Marx's dialectic principle, as situated in the conflict between the capitalist (thesis) versus the proletariat (antithesis), which later synthesizes into an ideal equal society (synthesis). This film accurately represents the dialectic principle both in "the sense of space–time" in the method of montage, but also "in the field of pure thought." In Eisenstein's words, it represents "the evolution of new concepts and attitudes in the conflict between normal conceptions and particular representations as a dynamic — a dynamization of the inertia of perception — a dynamization of the 'traditional view' into a new one."[50]

This social–aesthetic dialectic was manifested in a sequence wherein a serf, Marfa, begs a rich landowner for a horse. Fig. 1 and Fig. 2 use a deep focus on the background of the image, showing her observation of the stout livestock in the foreground of the image, and the landowner sleeping in the background. These two shots manifest a relation of conflict between poverty (thesis) and wealth (antithesis) in this limited space. The next three medium shot—reverse-shot images show the proceeding plot, when Marfa awakens the farmer (Figs. 3–5). Close-ups from Figs. 7–9, Fig. 16, Fig. 20 and Fig. 21 create the image of the farmer and his wife's affluent life in contrast to the indigent serf. Intersected with these shots, the shots of Marfa are all the same — a close-up of her bare, clasped hands (Fig. 12, Fig. 15, Fig. 25), with only a slight difference in the degree of flapping clothes which gradually

[49] Richard Taylor, introduction to *SWI*, 19.
[50] Eisenstein, *SWI*, 162.

increases in the later shots. The more short-length focal shots of wealthy couples intersected with the close-ups of the serf's hands, the more drastic the collision between the poor and the wealthy. This sequence of overtonal montage complements the dialectic principle in both aesthetics and the socio-economic content.

Figs. 1–15

Figs. 16–30



















The General Line (*Generalnaya liniya*, aka. *The Old and the New*, *Staroye i novoye*, Sergei M. Eisenstein, 1929)

Eisenstein himself did not designate this sequence as being an example of overtonal montage, although he specifically mentioned the cross-cuts among the grasshopper, the male peasant and the mowing-machine in *The General Line* (1929) as such. In this sequence, the montage of the three subjects is not constructed on the individual as dominant, but rather takes "the sum of *stimuli* of all the stimulants as the dominants." This stands in contrast to tonal montage, in which a determinative dominant in a sequence completely attracts the spectator's attention.[51] Rather, overtonal montage blurs the primary and the secondary, like Debussy's works, for the impressionistic effect.

When he outlined his ideas regarding the music for this film, to be composed by Edmund Meisel, Eisenstein set the chirps of grasshoppers to merge with the loud noise of a mowing-machine with a progressive intensity:

> 3. Grasshopper – distant chirping. At first muted and melodic, then over [shots of] grasshopper it becomes sharp, staccato chirping against a general background of melodic sounds of the fields
> 4. Machines – the industrial theme in a wild tempo. [52]

This sequence is created to show a progression from the quiet to an intensive synthesis of various sounds. It begins with a panoramic shot of the field using a wide-angle lens, with twisting mist, light and shadow (Fig. 31), but ends with a

[51] Ibid., 183.
[52] Jay Leyda and Zina Voynow, *Eisenstein at Work* (London: Methuen, 1985), 40.

close-up of the grasshopper with an extreme short focal length (Fig. 49). This set of shots has adequately manifested the quality of overtonal montage with its contrasting effect between the shots of the grasshopper and the mowing-machine, as Eisenstein explained to Meisel in the foregoing quotation.

Two medium shots of an old peasant (Fig. 32 and Fig. 34) intersect with shots of canola flowers from a panorama showing a peaceful field, and the medium to close-up shots appear with an increasing swaying of the flowers (Figs. 31, 33 and 35). Then a shot of a grasshopper emerging from the rapeseed flowers is captured by a lens of long-focus length (Fig. 36) as well as the following close-up of the old peasant (Fig. 37). The two shots enter the montage by close-up, with the overwhelming power to call attention and arouse emotion. To capture the image of an insect, one is supposed to use a long-focus lens to maintain a certain distance. This close-up of a grasshopper invites the spectators to approach a normally unreachable space, which requires them to be mute and hold their breath in order to hear the grasshopper's "distant chirping." The close-up of the peasant also corresponds with the same emotional tension. The emotional correspondence and semantic meaning between the two shots were enhanced and more directly manifested in the next two shots (Fig. 38 and Fig. 39), in which the grasshopper is pictured through a more shallow focus to blur the surrounding flowers and to fill the image with the full body of the insect, and the peasant holds up a hand behind his ear to hear a distant sound more clearly.

The next three shots of the mowing-machine, which Eisenstein characterized as "an industrial theme with a wild tempo" (Figs. 40–42), use almost the same focal length to tentatively enter this sequence as a new rhythmic form — each shot lasts half a second — and intrude upon the previous set of the grasshopper and the peasant, where each shot lasted between half a second and four seconds. The next four shots are composed using a faster tempo with a shifting focal length (Figs. 43–47) from a shorter to a longer one, just as in music the metric 2/4 time consists of a stressed beat and an unstressed beat. After the first set of the mowing-machine, another close-up of the grasshopper intersects with a metaphorically lighter sound that serves as a

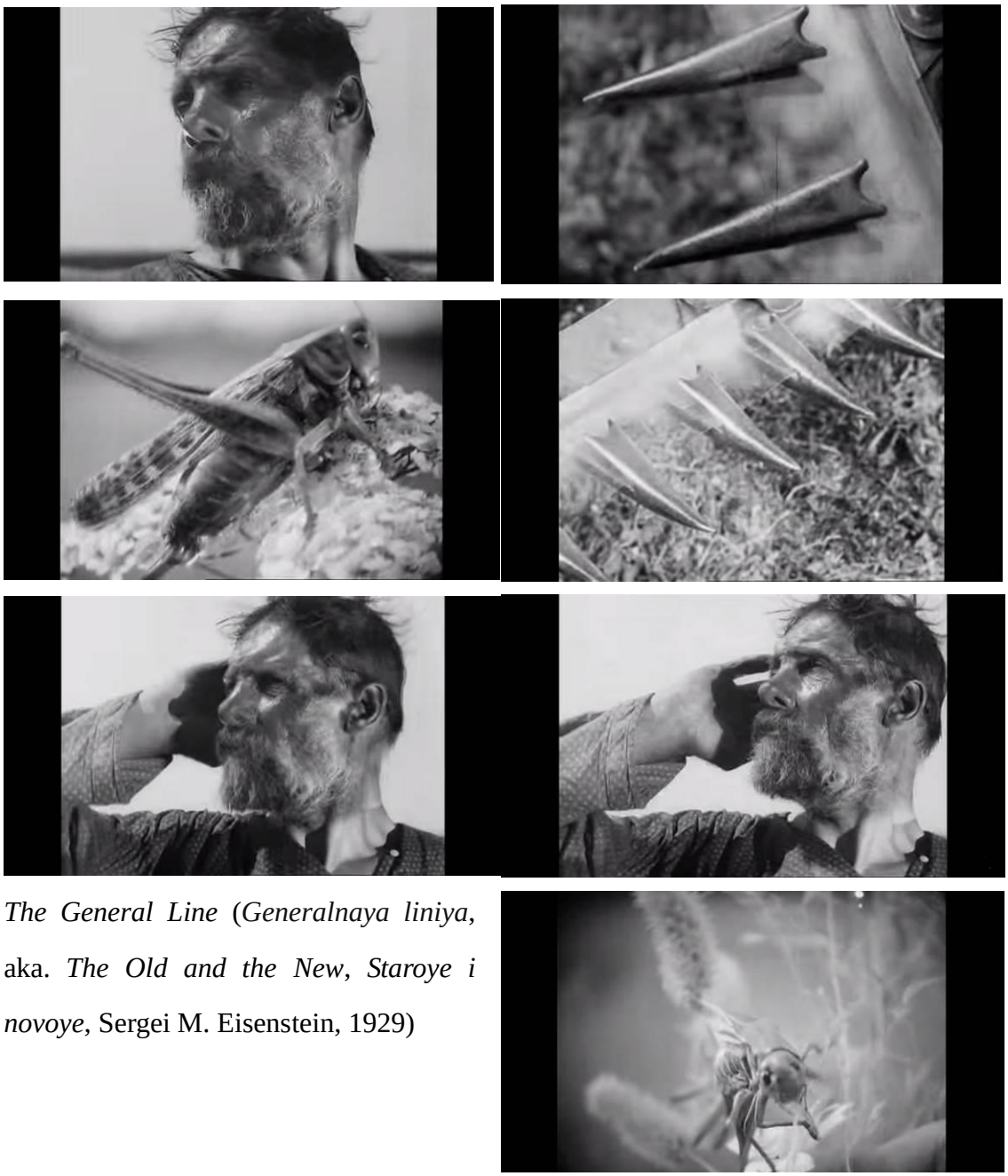
contrast, and yet is located in the same space as the mowing-machine. The close-ups of the grasshopper and the mowing-machine create *an inner sound contrast* through imagistic emphasis between the chirping and the roaring.

This sequence includes all the montage methods discussed above: metric montage (the two sets of mowing-machines crosscuts), rhythmic montage (the different rhythms of the shots in Figs. 31–39 and the shots of mowing-machines), tonal montage (a dominant of sound and space in the field mainly composed through close-up) and overtonal montage (various focal lengths contribute to the a mild harmonic atmosphere to a wild disharmonic tension). In addition to the synthesis of all the musical and imagist elements, this sequence also achieves a dialectic relation between the thesis (the chirp of grasshopper) and the antithesis (the roar of mowing-machine). It achieves a synthesis of nature and machinery, the old and the new, implying the Marxist new balance in agricultural society. Cinema thereby becomes "a synthesis of science, art and militant class-consciousness."[53] This juxtaposition reflects the dialectical concepts posited by Hegel and Marx as the sources of Eisenstein's dialectical montage theory. This combination or collision of montage induces a synthesis in the dimensions of both physical senses and intellectual thought. In the case of overtonal montage, the overtone as the antithesis collides with the tone and dominant as thesis to construct a sum total, or new dominant.[54]

Figs. 31–39

Figs. 40–49

[53] Eisenstein, *SWI*, 194.
[54] Taylor, introduction, 19.



The General Line (*Generalnaya liniya*, aka. *The Old and the New*, *Staroye i novoye*, Sergei M. Eisenstein, 1929)

6.6. The Perception of Sum Total and the Process of Thought in the Overtonal Montage

Montage involves the entire range of human sensory perceptions, including the tactile, olfactory, visual and auditory senses. It also includes emotional components as the "dramatic" element and movement triggered by reflexology.[55] Eisenstein's emphasis on the physiological essence of overtonal montage was rooted in his early

[55] Eisenstein, *SWII*, 329.

preference toward applying Ivan Pavlov's reflexology as the foundation that emphasizes the significance of individual stimuli.[56] It is no surprise that overtone in a movement of music or images, for Eisenstein, may be motivated by the physiological reflexes in perception

> *The General Line*, this distinctive montage complex within the shot that arises from the collisions and combinations of the individual stimulants inherent within it, of stimulants that vary according to their 'external nature' but are bound together in an iron unity through their *reflex physiological essence*.[57]

The perceptions of sum total stem from physiology, but generate a reception beyond the physical. Eisenstein considered the psychic as "the physiological process of *a higher nervous activity*" and denotes it as "psychophysiological," or the "feel," a sum total of the physiological reaction, and a resonance of all the stimulants. Eisenstein stressed that "the basic of sign of the shot can be taken to be the final sum total of its effect on the cortex of the brain as a whole."[58] Eisenstein introduced the "new formula" to perceive overtonal montage:

> For the musical overtones (a beat) the term 'I hear' is no longer strictly appropriate.
> Nor 'I see' for the visual.
> For both we introduce a new uniform formula: 'I feel'…
>
> To master this method you have to develop within yourself a new sense: the ability to reduce visual and sound perceptions to a new denominator…'
> Whereas sound and visual perceptions are not reducible to a single denominator.
> They are constants in different dimensions.
> But the visual overtone and the sound overtone are constants in a single dimension![59]

Neither sight in cinema nor sound in music remains a merely physiological

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[56] Andrew, *The Major Film Theories*, 55.
[57] Eisenstein, *SWI*, 183.
[58] Ibid., 183.
[59] Ibid., 186.

perception; neither hearing nor sight, but rather "feeling" affects the brain. Eisenstein explained that the effect of overtonal montage is a combination of the physiological and psychic in reception: "the entire, complex, rhythmically sensual nuancing of the combination of shots is carried out almost exclusively in accordance with the 'psychophysiological' resonance of the shot."[60]

The phenomenological "felt" experience of cinema was discussed in the fourth chapter. Phenomenological structure is "grounded in the non-hierarchical reciprocity and chiasmatic reversibility of *sense* as, at once, a *carnal matter* and a *conscious meaning* — both emerging *simultaneously* (if in various ratios) from that *single system of flesh and consciousness* synthesized as the *lived body*."[61] In the experience of overtonal montage, the lived body is a system that receives and generates multimodalities by means of the carnal senses, together with a consciousness of dialectical conflicts, producing multisensory experience and intellectual thought.

In his article "A Course in Treatment," Eisenstein's own words, recounted at the beginning of this chapter, thoroughly express his intention concerning the synchronization of senses in cinema. With sound, or without sound, montage is a process of both sense and thoughts. Cinema becomes both a brain and a body, the access to intellectual thought and sensory experience. As Deleuze expressed in his *Image-Temps* (*The Time-Image*),

> We saw that Eisenstein already laid claim to an intellectual or cerebral cinema, which he considered to be more concrete than the physics of bodies in Pudovkin, or physical formalism in Vertov. There is no less of the concrete and abstract on the one side than on the other: there is as much feeling or intensity, passion, in a cinema of the brain as in a cinema of the body.[62]

To describe the time-image of modern cinema, Deleuze quoted Kant, who noted that "time is out of joint and presents itself in the pure state," a crystallization of time in a

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[60] Ibid., 184.
[61] Vivian Sobchack, *Carnal Thoughts: Embodiment and Moving Image Culture* (Berkeley, CA: University of California Press, 2004), 73.
[62] Gilles Deleuze, *Cinema 2: The Time-Image*, trans. Hugh Tomlinson and Robert Galeta (Minneapolis, MN: University of Minnesota Press, 1989), 204.

transcendental sense.[63] Metric and rhythmic montages follow the time linkages in music; tonal montage is the symbolic meaning of a filmic technical element, such as *Klangfarbe* in music; overtonal montage consists of movements and thought processes, and the sensorial impression of those movements and processes. As Deleuze said, the "pre-linguistic images," the "pre-signifying signs," and cinema are "a whole 'psychomechanics,' the spiritual automation, the utterable of a language system which has its own logic."[64]

David N. Rodowick asserts that Deleuze conceptualized an image of thought as a visual and acoustic rendering of thought in relation to time and movement.[65] It is exactly Eisenstein's method of musical montage, particularly overtonal montage, through its rendering a process of thought in audiovisual time and movement. As András Bálint Kovács claims, Deleuze's taxonomy of classical and modern cinema differentiates itself from the theories of some historians of modernism who defined modern cinema "according to the presence or absence of a 'traditional' narrative."[66] Instead, Deleuze advocated that "cinema is always narrative," but modern cinema is preoccupied with the "*modalities* of narrative," and is "affected by repetitions, permutations and transformations which are explicable in detail by the new structure."[67] Narration is no longer the linear chronological or cause–result order, but rather follows sensorial logic. For example, the montage of grasshopper and mowing-machine in *The General Line* (1929) created a conflict between agrarian and industrial culture through the augmentation and abatement of sound. The intelligence of mental images is based on the intelligence of the senses, and in the case of overtonal montage, the intellectual montage that is achieved through a multimodal narrative and the realization of a world beyond the senses. The juxtaposition of two shots is an association of two interrelated meanings, such as the dialectical conflict

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[63] Ibid., 271.
[64] Ibid., 262.
[65] David N. Rodowick, *Gilles Deleuze's Time Machine* (Durham, NC: Duke University Press, 1997), 6.
[66] András Bálint Kovács, "The Film History of Thought," in *The Brain Is the Screen: Deleuze and the Philosophy of Cinema*, ed. Gregory Flaxman (Minneapolis, London: University of Minnesota Press, 2000), 163.
[67] Kovács, "The Film History of Thought", 163; Deleuze, *Time-Image*, 137.

between the two social classes in *The General Line* (1929).

Summary

In the single set-up image, the eye movement in the case of paintings or shots as its psychological foundation has the abstract and invisible movement which later corresponds to the formless sound movement, creating an *inherent and synchronized* movement in vertical montage. Dynamism, the movement of the immobile, is the affective function of visual perception, which sees the stillness of movement not as illusion or association of previous experience, but directed and composed by the artist. Vertical montage is the synthesis of dynamism in stillness and physical movement of montage and music, as well as the synchronicity of the senses. To correspond to invisible, formless sound, eye movement is the internalization of linear movement in a single shot to achieve inner synchronicity, as Eisenstein anticipated in vertical montage.

Eisenstein intended a sight–sound synaesthesia in the process of filmmaking and production (musical principles contributed to shot composition and editing) and a coaesthesia in cinematic experience (a general perception of both music and image). His idea of *Gesammtkunstwerk* emphasized a non-hierarchical sensorial experience, or as he called it, the "feel", being a perception of the sum total. This means that no particular sense perception, either hearing or sight, is predominant. From horizontal to vertical montage, there exists an epistemological shift in Eisenstein's aesthetics theory and a transition between a dialectical monophonic montage to a polyphonic structure. However, one cannot simply define the earlier period of Eisenstein's films and theories based purely on the dialectic principle and reflexology. In the case of overtonal montage, Eisenstein developed the idea of organic unity, the simultaneous perception of the sum total in a simultaneous dimension, before the 1930s.

Musical principles of metric, rhythm, tone and overtone may be applied to the montage method for a dialectic relation between content and form, social conflict and emotional contrast. Overtonal montage is the co-existence of measurable musical principles in metric and rhythmic montage; the dialectical meanings as the

conceptual movement; and the synthesis and the synchronicity of perceptions off-screen or off-score as later seen in vertical montage. These dialectic conflicts and disharmonies in physiological experiences and content indicates a Deleuzian cinema of brain and body, a mental image based on the modalities of narrative that Deleuze found in modern cinema. Whether this modernism appears as a phantom in the pre-war films or the actualized body of the post-war films, according to Deleuze's metaphor of mental images, it has been realized in Eisenstein's pre-war film *The General Line* (1929).

Conclusion:

In his article "Clues: Roots of an Evidential Paradigm," Carlo Ginzburg introduces the "trace" as an epistemological model to explain attempts at the end of the nineteenth century to find a deeper and more comprehensible reality, paralleling picture marks (Morelli), clues (Sherlock Holmes) and symptoms (Freud).[1] According to Ginzburg, this eagerness "to decipher" traces was rooted in human history several thousand years ago, when men were hunter-gatherers for animals and food.[2] In the time of modernity, it becomes a desire to rationalize the "irrational" — art, murder and the psyche — to transform it into evidence ready for analysis.

The collision of rationality and irrationality in modernity at the turn of twentieth century that is reflected in modernist art, music and cinema have been technically supported by experimental science and psychology, and meanwhile thematically and sensually inspired by primitive and occult culture. Modernity may be explained as negating the old, especially the primitive forms of religion. Yet, Rachel O. Moore refers to modernity and the primitive as a mutually replenished system of canals and the river: "they float through time … and they are always, always on the wane."[3] Animism, used by anthropologists in the nineteenth century to complement the prehistories of modern society as the contradictory side of primitive culture, later flourished through cinema as a modern magic. Today, philosophers attempt to validate it as an alternative episteme of subjectivity and question the speculation of natural science. On the other hand, *Klangfarbe* stemmed from an occult and literary tradition, and was measured by Helmholtz's acoustic experiment and Vygotsky-Luria's psychological observation. Today, clinical synaesthesia may be evidenced through technological devices. Rather than "always on the wane," the wax and wane of the modernity and the primitive resemble "modernism" which appears *periodically*.

The contradiction of modernity and primitiveness, rationality and irrationality, has been represented by the cinematic mechanism and its content. Moving images, because of their continuity and ability to be indexed, become the evidential trace of time and human activities. Henri Bergson questioned the qualification of

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[1] Carlo Ginzburg, *Clues, Myths, and the Historical Method* (Baltimore, MD: Johns Hopkins University Press, 1992), 101.
[2] Ibid., 102.
[3] Rachel O. Moore, *Savage Theory: Cinema as Modern Magic* (Durham & London: Duke University Press, 2000), 160.

cinematography to represent time since it selects privileged moments to create the illusion of continuity, such as Marey's chronophotography, rather than the unbreakable duration ofreal time exempt from the standardization and rationalization of modernity. But neither Marey's chronophotography nor cinema intended to create the illusion of continuity. On the contrary, they attempted to represent *the instability and irrationality of human movement in both physiology and psychology*, which precisely demonstrated their dissention on the scientific and rational side of modernity, as Bergson criticized. Moore quotes Jean Epstein's phrase "metal brain" as a metaphor of cinema, stating that the modern machine, however, "prompted a fascination with the very primitive."[4] This dissertation probes this fascinating power and the paradoxical effect of cinema at the time of modernity. *Cinema, like a brain, the organ of sensuality and intelligence, negotiates the paradoxes in modernity, new and old, rationality and irrationality, through its own mechanism and its content. Cinema itself contains the contradiction, like the visible and the invisible* that artists, scientists, philosophers all attempt to critically decipher from their own perspectives.

The multitude and contradictory perspectives of modernity, cinema and vision are all centered upon Eisenstein, who lived in and has been influenced by this era, and conversely, whose theories and films pollinated the practices of these perspectives and represented cinema's ability to negotiate the paradoxes of modernity. The periodical modernism is found in Sergei M. Eisenstein's films in that the so-called classical cinema has emerged with an attitude of "beyond vision", demonstrating all the paradoxes of modernity: *the invisible activities of body and brain, rationality and irrationality, sensuality and intelligence.* "Beyond vision" is thus to question *sight as the only form of experiencing cinema and witnessing human activities involved in cinema, and to trace the invisibilities inside or outside the visual images*. Rather than seeing movement and motion, cinematic experience is *a process of the brain abstracting movement and transition and operating the multisensory reception and intellectual conception of the spectators*.

Eisenstein was situated at the time of the first avant-garde movements, which triggered his early theoretical reflections on body, motion and movement, and continually influenced his later cinematic practices and theoretical development. Marey's chronophotography intended to visualize the physiological activities of

[4] Ibid., 2.

human joints and muscles concealed beneath the visible surface of the human body and its motion. The tracing of movement was emphasized by his geometrical chronophotography, which later inspired both the abstraction and dynamism of early avant-garde art forms, such as the Cubist, Futurist and Suprematist forms, and the actualized movement of abstract objects in German Absolute films. During this period of time, an urge existed to actualize dynamism in stillness in the visual movement and simplify the contour and figure to articulate *movement as a universal nature*.

Responding to this urge, metamorphoses and animism are popular themes represented in early cinema, especially in animation, since the painted, moving images are capable of delineating the complete process from one figure to another, or from non-human objects to the humanized creatures. Yet how can one see the plasmatic lines and bodies in photographic moving images? Instead of visualizing the movement like Marey and the modernist artists, or the movement within a shot like Dziga Vertov, for Eisenstein, *movement remains in the stillness and the intervals of montage. It is invisible, yet completes its own process in the spectator's brain*.

Affect explains the dynamism in stillness and develops into the inherent principle of composition in single set-ups, the foundation of the later polyphonic structure of vertical montage. Similar to Rudolf Arnheim, Eisenstein considered this feeling of dynamism to stem from a direct affective function of vision working on the brain to perceive an invisible linear movement in the stillness. He was intrigued by affect as the physiological and psychological mechanism of the human body and the brain as the invisible cause of motion and movement. After Expressive Movement, affect as an aesthetic effect separated from the representation of body and motion, turning toward an explanation of an ecstatic and explosive moment of transition.

The montage of attraction also creates an inherent leap in the spectator's brain based on the affective function. The metamorphoses between two objects can be realized through special effects, such as the early magician films of Segundo de Chomón and Georges Méliès. However, in Eisenstein's *Glumov's Diary* (1923), the metamorphoses occur not only in the bodies, but also the facial expressions, the emotions and the identities, which affect and proceed within the spectator's brain rather than being imprinted on the celluloid to constitute a visual movement. Alexander Kluge expressed it as "the third image," which is "hidden in the cut and

which itself not material," and "the quiet ideal that has existed in the spectator for a long time."[5] Eisenstein's representation of metamorphosis is not witnessed by the eyes but is a metaphor of movement, from one status to another, as the revolutionary upheaval of all ideological realms in the time of modernity.

The representation of movement at the turn of twentieth century has shifted to the next movement of cinema, the introduction of sound in the late 1920s and the success of Technicolor in 1930s, both of which compelled Eisenstein to face the reality that cinema would inevitably integrate these two elements into its future. For him, neither sound nor color is a background or an embellishment of visual images enhancing the verisimilitude of cinema; both are presented on an equivalent basis to create the synaesthetic effect and polyphonic structure. This idea has been raised in several artistic sources: Wagner's *Gesamtkunstwerk*; the synaesthesia and correspondence of French Symbolists and music theories; the "absence of perspective" in the modern arts; and the Luria-Vygotsky psychological experiments on synaesthesia. All of these influences oriented Eisenstein to a multisensorial perspective in filmmaking. In addition to his artistic and scientific surroundings, and in spite of the evolutionist's hierarchized primitive cultures and societies, Eisenstein himself developed a long-time anthropological interest in the primitiveness of human beings. In this regard, the theoretical foundations of his intermedial practices were influenced by Lucien Lévi-Bruhl and James Fraser in their discoveries concerning the organic synchronization of principles and pathos in nature.

This multisensorial experience of cinema beyond vision implies an off-screen sense of not only sound, but also sight, which entails a sense of affect in both color and montage. The invisibility of sound and affect suggest the visual color of perpetual and autonomous existence in *Ivan the Terrible*, *Part II* (1958), and the audiovisual montage of internalized synchronicity of linear movement in *Alexander Nevsky* (1938). This non-visual experience of cinema was designated by Eisenstein as "I feel", being a mixed and inseparable *perception of the sum total*. It was first mentioned in his writing and practiced in *The General Line* (1929) in the late 1920s, which not only conducts the "modalities of narrative," but also the dialectical principles in both sensorial and intellectual structures. Evolving from "I feel" to "I

[5] Alexander Kluge, "Die Funktion des Zerrwinkels in zertümmender Absicht. Ein Gespräch zwischen Alexander Kluge und Gertrud Koch," interview by Gertrud Koch, in *Kritische Theorie und Kultur*, ed. Rainer Erd et al. (Frankfurt: Suhrkamp, 1989), 115-116. See Christopher Pavsek, *The Utopia of Film: Cinema and Its Futures in Godard, Kluge, and Tahimik* (New York: Columbia University Press, 2013), 203.

think," a cinematic brain within which both senses and thoughts are at work in the cortex, is identified by spectators as their own brain through a phenomenological reversibility and embodiment — thinking and feeling as cinema and in the cinema.

To produce sound film or color film is Eisenstein's reflection on the emerging new cinematic technologies: Before their introduction into cinema, sound existed in vision through the analogized illumination of lights and rhythms of montage, and color existed in vision producing an objectless meaning and feeling. Before the moving images of cinema, metamorphoses existed in Ovid's mythology; animism existed in religious culture and the arts; and montage existed in Pushkin's poetry and Kabuki theatre. Georges Sadoul's multivolume work, *Histoire générale du cinéma*, organized a chronological order of films and film directors in most countries and all relevant periods. By contrast, *Eisenstein emerged from the cinema-only historiographical method: artistic styles, forms, motifs, themes, senses, feelings, and urges existed before the birth of cinema; they enriched the aesthetic innovation of cinema and have been remediated by cinema.*

As stated in Eisenstein's unfinished texts, written between October, 1946, and January, 1948, and now compiled under the name *Notes for a General History of Cinema*, "Cinema is the heir of all artistic cultures." Photography is a human urge to preserve their own bodies like ancient Egyptians who mummified corpses. Cinema is the urge to record process like all the cine-toys before the birth of cinema and the early Modernist arts). Sound cinema is the urge to record the process of sound like balloons in comic drawings and hieroglyphs.[6]

When Eisenstein researched cinematic styles of vision, sound, color and movement, he excavated them further with a psychological aspect not limited to his artistic heritage: cinema is "the most complete reflection of man"; "a copy of man's psychological apparatus"; "Close-ups as points of insistence of interest"; "Fading in and out" like "the fading of consciousness" or the manner in which one falls asleep; and flashbacks like the "recollections" of memories.[7] Eisenstein restated the Bergson-Deleuzian argument that cinema is similar to a mechanism of the brain in a process of both thought and senses, in a flow of both consciousness and unconsciousness. Deleuze's taxonomy of classical and modern cinema advocated that

[6] Sergei M. Eisenstein, "The Heirs," in *Sergei M. Eisenstein: Notes for a General History of Cinema*, ed. Naum Kleiman and Antonio Somaini, trans. Margo Shohl Rosen, Brinton Tench Coxe and Natalie Ryabchikova (Amsterdam: Amsterdam University Press, 2016), 113-114.
[7] Sergei M. Eisenstein, "The Place of Cinema in the General System of the History of the Arts," ibid., 241.

modern cinema follows sensorial logic and intelligence, and mental activities without chronological and cause-and-effect reasoning. This has been achieved in Eisenstein's films, which have presented themselves as *a periodic modernism* reappearing, for example, in *Late Spring* (*Banshun*, Yasujirō Ozu, 1949) in the montage of a vase and the daughter's tearing face as crystallized time or in *Hiroshima mon amour* (Alain Resnais, 1959) in a montage of two close-ups of hands as the recollection of memories.

Eisenstein's theories of cinema, though propelled by the technological development of his media, have persistently focused on the perceptive and psychic activities of perceiving images, whether with or without sound, with or without color. This is seemingly contradictory to the argument of this dissertation, which seeks to emphasize the senses other than vision that are involved in the cinematic experience. However, this dissertation does not seek to challenge the importance of vision. Instead, in the final section on overtonal montage, this dissertation considers in retrospect the black-and-white silent film *The General Line*. In that film, the *diversely interwoven senses and thoughts in vision* that Eisenstein discovered mid-life, before his diversification of elements into cinema, have pioneered a theoretical arc to later phenomenological and Deleuzian philosophy.

"Beyond vision," a perspective in considering Eisenstein's theories and films, is in fact an attitude of media archaeology that focuses on the historiography of a medium beyond itself and its time period. Eisenstein developed a genealogy of the representational forms, media and techniques from which cinema, as the synthesis of the arts, inherits those of movement, color and sound. The history of cinema began in 1895, but vision of movement, vision of color, vision of sound and vision of affect began earlier than visual images or re-formed outside cinema, just as the desire for trace commenced earlier than the modern time. Rather, in terms of aesthetics, justice and science, cinema was to solve the most substantial need of human beings of any time.

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Filmography

Alexander Nevsky (*Aleksandr Nevskiy,* Sergei M. Eisenstein, 1938)

Ballet Mécanique (*Ballet mécanique,* Fernand Leger, 1924)

Electrocuting an Elephant (Thomas A. Edison, 1903)

Execution of Czolgoz, with Panorama of Auburn Prison (Thomas A. Edison, 1901)

Fantasmogorie (*Fantasmogorie,* Émile Cohl, 1908)

Glumov's Diary (*Dnevnik Glumova*, Sergei M. Eisenstein, 1923)

Gone with the Wind (Victor Fleming, 1939)

Hiroshima mon amour (Alain Resnais, 1959)

Ivan the Terrible, Part II (*Ivan Grozniy,* Sergei M. Eisenstein, 1958)

Jumping Beans (Max & Dave Fleischer, 1923)

Late Spring (*Banshun*, Yasujirō Ozu, 1949)

Man with a Movie Camera (*Chelovek s kinoapparatom*, Dziga Vertov, 1929)

Merbabies (Walt Disney and Harman and Ising, 1938)

Metamorphoses (*Métamorphoses,* Segundo de Chomón, 1912)

Modeling (Max & Dave Fleischer, 1921)

Orpheus (*Orphée,* Jean Cocteau, 1950)

Out of the Inkwell (Max & Dave Fleisher, 1921-1925)

Rhythmus 21 (*Rhythmus 21*, Hans Richter, 1921)

Rhythmus 23 (*Rhythmus 23*, Hans Richter, 1923)

Rhythmus 25 (*Rhythmus 25*, Hans Richter, 1925)

Strike (*Stachka,* Sergei M. Eisenstein, 1925)

Symphonie Diagonale (*Symphonie Diagonale*, Viking Eggeling, 1924)

Testament of Orpheus (*Le testament d'Orphée, ou ne me demandez pas pourquoi!*,

Jean Cocteau, 1960)

The Battleship Potemkin (*Bronenossez Potjomkin*, Sergei M. Eisenstein, 1925)

The Blood of a Poet (*Le Sang d'un Poète*, Jean Cocteau, 1930)

The Electric Current (*Le Courant Electrique*, Segundo de Chomón, 1906)

The Electric Hotel (*El Hotel Electrico*, Segundo de Chomón, 1908)

The Eleventh Year (*Odinnadtsatyy*, Dziga Vertov, 1928)

The Fall of the Usher House (*La Chute de la Maison Usher*, Jean Epstein, 1928)

The Four Troublesome Heads (*Un Homme de Têtes*, Georges Méliès, 1898)

The General Line (*Generalnaya liniya*, aka. *The Old and the New*, *Staroye i novoye*, Sergei M. Eisenstein, 1929)

The Magician (*Le Magicien*, Georges Méliès, 1898)

The New Gentlemen (*Les Nouveaux Messieurs*, Jacques Feyder, 1929)

The One-Man Band (*L'homme orchestra*, Georges Méliès, *1900*)

The Skeleton Dance (Walt Disney, 1929)

The Vanishing Lady (*Escamotage d'une dame au théâtre Robert Houdin*, Georges Méliès, 1896)

The Wizard of Oz (Victor Fleming, 1939)

Zusammenfassung

Die vorliegende Arbeit beschäftigt sich mit einer Diskussion über die Zusammenhänge von Moderne, Kino, Vision und Sergei M. Eisenstein. Die Kollision von Rationalität und Irrationalität zu Beginn des 20. Jahrhunderts reflektiert in moderner Kunst, Musik und Kino, wurden technisch durch experimentelle Wissenschaft, Psychologie unterstützt und mittlerweile thematisch und sinnlich von primitiver und okkulter Kultur inspiriert. Dieser Widerspruch der Moderne wurde durch filmische Mechanismen und Inhalte repräsentiert. Kino enthält wie ein Gehirn, das Organ der Sinnlichkeit und Intelligenz, die Widersprüche der Moderne und selbst den Widerspruch zwischen Sichtbarem und Unsichtbarem, den Künstler, Wissenschaftler und Philosophen in ihrer eigenen Perspektive versuchen, zu entschlüsseln. Die Vielzahl an wiedersprüchlichen Perspektiven von Moderne, Kino und Visionen waren alle in Eisenstein vereint, der in der Epoche lebte und von ihr beeinflusst wurde. Seine Theorien und Filme bereicherten die Praktiken dieser Perspektiven und brachte dem Kino die Fähigkeit zur Verhandlung der Paradoxa der Moderne.

„Über Vision“ in Eisensteins Filmen und Theorien entstand mit einer Tendenz in dem sogenannten vorkriegs-klassischen Kino, den unsichtbaren Aktivitäten von Körper und Gehirn, Rationalität und Irrationalität, Sinnlichkeit und Intelligenz als Paradoxe der Moderne. „Über Vision“ als einzige Form, Kino und menschliche Tätigkeiten im Kino zu erleben ist somit, in Frage zu stellen. Anstatt bewegte Bilder zu sehen, ist die filmische Erfahrung ein Prozess des Gehirns, Bewegungen zu Übergängen zu abstrahieren und die multisensorische Rezeption und geistige Konzeption der Zuschauer zu bedienen. Eisenstein entwickelte stattdessen eine Genealogie der Darstellungsformen, Medien und Techniken, aus denen Kino die Bewegung, Farbe und Ton erbte. Die Geschichte des Kinos begann in 1895, die Vision der Bewegung, der Vision der Farbe und der Vision des Klangs begannen allerdings früher als Bilder. „Über Vision“ ist eine Haltung der Medien-Archäologie, die sich mit der Geschichte eines Mediums über sich und seiner Zeit befasst.