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The truth-machine:

continuity and the ontology of the moving image of cinema

Charalambos Charalambous

**PhD in Film Studies
by Practice as Research**



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The analytical nature of representation is inconsistent with the homogeneity of the continuum. This inconsistency determines the moving image of cinema; for, the cinematographic apparatus employs photographic still images to reconstitute the appearance of motion of the real world. Bergson claims that this cinematographic perception is also characteristic of our understanding of the real world; the qualitative essence of movement and time is spatially abstracted through representation for the demands of differentiation and quantification. Ensuing an overturning of time's relation to movement in modern philosophy, Deleuze's theory for the image rectifies the misconception of cinematic movement as discontinuity. Considering the novel representability of continuity in the cinema, this thesis proceeds to a rethinking of the image's significance for an understanding of worldly being by defining a new ontological account for the moving image.

The study of the technological genesis of the moving image discloses its ontological difference from the photographic image. Scrutinizing representation of movement in chronophotographic practice, the spatial abstraction of continuity caused by photographic seriality is revealed thus enabling a departure from the traditional understanding of cinema's temporality. The practice based research – which is also concerned with the issues of continuity's representability and the falsification of perception of the moving and still image – produces formal cinematic devices used for the making of the feature length documentary *an Anthology of Easter*. Challenging the conventional poetic and aesthetic modalities of non-fiction film, it addresses the question of the continuity of movement, time and space and engages with the intelligible perception of the real world as a referent of the moving image. Finally, the thesis proposes that the moving image of cinema enhances the notion of indexicality; for, it provides us the unique representational sign that retains the continuous nature of time, in the image of the real world.

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the friends, they are the ones who make time worth enduring...**

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The truth-machine: moving image and the failure of representation

This chapter introduces the methodology³ of the research and the key theorists that will be discussed. It examines Bergson's dismissal of the categorial systems of representation, due to the utilization of discontinuous poses for the representation of continuity, and the implications for our understanding of time and movement. Following an overturning of the philosophical perspective on time's relation to movement it proposes that the cinema can provide a novel representability of continuity.

In short, we can follow from the mineral to the plant, from the plant to the simplest conscious beings, from the animal to the man, the progress of the operation by which things and beings seize from their surroundings that which attracts them, that which interests them practically, without needing any effort of abstraction, simply because the rest of their surroundings takes no hold upon them: this similarity of reaction following actions superficially different is the germ which the human consciousness develops into general ideas.¹

Henri Bergson

The requisite of a genetic theory for the moving image of cinema

The malleable definition of cinema's essence nurtures a multiplicity of theories for the moving image and sustains the medium's divergent representational modalities. The ensuing equivocalness and adaptability of the moving image become at once the cinema's greatest asset and vulnerability; for they exemplify the necessity of subordinating cinema to systems of intelligibility and regimes of knowledge, that shape and direct the moving image's meaning.

Jacques Rancière hypothesizes on the perturbing possibility:

Those who can do everything are usually doomed to servitude. ... the "passivity of the machine" ... lends itself just as well to the work of restoring the old representative power of active form arranging passive matter that a century of painting and literature had struggled to subvert. At the end of the day the whole logic of representative arts finds itself restored, piece by piece, by this machine. ... cinema arrives as if expressly designed to thwart a simple teleology of artistic modernity, to counter art's aesthetic autonomy with its old submission to the representative regime.²

Is the cinematic medium preserving the representational forms of traditional arts, or are there elements that subvert what appears to be a submission of its image to such servitude? One of the main concerns of this thesis is to exposit the cinema's unique representational capacities through a comprehensive examination of the cinematographic apparatus. In the course of this investigation, the genetic formation of the moving image of cinema will be examined from several perspectives, so that an advanced understanding for the intelligible perception of the image may emerge.

For this reason we turn to Rancière's recent overarching account about the image of

¹ Henri Bergson, *Matter and Memory*, trans. Nancy Margaret Paul & Scott Palmer (New York: Zone Books, 1991), pp. 159-160.

² Jacques Rancière, *Film Fables*, trans. Emiliano Battista (New York: Berg Publishers, 2006), p. 10.

modern art that is also concerned with the cinematic image. Considering the influential figures that theorized the moving image, Rancière acknowledges that the cinema like modern theory of art:

[it] also has two model thinkers: André Bazin, who in the 1950s, a religious agenda firmly in the background, deployed the arsenal of phenomenology to theorize the artistic advent of the essence of cinema, which he identified with cinema's "realistic" ability to "reveal the hidden meaning in people and things without disturbing the unity natural to them" and Gilles Deleuze, who in the 1980s set about articulating a theory of the break between these two ages based on a rigorous ontology of the cinematographic image.³

The realism hereditary in Bazin's representational ontology and Deleuze's attempt to re-innovate the genesis of cinematic representation are the main theories that will inform the genetic account for the moving image and the ensuing formulation of a perceptual model for the image. The main points of concern for this thesis can now be stated:

- To redefine the ontology of the moving image by considering the representability of continuity –movement and time– in cinema and actualize a model for the intelligible perception of such image.
- To rethink an account of cinematic realism that considers truth as the transcendental exteriority of representation, by providing an ontological link between moving images and the real world.

Introducing the ontological method

Unlike traditional arts like music, painting and literature, the cinema's young age as an industrial art foregrounded the necessity to redefine the ontology of the moving image in every newly proposed theory of film. Accordingly early film theorists amend their writings with philosophical and ontological accounts concerning the image of the modern representational medium. A trajectory can be traced taking us from the very first theories that tried to theorize cinema as language and construct a grammar of film –most notably the theory of montage by Sergei Eisenstein– or to discover mechanical, rhythmical and other harmonic qualities in the moving image –the poetic principles in the cinema of Psevolod Pudovkin, Dziga Vertov and Joris Ivens–⁴ to the later theories which attempt to assign precise meaning to the image's visual characteristics by providing informed aesthetical canons –either through an examination of the cinema's medium specificity, as in Rudolf Arnheim's *Film as Art*,⁵ or through an adaptation of theoretical tools from linguistics for the creation of a system of film semiotics, as in *Film Language* by Christian Metz,⁶ or more recently, through a development of analytical tools for

³ Jacques Rancière, *Film Fables*, p. 107.

⁴ Some filmic examples that showcase the poetics of cinema that characterizes each film-maker are: Dziga Vertov, *Kino-Eye* (1924), *Man with a movie camera* (1929), *Three Songs about Lenin* (1934). Psevolod Pudovkin, *Mother* (1926), *The Deserter* (1933). Joris Ivens, *The Bridge* (1928), *Rain* (1929).

⁵ Rudolf Arnheim, *Film as Art* (California: University of California Press, 1957).

⁶ Christian Metz, *Film Language: A Semiotics of the Cinema*, trans. Michael Taylor (New York: Oxford University Press, 1974).

film criticism by V. F. Perkins in *Film as Film*⁷-. Despite the chronological spacing that separates these theories they share common approaches and objectives; in their attempt to impart to cinema the legibility that other representational systems already possess and benefit from, a single characteristic is endorsed as the substantiation of the cinematic medium's essence.

Re-visiting the brief history of film theory, Tom Gunning gains an appreciation for the methodological reasoning that underpins such attempts to define a single characteristic as the essence of cinema. Gunning maintains that:

An attempt to isolate a single essence of cinema remains not only an elusive task but possibly a reactionary project, yet most earlier attempts by theorists to define the essence of cinema can also be seen as attempts to elucidate the specific possibilities of cinema within a media environment that threatens to obscure or dismiss the particular powers that film holds.⁸

Thence, Gunning urges for a return of film theory to the consideration of the cinema's medium specificity, especially in the current epoch when theoretical undertaking has been upstaged by modern approaches '(like semiotics, psychoanalysis, or cognitivism) that seem to ignore or minimize differences between media in favour of broader cultural or biological conditions'.⁹ Fundamental elements of cinema that derive from the technological apparatus that creates the moving image are put aside by film theories that do not prioritize a definition of the ontology of the moving image. Following Gunning's proposition, the essentialist approach of classical film theories will not provide the methodological example for this research; instead the thesis will examine the cinematographic apparatus and the corresponding representational modality of cinema in relation to the concept of continuity, in order to disclose those elements that differentiate cinema from other relative representational mediums.

The methodological approach of this investigation is made explicit by the requirement that all research questions are to be concerned with the moving image of cinema ontologically, thus declaring the significance of the image for the intelligible perception of being and world. This approach applies to both aspects of the research, theoretical and practical, and can be straightforwardly described, Richard Rushton would concur,¹⁰ as involving one's self with the cinema as characteristic of a true worldly being. Heidegger's claim regarding the successfulness of an ontological investigation is rather unexpected:

The real "movement" of the sciences takes place when their basic concepts undergo a more or less radical revision which is transparent to itself. The level which a science has reached is determined by how far it is *capable* of a crisis in its basic concepts. In such

⁷ V. F. Perkins, *Film as Film: understanding and judging films* (New York: Da Capo Press, 1993).

⁸ Tom Gunning, "Moving away from the Index", in *Differences: A Journal of Feminist Cultural Studies, Indexicality: Trace and Sign*, Vol. 18, Num. 1, ed. Mary Ann Doane, (Durham: Duke University Press, 2007), p. 37.

⁹ Tom Gunning, "Moving away from the index", p. 36.

¹⁰ Richard Rushton adopts Cornelius Castoriadis' proposition that, a thing or being that holds its own reality should be approached 'as characteristic of real being' and not as 'deficient or secondary mode of being'. cf. Richard Rushton, *The Reality of Film: Theories of filmic Reality* (Manchester: Manchester University Press, 2010), p. 191.

immanent crises the very relationship between positively investigative inquiry and those things themselves that are under interrogation comes to a point where it begins to totter.¹¹

An ontological inquiry can utilize the crisis of concepts essential for cinema in order to advance the understanding of how it partakes in the creation of worldly meaning. Such crisis does not emerge by polemically founding an insurmountable incompatibility with traditional film theory, but it derives from a re-examination of the cinema's basic elements in a manner that is *transparent* to film theory; that is to say, redefinition of the ontology of the moving image does not refute or make obsolete any meaning that was previously assigned to the elements of film. Finally, the ontological investigation is not driven by an intention to devise an account that is solid, infallible and final; paradoxically, it is deemed most effective when the ontological stance gives rise to theoretical propositions which are at the verge of collapse, thence enabling at any instant a complete regeneration of the ontological account.

Cinematic image and the representation of the real world

To expose the ontological underpinnings of the link between cinematic images and the real world, let us examine how film theory addressed the issue of a connectedness between representation and reality. Rushton makes an insightful observation by suggesting that, when confronted with the issue of representation in cinema, theorists 'base their arguments on a desire to avoid representations that are illusionists in favour of forms that are closer to (what they conceive as being) the specificities of reality as such'.¹² Rushton's proposition is dual: firstly, the discourse of real versus illusive representation relies on a fictitious favouritism that is specific to each film theory, and secondly the reality that each theory proposes is an equally factitious construction. This twofold claim provides the foundation for Rushton's overarching opposition of a division between cinematic illusion versus cinematic realism that is exploited during his discussion of numerous film theories. Rushton adopts Anne Kibbey's position to expose a modern kind of iconoclastic ideology by the film theorists who divide the cinematic images in good and bad images.¹³ This argument, that brings to mind another famous division between 'those directors who put the faith in the image and those who put their faith in reality'¹⁴ by Bazin, voids an exterior worldly reality and other external systems for the valuation of the image, by making explicit that the introduction of criteria that deem images good or bad are purely subjective. Although Rushton intends to defend Bazin's account for the image and his advocacy for realistic representation in cinema, it becomes clear that a critique of cinematic representation should be emancipated from the imposition of an external rarefied reality and become concerned only with the image itself. In Bergson's words, 'Matter or mind, reality has appeared to us as a perpetual becoming. It makes itself or it unmakes itself, but it is never

¹¹ Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (Oxford: Blackwell Publishing, 2007), p. 29.

¹² Richard Rushton, *The Reality of Film*, pp. 38-39.

¹³ Richard Rushton, *The Reality of Film*, pp. 39-41.

¹⁴ André Bazin, "The Evolution of the Language of Cinema", in Leo Braudy and Marshall Cohen eds., *Film Theory and Criticism: Introductory Readings* (New York: Oxford University Press, 1999), p. 43.

something made'.¹⁵ Therefore, both the theoretical and practical aspects of this research will confront the task of defining an ontology of the moving image that discloses its connection to the real world, by considering a concept that is inherent to both cinematic and worldly reality: continuity. The analysis of the process by which continuous phenomena –movement and time– are abstracted from the real world to become moving images, is the quintessential critique of cinematic representation, since an ability to produce and reproduce the image of the moving world is the constitutional principle of cinema both as ideological conception and technological invention.

Before examining the ontological aspect of continuity for cinematic representation we have to acknowledge that, when thinking about the representation of the real world as image worldly objects and concepts can not be defined purely or entirely on the base of listing their ideal and material perceptible characteristics. Images in Bergson's account for the perception of the material world are given a curious mode of existence; he writes, 'by "image" we mean a certain existence which is more than that which the idealist calls a *representation* but less than that which the realist calls a *thing* – an existence placed halfway between the "thing" and the "representation"'.¹⁶ In a rare instance of proximity to Bergson's mindset, Heidegger comments on both modes, ideal-conceptual versus material-sensible, of an intelligible perception of the real world:

Whereas the first interpretation keeps the thing at arm's length from us, as it were, and sets it too far off, the second makes it press too physically upon us. In both interpretations the thing vanishes. It is therefore necessary to avoid the exaggerations of both. The thing itself must be allowed to remain in its self-containment. It must be accepted in its own constancy.¹⁷

It is the position of this thesis that a model for perception that understands "matter" –the real world– as the Bergsonian "aggregate of images", should allow for an interchangeability between material and idealistic worldly qualities –the first we physically sense, the second we mentally cognize– and not prize the one over the other. Therefore, an account for the image that aspires to actualize such a perceptual model begins by acknowledging that –even in concern to a world of matter– the essence of a thing may always evade its sensible perception and that our understanding of the real world relies on an interchangeability of the image's characteristics during the perceptual process; for it is when our ideas about the image coincide with our sensible perception, that the image assumes a constancy that renders it real.

Representation is nothing but the systematization of an agreement between the ideal and the sensible that automates the intelligible perception of images. Heidegger identifies this mechanism that strengthens the representational regime as a residuum of a long philosophical

¹⁵ Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (New York: Henry Holt and Company, 1913), p. 272.

¹⁶ Henri Bergson, *Matter and Memory*, p. 9.

¹⁷ Martin Heidegger, "The Origin of the Work of Art", in *Martin Heidegger, Basic Writings from Being and Time (1927) to The Task of Thinking (1964)*, ed. David Farrell Krell (London: Routledge & Kegan Paul, 1978), pp. 156-157.

tradition and then admonishes: 'if in addition the subject-object relation is coupled with the conceptual pair form-matter; then representation has at its command a conceptual machinery that nothing is capable withstanding'.¹⁸ This prospect of an omnipotence of representational systems that always short-cut the perceptual understanding of the image, urgently brings forth the need to eradicate the schemata that confine our understanding of the world and being. Therefore, the model for the perception of the world that this thesis will formulate, considers the image –of a thing, concept or being– as a tripartite schema that includes the worldly object itself, representation and perception.¹⁹ The image in this account is not a representation, rather it would be more accurate to describe representation as a severely reduced image, due to the integration of analytical systems that insure its intelligible perception. With such a distinction between image and representation in place, the reasoning behind a consideration of cinematic representation, instead of being concerned only with the image of cinema, ought to be made explicit. Hughes explains that previous film theories –even the profound genetic theory for the image of cinema by Gilles Deleuze– conflate image and representation. Consequently, Hughes claims, we need to acknowledge that 'the expressions "actual", ... "representation", "quality-extensity", the "perceptual world" all define the inhabitants of the world of representation, the rules and regulations of which are defined by the human game'.²⁰ Since worldly being is made known to us through its phenomenological perception, an attempt to define the ontology of the moving image is not incompatible with the actualization of a model for the perception of the image as representation. Therefore the primary condition of this research to be concerned with the moving image as ontologically significant for the understanding of being and world, acquires further importance; for it allows moving from the representational aspect, to the consideration of the image itself.

The cinematic philosophy of Gilles Deleuze

As it was previously stated, an ontological inquiry can utilize the crisis of cinema's basic concepts. Such a crisis of the moving image along with a simultaneous breakdown of cinematic representation, is described in Gilles Deleuze's theory for the image of cinema.²¹ Right from the beginning it is worth considering whether a change in the medium's representational modality, conceived by Deleuze as drastic division between movement-image and time-image, expresses a true crisis of the cinematic image; or, whether it is a fictitious theoretical construction that introduces this radical break in the history of cinema in order to reflect the rupture inflicted to world history by the First and Second World Wars. John Mullarkey also adopts a critical stance towards Deleuze's theory for the image of cinema and by making use of an analogy to literary dramatization he provides a summary of its narrative that overemphasizes the fictive elements of this account:

The story arc of *Cinema 1* and *Cinema 2* (is) as dramatic as it is (narratively)

¹⁸ Martin Heidegger, 'The Origin of the Work of Art', p. 158.

¹⁹ The interconnection of these elements within the image, is made evident in a following chapter of this thesis.

²⁰ Joe Hughes, *Deleuze and the Genesis of Representation* (London: Continuum, 2008), p. 118.

²¹ Gilles Deleuze, *Cinema 1: The Movement-Image* (London: Continuum, 2005).

Gilles Deleuze, *Cinema 2: The Time-Image* (London: Continuum, 2005).

classical. It begins with a state of nature, followed by its fall and subsequent redemption: there was once a cinematic image adequate for expression (movements that mattered), that then fell into crisis (the shattering of the movement-image), before its resurrection as a time-image, an image adequate for its time, even when it is a time of loss and decay.²²

The reference is overly revealing for Deleuze's interest on literary criticism, narratology and theories of signs²³ largely responsible for his continuous paraphrasing of the classical narrative structure of "equilibrium–disruption–reinstatement new equilibrium" in his philosophical writings on representation.²⁴ Joe Hughes assigns an homologous narrative structure to *The Logic of Sense*,²⁵ but through the introduction of a narratological distinction between *story* and *plot* he makes this intriguing observation: Deleuze's presentation of a theory's *story* methodologically surmounts and finally overrides its traditional narrative structure.²⁶ Hence this thesis contends, although the literary paradigm can provide a compelling justification for the kindred narrative variations in Deleuze's philosophical theories, it would be fittingly vindicating to conceptualize the aforementioned multiplicity in relation to Deleuze's philosophical concept of the *virtual* and his endeavour to think anew *difference*. In order to fully exploit the implications of this proposition consider the following: any persistent methodological threads running through Deleuze's work and the recurring appearance of omnifarious theoretical terms to which he assigns corresponding functionality, are more important for an understanding of the Deleuzian mindset than a falsified history Deleuze himself conceives to interweave the theory's narrative into historical, cultural, or any other context.

Pursuing this line of thinking, an unchanged premise in Deleuze's work is identified: the representational regeneration always follows a breakdown of representation that is triggered by a crisis of the image-sign. Representation, in this context, refers to the larger organizational system that describes a relation of images with the world, and its failure can be constructively utilised only in the case that we understand precisely both an ontology of the image and how it partakes in rendering worldly representation intelligible. Almost all Deleuzian theories of signs –literary, cinematic, or psychoanalytical– are merely micro-modelling his grander philosophical position on the importance of grounding perception within a representational genetic process. Hughes references several examples to maintain that:

The only way to understand Deleuze's texts is to understand them as a theorization of genesis, and the only way to understand Deleuzian concept –whether it be "line of flight", "body without organs", or even, in *What is Philosophy?*, "science", "art", and "philosophy"– is to determine its place and function within the genesis in which it

²² John Mullarkey, *Refractions of Reality: Philosophy and the Moving Image* (Basingstoke: Palgrave Macmillan, 2009), p. 87.

²³ *Proust and Signs* is an example of literary criticism that is concerned with the provision of a theory of signs. cf. Gilles Deleuze, *Proust and Signs*, trans. Richard Howard (London: The Athlone Press, 2000).

²⁴ A classical narrative structure is adopted in *Difference and Repetition* and *Cinema 1 & 2* among others. cf. Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (London: The Athlone Press, 1994).

²⁵ Gilles Deleuze, *The Logic of Sense* (London: Continuum, 2004).

²⁶ Joe Hughes, *Deleuze and the Genesis of Representation*, p. 20.

partakes.²⁷

The acknowledgement of such theoretical scope comes from Deleuze himself; with the primary thesis of *Difference and Repetition* he proposes a generalized and fundamental application of the aforementioned methodological paradigm in relation to contemporary philosophy:

Modern thought is born of the failure of representation, of the loss of identities, and of the discovery of all the forces that act under the representation of the identical. ... All identities are only simulated, produced as an optical "effect" by the more profound game of difference and repetition.²⁸

Seen in this light Deleuze's cinematic philosophy acquires paramount importance for modern thought. For, the genetic theory of *Cinema 1 & 2* is concerned with the moving image and the perceptual processes that render intelligible this kind of representational sign, can also induce a meaningful understanding of the real world's image. It would not be an hyperbole to suggest that, according to Deleuze, modern thought is only to rethink the image and form a new theory for representation and perception, to undo all the work of the philosophy of antiquity and renew the meaning of the world.

Cinematic representation: overturning a traditional understanding of time

Ancient thought's reflection on the variation of images, intending the identification of eidetic representatives of the natural world, lead to the genesis of categorial systems. This was an originative and immense undertaking since the lack of pre-installed regimes of knowledge provided an opportunity for a truly open perception of worldly images. An initial indeterminacy that afforded a fluency in the representational abstraction of the world, turned rapidly into a rigid formalized system. That is the reason Bergson relates the insertion of the immutable idea to the system of categorial differentiation; with its coming a whole cosmology equipped with a constant measure for the knowledgeable understanding of the world is put in place.²⁹ The categorial systems solidify the image's intelligible meaning and subdue its indeterminacy, thus enabling the emergence of a cinematographic kind of perception that exchanges one static view of the world for another. The exclusion of the indeterminant, as the condition for the creation of an infallible system of knowledge, is not a prerogative of the modern epoch, but as Bergson observes 'it is the very idea ... that we find in the ancient philosophy. The main lines of the doctrine that was developed from Plato to Plotinus, passing through Aristotle (and even, in a certain measure, through the Stoics), have nothing accidental, nothing contingent'.³⁰ Alain Badiou asserts this power of the categorial system to instill convention, but also refers to the modern thinker that managed to override its principles by suggesting that 'Logic, ever since Aristotle, has been nothing other than the encoding of the categories, the triumph of property over impropriety. One would need to extract from Deleuzian univocity another logic altogether; a logic in which, with regard to categorial distribution, we cannot rest content with

²⁷ Joe Hughes, *Deleuze and the Genesis of Representation*, p. 16.

²⁸ Gilles Deleuze, *Difference and Repetition*, p. xviii.

²⁹ Henri Bergson, *Creative Evolution*, pp. 315.

³⁰ Henri Bergson, *Creative Evolution*, pp. 315-316.

the usual connections'.³¹ This dismantling of logical connections, paraphrased as a break of the sensory-motor link in Deleuze's cinema books, is expressed as an opening up of the perception following the appearance of new types of cinematic images;³² in other words, the image's meaning is not prescribed but becomes actualized within the perceptual process.

Ancient philosophy attempted to understand the continuum by utilizing discontinuous points. Concepts like movement, time and space, were described by a series of distinct points or instants adhering to an ordering system; a common organizational principle was the division in canonical distances-intervals but the idea of decisive-privileged instants was also employed. Instead of understanding its true nature, continuity was reduced to an accessible differential system, it was rationalized. This abstraction of the continuum through differentiation was held in place until its recent reformation by the modern philosophy; it was Kant who questioned our representations of space and time with his *Critique of Pure Reason*,³³ suggesting for a radical rethinking of time's relation to movement. Bergson implements Kant's notion of understanding the continuum through the philosophical method of intuition, to propose his own theory for the perception of the world as images. Rodowick remarks, 'The clearest way of explaining the link between Kant and Bergson is to say that both refuse to think the form of time as a chronological and linear succession in space. ... Movement can no longer be imagined as physical movement in space; it must be reconsidered as the form of change through time'.³⁴ This renovation of time's relation to movement was transposed by Deleuze to cinema's moving image and its representation of continuity –movement and time–. In an attempt to trace the origins of our misrepresentation of continuity Deleuze observes that "for antiquity, movement refers to intelligible elements; forms or Ideas which are themselves eternal and immobile. Movement, conceived in this way, will thus be regulated transition from one form to another, that is, an order of *poses* or privileged instants".³⁵ Therefore Deleuze adopts Bergson's position in suggesting that, our understanding of the continuum through differential fragmentation also qualifies our conception of representational systems. Differentiation, as the founding principle of representation, can only account for a change in the position of immobile parts –a spatial transformation of the whole– but it cannot express a constant and qualitative transformation of the whole.

Hughes describes the structure that is holding together the representational system according to Deleuze; he notes, 'Deleuze characterizes the world of representation as a fixed or

³¹ Alain Badiou, "Of Life as a Name of Being, or, Deleuze's Vitalist Ontology", in *Pli*, Volume 10: *Crises of the Transcendental: From Kant to Romanticism*, trans. Alberto Toscano (The Warwick Journal of Philosophy, 2000), <http://www.warwick.ac.uk/philosophy/pli_journal/pdfs/Vol_10/Pli_10_10_Badiou.pdf>, Web: 14 February 2010, p. 194.

³² Gilles Deleuze, *Cinema 2: The Time-Image*, pp. 24-33.

³³ Kant rejected the ancient Aristotelian and the modern Newtonian views on time and space, as well as, their proposition that the continuum can be differentially described. Kant considered time and space as a priori representations which cannot be know empirically but only intuitively. cf. Emmanuel Kant, *Critique of Pure Reason*, trans. J. M. D. Meiklejohn (Pennsylvania: The Pennsylvania State University Press, 2010), <<http://www2.hn.psu.edu/faculty/jmanis/kant/Critique-Pure-Reason6x9.pdf>>, Web: 12 January 2011.

³⁴ David N. Rodowick, *Gilles Deleuze's Time Machine*, (Durham: Duke University Press, 1997), p. 128.

³⁵ Gilles Deleuze, *Cinema 1: the Movement-image*, p. 4.

sedentary distribution of singular points: they are distributed in an already defined form according to pre-established rules'.³⁶ As long as cinematic images comply to the systems of organization that render them coherent as representational signs, the connections supporting the cinematic construct spatially, temporally, ideologically and in multiple other ways, remain unquestioned and the self-asserted cinematic reality can stay intact and complete. Rodowick describes the opening of cinematic images as a redefining of the whole, obtained by a different organizational structure that exposes an exteriority of this representational construct. Such exteriority overturns the linear spatio-temporal causality that characterizes the conventional construction of continuity in the cinema, to set forth the true erratic behaviour of time. This is Rodowick's description:

In its primary definition, this outside is the force of time, which, incommensurable with space, changes the function of the interval. There is no longer a rational interval assuring continuity in space and succession in time. Rather, the force of time produces serialism organized by irrational intervals that produce a dissociation rather than association of images. The interval is no longer filled by a sensory-motor situation; it neither marks the trajectory between an action and reaction nor bridges two sets through continuity links.³⁷

Cinema is capable of substantiating this opening in the image because of its unique capacity to represent continuity. The cinematic representation of the real world in motion through the reduction of homogeneous real time to sequential fragmented instants, for the subsequent re-animation of the immobile images, highlights the problem of reconstituting the continuum through the discontinuous. Therefore a general crisis of the image that caused the breakdown of representation can be understood as the effect of a move from the Cartesian definition of time that affiliates perception with an empirical understanding of the world as representation, to the Kantian description of time that enables the perception to transcend its representational referent. Thus, previous systems for the knowledgeable understanding of being and the world are not longer effective since, according to Rodowick, 'the True can no longer be thought under the forms of the changeless, the self-identical, or the self-same. What used to be called the "laws" of thought (the principles of identity, of contradiction, and of the excluded middle) are effectively overthrown'.³⁸ This research will make evident the significant role of the modern mechanical representational mediums –photography and cinema– for invalidating a traditional understanding of time that was the foundation of ancient logic.

Mary Ann Doane suggests, 'The rationalization of time (its division into discrete entities – seconds, minutes, hours, and its regulation by the clock) is a symptom of the foreclosure of meaning in the defence against shock. Rationalization supplants, displaces, or, in a sense, *mimics* meaning'.³⁹ Rationalization, then, is a mimetic understanding of continuity that is based

³⁶ Joe Hughes, *Deleuze and the Genesis of Representation*, p. 112.

³⁷ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 143.

³⁸ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 130.

³⁹ Mary Ann Doane, *The emergence of Cinematic Time: Modernity, Contingency, The Archive* (Cambridge: Harvard University Press, 2002), p. 14.

on exchanging homogeneity for a canonical discontinuity. Such falsification of the continuum is not without purpose; modernity depends on the constancy that an axiomatic systematization of discontinuity introduces, for it satisfies the scientific and economic necessity for an extreme accuracy in quantification and subdues the unrestrained power of the continuous which gives rise to chance. The appearance of the contingent in the representational modality of modern mechanical artistic mediums caused a corruption of rationalized representations of continuity. The re-emergence of contingency in modernity becomes the principal argument for Doane's project on the novel representability of time and continuity in the cinema. Doane dismisses the immobility and rigidity that Bergson attributes to representation and argues that:

Representational systems (art, literature) address themselves to the ephemeral, the contingent, the moment. The credibility of any static universal or eternal is diminished. ...in this context, the cinema ... insists that movement can indeed be born from immobilities. Cinema works by obliterating the photogram, annihilating that which is static. It appears to extract a magical continuity from what is acknowledged to be discontinuous.⁴⁰

This proposition that the cinematographic apparatus is able to re-constitute continuity, was the result of a new perspective on Bergson's theses on movement. It was Deleuze who argued that Bergson misconceived the cinematographic re-creation of movement by the use of immobile parts –photographic still images– when in reality the cinema is the representational medium that Bergson himself anticipated; for it utilizes mobile segments –open durations– to present continuous phenomena like movement and time, and annuls the importance of the privileged instants for the representation of continuity by the technological employment of any-instants-whatever.⁴¹

Deleuze uses his philosophy of difference to claim that an experience of continuity re-composed through differential repetition, is qualified qualitatively by variable intensities that render the continuum incommensurable; and in the case of the cinematic representation of continuity the affective experience of the moving images debases the importance of isochronic instants for an abstraction of movement by the cinematographic apparatus.⁴² Bergson provides an example of a correct attitude towards time by exposing the difference between ancient and modern science in their attempt to know time; he notes, '*ancient science thinks it knows its object sufficiently when it has noted of it some privileged moments, whereas modern science considers the object at any moment whatever*'.⁴³ This thesis contends that cinema adopts the same attitude towards the real world since it can only present its referent by considering it at any-instant-whatever. Therefore Deleuze succeeds in turning Bergson's dismissal of the cinema as a profoundly unreal presentation of continuity –worldly movement and time– to its main advantage. This qualitative nature of time's representability in cinema is manifested in the tension between continuity and discontinuity: the latter attempts to conceal the analytical

⁴⁰ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 176.

⁴¹ Gilles Deleuze, *Cinema 1: The Movement-Image*, pp. 1-12.

⁴² Gilles Deleuze, *Difference and Repetition*, p. 21.

⁴³ Henri Bergson, *Creative Evolution*, p. 330.

nature of cinematic representation by seamlessly reconstructing the impression of continuity, both spatially and temporally; while, the first relates the homogeneity of continuity to the contingency of the any-instants-whatever.⁴⁴ To expand this idea of an indifferent treatment of time by the cinematographic apparatus, this text will engage in the following chapters with the regimes of the image that Jacques Rancière proposes in his theory for the ontology of modern art in *The Politics of Aesthetics*.⁴⁵

The ontological significance of continuity for the moving image

The new representability of continuity is expressed by an opening up of the image that results to the failure of cinematic representation; for it thwarts the traditional representational modalities of cinema to advance a new perception of the moving image. As it is made explicit in Deleuze's cinema books the crisis of the image stems from the breakdown of the sensory-motor schema that solidified the conventions underlying the creation of meaning in early and pre World Wars cinema. Prior to the emergence of a new representational modality, cinema's depiction of the worldly exteriority was based upon a continuity that insured the subordination of moving images to the sensory-motor schema. With Bazin's early theory of cinematic realism in mind, Carroll terms this kind of continuity spatial; for, the attempt to express continuous phenomenological action or duration in the real world, is always conferred in the form of visual spatial relations, that are actualized within the photographic representational aspect of the moving image.⁴⁶ The aesthetics of deep-focus composition that 'emphasized the recording dimension of film by articulating events in a spatially and temporally *continuous* manner'⁴⁷ can be considered a substantiation of such kind of continuity that decisively determines the poetic modality of cinema. This seamless and mimetic reproduction of an exo-filmic spatio-temporal continuity is exposed by Deleuze as the falsification of the continuum; thus, he proceeds to emphasize the dissimilarities between a spatial continuity of the moving image and his concept of "false continuity". The cinema of spatial continuity produces moving images that strive to retain an appearance of continuous actions and duration intact; conversely, movement-images utilize devices like the mobility of the camera and montage, to present continuous actions and duration in a manner that may appear shattered, while retaining their referent's essence in the form of inherent, qualitative characteristics of the image as a whole. In an attempt to interpret the inner workings of this de-construction and re-assembly of the whole, Deleuze's theory of the image postulates a new understanding of time disconnected from space and movement; it is only then that false continuity can expose the relation of the cinematographic images (parts) with time conceived as the Open (whole).⁴⁸ This thesis suggests that the falsification of the continuum that is characteristic of a cinema of spatial continuity, diminishes the ontological

⁴⁴ Deleuze also relates the two modes of representing continuity with the different attitudes of scientific thought in antiquity and modernity, towards time. cf. Gilles Deleuze, *Cinema 1: the movement-image*, pp. 4-5.

⁴⁵ Jacques Rancière, *The Politics of Aesthetics: The Distribution of the Sensible*, trans. Gabriel Lockhill (London: Continuum, 2004).

⁴⁶ Noel Carroll, *Philosophical Problems of Classical Film Theory* (Princeton: Princeton University Press, 1988), pp. 104-120.

⁴⁷ Noel Carroll, *Philosophical Problems of Classical Film Theory*, p. 102.

⁴⁸ Gilles Deleuze, *Cinema 1: The Movement-Image*, pp. 20-29, 56-57.

significance of the moving image for being and the world; for, an assertive reproduction of the world in motion by the cinema, is a representational enactment that performs the reductive rationalization of the real.

Thinking about an autonomy of time and movement in the cinematic representation of continuity, is expressed by the disaffirmation of the sensory-motor schema and an impairment of meaning creation in the cinema. Jacques Rancière proposes that the new representability of continuity by the moving image causes a division in two eras of cinematic history: the first is marked by narrative continuity, the latter is an era of discontinuity and disassociation. Rancière is equally censurable for introducing a classical literary narrative and formulating a falsified history of the cinema. His account for the moving image starts with an assumption:

(T)hat there is a cinematographic modernity and that it confronted the classical cinema of the link between images for the purpose of narrative continuity and meaning, with an autonomous power of the image whose two defining characteristics are its autonomous temporality and the void that separates it from other images.⁴⁹

Rancière suggests that to realize the cinema's possibilities as a modern medium we need to apperceive its traditional representational modality; for, the determinant ontological feature of the moving image has to be sought in its newfound ability to represent what was previously unrepresented. Instead of considering the ontological determination of the cinematic image as exclusively externally and contextually formulated, we ought to think the moving image in itself to justify its evolution and history as representational sign. Such an attempt to define the ontology of the moving image will resultantly disclose its variation from all the other representational images. Therefore Rancière comes to the rather unexpected proposition that, unlike an early image of cinema which defines itself in terms of narrative, literary, linguistic, artistic and scientific prescripts, the characteristics that define the image of modern cinema are the expression of an already existent ontology of cinema.

The ontology of the moving image is interconnected with the technological aspect that determines the cinema's representational modality for, as Rodowick proposes the 'cinema's two regimes are marked on the one hand by the automatization of movement in the image and on the other hand by the autotemporalization of the image'.⁵⁰ The inception of these two regimes can be traced in Rodowick's claim that 'one important consequence of the passage from an indirect image of time as spatial succession to a direct image is the displacement of a quantitative view of time by a qualitative one where time is given as a force. In this respect, the relation between time and movement must be reconsidered'.⁵¹ This text has already exposed the conflation of time and movement within traditional representational systems that intend a quantification of the continuum. The slight revision in our understanding of continuity, that is caused by the different representational modality of the moving image, radically changes the

⁴⁹ Jacques Rancière, *Film Fables*, p. 107.

⁵⁰ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 173.

⁵¹ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 121.

processes of meaning construction in cinema. According to our initial description of ontological investigation, we ought to consider continuity as a basic concept of the cinema that bears ontological significance for its moving image. Therefore, in the course of the next chapters this research resolves to an examination of continuity's cinematic representation, to describe the spatial and temporal articulations of the real world by the moving image and ground emerging concepts that sustain their ontological connection.

Rethinking the continuity of the moving image is the basis of a broader re-examination regarding the image's representational signification, which is concerned with the mechanics of perceptual apprehension that give rise to the real world's intelligibility. Hence, an appearance of a break in the continuity of the image of cinema, is capable of causing a profound disruption of its representational modality. This occurrence is often expressed in theoretical accounts as a radical break in cinematic history –Rancière's aforementioned account is such an example– or, the emergence of a new type of image. Deleuze's theory instils such a break in the progression from the movement-image to the time-image of cinema. Mullarkey itemizes the five apparent characteristics attributed to the new image of cinema, the time-image, and comments:

“the dispersive situation, the deliberately weak links, the voyage form, the consciousness of clichés, the condemnation of plot”. Together, they transform a vice into a virtue, wresting a new image from the bare repetitions of Hollywood. It can do this because, by thematizing a failure, the time-image gives us a *direct* representation of what reality is like itself: time as breakage, as wound, as fissure, as crack, as differential – all the features that Deleuze's process philosophy explores across its corpus.⁵²

No longer is the moving image primarily defined by movement alone –its own, or, the world's– for time tugs along a new dimension of the continuous which forcefully redefines the ontology of the moving image. Exhausting the multiplicity of the movement-image, Deleuze proceeds to the time-image and rethinks the meaning of the image of cinema and consequentially re-invents even the aesthetic function of the Bazinian characteristic of realistic representation – depth of field and its mimetic subordination to realistic representation– and imbues to it the ontological urgency of time: 'In this freeing of depth which now subordinates all other dimensions we should see not only the conquest of a continuum but the temporal nature of this continuum: it is a continuity of duration which means that the unbridled depth is of time and no longer of space. It is irreducible to the dimensions of space'.⁵³ A move from movement-image to the time-image of cinema was nothing more than the reverberation of a similar move in our understanding of time. Adopting the Kantian proposition of the inability to understand time empirically in its representational form the moving image of cinema adopts Bergson's intuitive philosophical methodology.

Instead of a conclusion

⁵² John Mullarkey, *Refractions of Reality*, p. 93.

⁵³ Gilles Deleuze, *Cinema 2: The Time-Image*, p. 105.

At this point this thesis can maintain with certainty that the failure of representation does not emerge as capricious theoretical construct, but it is rooted in a profound crisis of the true that shakes the foundations of an ontological connection between image and the world. A move from the movement-image to the time-image in Deleuze's theory for the image and the resulting division of cinematic history in two, is not a mere progression in the typology of moving images but also reflects a shift in the philosophical understanding of time. Mullarkey provides a synoptic account that asserts this position:

What gives the *Cinema* volumes their twin titles, is the change in attitude towards time from the Greek view to the Kantian one, from time being subordinated to movement to movement being subordinated to time. Art, and in particular cinema, emulates this shift according to Deleuze, and so has a "role to play in the birth and formation of this new thought, this new way of thinking". Cinema repeats "the same experience" as philosophy. Naturally, we might be wondering whether Deleuze's proposition here is a historical thesis or a philosophical one (by his own definition), or both.⁵⁴

The inception of this change in our understanding of cinematic time is linked with Bergson's exposition of the representation and perception of continuity as illusive, due to the traditional misconception of homogeneous time as spatially confined within movement. Bergson's call for a renewed understanding of time in relation to the perception of continuity was addressed by Deleuze; for, his theory for the image of cinema renovates Bergson's theses on movement and allows for the new conception of continuity's representability by the moving image. In the following chapters the moving image of cinema will be compared with the photographic image; considering the corresponding treatment of time and movement as continuous concepts, their ontological differentiation will be determined. The work of the pioneer chronophotographers Eadweard Muybridge and Étienne-Jules Marey, whose serial still images of moving bodies and animals are considered the foretoken of the cinematic image, will reveal the progression from the spatial abstraction of the continuum towards the new representability of time by the moving image. This thesis approaches the genesis of the image from multiple perspectives with the intention to bridge theories of representation and perception through the renovation of the ontological account of the moving image of cinema.

⁵⁴ John Mullarkey, *Refractions of Reality*, p. 82.

The truth-machine: moving image and the representation of continuity

Considering the representability of continuity in cinema, discloses the ontological differences between the moving image and other types of representation; thereof, it becomes possible to depart from the traditional understanding of the cinema's temporality which is interlinked to the spatial abstraction of time due to the employment of serial photographic images by the cinematographic apparatus for the representation of movement. Finally, the chapter proposes a novel way of thinking about the moving image in relation to the technological reconstitution of the continuum, by analysing the depiction of movement in chronophotographic practice.

Such is the contrivance of the cinematograph. And such is also that of our knowledge. Instead of attaching ourselves to the inner becoming of things, we place ourselves outside them in order to recompose their becoming artificially. We take snapshots, as it were, of the passing reality, and, as these are characteristic of the reality, we have only to string them on a becoming, abstract, uniform and invisible, situated at the back of the apparatus of knowledge, in order to imitate what there is that is characteristic in this becoming itself. Perception, intellection, language so proceed in general. Whether we would think becoming, or express it, or even perceive it, we hardly do anything else than set going a kind of cinematograph inside us. We may therefore sum up what we have been saying in the conclusion that the mechanism of our ordinary knowledge is of a cinematographical kind.¹

Henri Bergson

Cinematic representation of continuity and the ontology of the moving image

The cinematic image aspires to represent the –real– world in motion. Worldly objects and beings are recorded by the cinematographic apparatus as sequential photographic images which are subsequently set in motion; it is, then, by animating the immobile photographic representation that movement is reconstituted in the cinema. Therefore, to talk about the moving image of cinema is to affirm the illusive nature of a cinematic representation of continuity, evident in its ability to create an “impression of reality” through motion as Metz claims.² For in the case of the still images that are recorded onto the film reel no movement is captured at all as a visual representation; in fact, such photographic portrayal of movement would certainly disrupt the unblemished realness of cinema and bring to the foreground the apparatus that creates the moving worlds – a drawing of the curtain to reveal the wizard, cinema as a machine of wonder. Frequently, thinking about the cinema hastily bypasses the genetic process that is concerned with the moving image's coming-to-being. Rodowick locates this approach in the incautious reduction of the moving image's ontology in contemporary film theories which utilize the commonplace and severely synoptic presupposition ‘that, cinema is technological apparatus –a machine organizing the space and time of meaning in the image for the spectator–’³ before proceeding to a formulation of contextual theories for the cinema. This thesis suggests that there is more to be extracted from the originary process of technological

¹ Henri Bergson, *Creative Evolution*, p. 306.

² Christian Metz proposes that the cinema creates an impression of reality for the spectator. The cinematographic apparatus sustains this impression by recreating only the illusion of movement on the basis of a psychological and affective perception of motion. cf. Christian Metz, *Film Language*, pp. 3-15.

³ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 174.

genesis of movement in cinema to inform the ontology of the moving image.

The photographic apparatus creates the image in the likeness of the world thus satisfying an ancient fascination with its realistic re-presentation. Bazin posits it is the automatic production that secures photography's objective character and awards to its image a credibility absent from all other kinds of picture making.⁴ Christian Metz presents a contrasting view concerning the photographic medium's capacity for realistic representation:

(T)his means was still not sufficiently lifelike: it lacked the dimension of time; it could not render volume acceptably; it lacked the sense of motion, that synonym of life. All these things were suddenly realized by the cinema, and –an unexpected bonus– what one saw was not just some plausible production of motion, but motion itself in all its reality. And it is the very images of still photography that this so real motion can animate, thereby bestowing on them a novel power to convince⁵

It is this ability of the cinema to transfer the indexical nature of photography –retained intact by the cinematographic apparatus– to a representation of the world in motion, which led Bazin to consider the cinematic medium as the apotheosis of realistic representation and forcefully adjoin, hereby, photographic representational attributes to the ontology of the moving image. In reality, the kind of photographic images that are suitable for the creation of the moving image of cinema is extremely precise; bypassing characteristics like correct exposure and focus –basic aesthetic traits that insure the photographic image's representational legibility– the primary characteristic of the images which exist only as part of a sequence of photographs on the film reel, to partake in the creation of moving images, is stillness. This reference to the stillness of a photographic image marks the extremely short exposure time for each frame so that still images do not visually register the movement⁶ but instead arrest the moving subject in immobile positions. It is evident that the static photographic image also has the capacity to represent movement, but in doing so it employs a system of aesthetics proper to photographic representation. This is the misconception implicit in Bazin's representational ontology; his advocacy for realistic representation in cinema derives from an aestheticism of the photographic that threatens to degrade movement –and time– and their newly emerged representability by the moving image, to a purely aesthetic phenomenon.

This ability to record and reproduce moving subjects had severe implications for our thinking on time. Phenomena that are inherently continuous undergo a de-constructive analysis in cinematic representation; the employment of serial photographic still images transcribes time in discontinuous instants that are subsequently recomposed to create a cinematic experience which is immersed in a time that is real but disconnected from the original time of the record. A primal question that arises is whether such reduction of continuity by the cinematographic apparatus can sustain the essence of the continuum.

⁴ André Bazin, "The Ontology of the Photographic Image", pp. 13-14.

⁵ Christian Metz, *Film Language*, p. 14.

⁶ A photographic representation of motion, commonly results to the depiction of the moving subject as a blurring.

Bergson exposes the full scale of this investigation when he proceeds to a more general proposition that our perception of the material world is paradigmatic of a cinematographic analysis of continuity which introduces a difference not in degree but in kind between the world and its perception.⁷ According to Bergson, such problems are not specific to the image of cinema but is a phenomenon which plagues all representational systems. Recalling the paradox of movement posed in antiquity by Zeno of Elea⁸ he exposes this cardinal controversy and proceeds to describe the way ordinary intellect 'always translate(s) movement and duration in terms of space. But common sense and language have a right to do so and are even bound to do so, for, since they always regard the *becoming* as a *thing* to be made use of, they have no more concern with the interior organization of movement than a workman has with the molecular structure of his tools'.⁹ With the moving image of cinema comes a novel representational modality with an original perspective on time; in its core exists the tension between continuity and discontinuity, and a question over preserving the truth of the continuum in relation to the mechanical presentment and actualization of movement. For the first time the issue of truth and its relation to continuity is reciprocated; for this novel type of image is capable of materializing the continuum and making it felt as a force. Specifically in relation to the representation of time by the moving image Rodowick claims '[this force] puts truth into crisis, because in these images it is no longer possible to think a direct relation between truth and the form of time'.¹⁰

From cinematic representation to the time of the moving image

The representational aspect of the moving image of cinema draws us away from the imperceptible idealism of the continuum towards an ordinary understanding of worldly time, as the temporality of everydayness. The continuity that the moving image endeavours to retain is constrained by the analytical system of cinematic representation, which produces its own spatiality and temporality. In reference to the experience of early kinetoscopes Doane provides a description of how the moving image becomes a Proustian 'heterotopia and heterochrony, offering its spectator an immersion in *other* spaces and times, with the safe return to his or her own', and proceeds to suggest that 'what the new technologies of vision allow one to see is a record of time'.¹¹ Despite a meticulous fabrication of representational spatio-temporalities for the sake of spectacle, the consequences of passing from the continuous to the discontinuous are detrimental. No matter how precise the metric grid of quantification and differentiation becomes in representational spaces, it will always thwart the essence of the continuum and

⁷ Bergson's proposition of the cinematographical perception of continuity as the model for the perception of the world is exploited both in *Creative Evolution* and *Matter and Memory*.

cf. Henri Bergson, *Creative Evolution*, pp. 272-297.

cf. Henri Bergson, *Matter and Memory*, pp. 133-177.

⁸ The discussion on the paradoxes of motion attributed to Zeno of Elea in relation to cinematographic perception is informed by multiple references.

cf. Henri Bergson, *Creative Evolution*, pp. 307-315.

cf. Henri Bergson, *Matter and Memory*, pp. 188-196.

cf. Mary Ann Doane, *The Emergence of Cinematic Time*, pp. 172-178.

⁹ Henri Bergson, *Matter and Memory*, p. 191.

¹⁰ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 137.

¹¹ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 3.

annul its significance for the ontology of the moving image. The capacity of current systems of representation for analytic differentiation and scientific measurement, have long exceeded the limitations of bodily perception and our ability to distinguish quantitatively for the needs of ordinary tasks; thereof, categorization and distribution of images is more than adequate for everydayness, thus the image's perception becomes a habitual act causing a solidification of the image's meaning. This systematization of the perception is not without advantages; our understanding of the world through its representation becomes transferable as knowledgeable schemata – meanings solidly attached to images of the world. But, although the solidification of the image's meaning enables a knowledgeable perception of the world it is also the mortal stiffening of the image since, according to Bergson, it provides an arrested image of the moving world for the sake of a cinematographical kind of perception.¹²

Let us put aside briefly this Bergsonian idea of a cinematographical perception of the world in order to return back to the perception of the moving image itself and trace the formation of the same predicament there. According to Deleuze the main disabling factor for the openness of the perception of the image is the sensory-motor link that is embedded in a cinema of spatio-temporal continuity and seamlessness which instils the filmic conventions.¹³ The constancy of the sensory-motor schema provides such a stability that it becomes the cornerstone for the formulation of film semiotics and analytical film theories which propose aesthetic discourses as the orthodox thinking about cinema, bypassing the primary condition of an ontological definition of the moving image. This is the case in a traditional understanding of time's representability in cinema; an inability to conceive the moving image as a completely new type of sign with unique representational modality leads to an abstraction of time through the discontinuous photographic still images that make up the filmic reel. The misconception of a deconstructive annihilation of the continuum by the cinematographic apparatus is the reason for Bergson's condemnation of the cinematograph.¹⁴ Thinking about the cinematic image as a composite type of representation warrants a consideration of its photographic constituents as ontologically significant. As a result the indexical nature of the photographic representation is advanced as primary ontological characteristic of the moving image and a new representability of time in cinema is suppressed by the demand for realism.

The aesthetic prescript of photographic realism in cinema is a remnant of Bazin's representational ontology and it is re-introduced in relation to a current discourse about the indexical nature of the moving image. Merging the representational and ontological aspect of the moving image strengthens a belief that the legibility of cinematic images derives from their external referent. Such misuse of the photographic for an ontological determination of the moving image does not only falsify the unique representation of time in cinema but also

¹² Henri Bergson puts forward a proposition that language, perception and thinking that form ordinary knowledge are of a cinematographic kind; they abstract continuity by utilizing discontinuous and immobile points-instants. cf. Henri Bergson, *Creative Evolution*, p. 306.

¹³ Gilles Deleuze, *Cinema 2: The Time-Image*, pp. 167-168.

¹⁴ Henri Bergson, *Creative Evolution*, pp. 304-307.

degenerates the phenomenological experience that is specific to the moving image. Elizabeth Cowie remarks that 'the moving image and its accompanying sounds remake our relation to the time represented as one of simultaneity, a present tense of seeing',¹⁵ thus drawing our attention to a realness of the phenomenological experience of moving images due to the fact it is always immersed in the present time. The act of viewing a photograph also takes place in the present time, but our experience of time during the viewing of the moving image is that of synchronisation. The time of the phenomenological experience of the cinema is always a time endured and as such it is the only representational medium that satisfies Bergson's terms for a reconstitution of the continuum.

Photographic image and temporal ordering

Preparing the ground for the discussion on time and the ontology of the cinematic image, an in-depth investigation of time's relation to the photographic image will demonstrate the ontological significance of the photographic still for the coming-to-being of the moving image, and elucidate the cinematic representation and perception of time. Film theorists frequently conceptualize the moving image through André Bazin's highly influential proposition that the photograph's automatic production which is responsible for its indexical link with the real world,¹⁶ is also a characteristic with ontological significance for the moving image. Thus, advocates of realist representation, in their theoretical approach towards the cinema's image, adopt an aesthetic stance which impacts on the time of the moving image. Carroll reveals how an ontological dimension of the photograph's time, informs idempotently the ontology of the moving image: 'for Bazin, a film has existential import. It is a re-presentation of something that existed in the past. ...including the automatic or causal process of photography as a defining characteristic of cinematic representation is to impute to all cinematic images the property of being representational'.¹⁷ Richard Rushton defends this ontological account of the moving image by adopting the thesis that Bazin proposes an ontological identity between the real world and film, for, both reality and representational reproduction by the moving image are artificially constructed and possess their own degree of realism.¹⁸ In this light, Bazin's advocacy for realism in cinema can be considered an urge towards utilizing the representational medium in a manner that emphasizes the identical relation of its constructed reality and the real world. This proposition, though, refrains from drawing attention to a seamless twinning of the existential aspect of representation –expressed by an indexical link to its referent– with a specific temporality of such reference to the world as has-been that is specific for photographic representation. This uncomplicated understanding of photographic temporality, even in the case that realism is not one of verisimilitude, leads to a rigidly constructed filmic world;

¹⁵ Elizabeth Cowie, "Specters of the Real: Documentary Time and Art", in *Differences: A Journal of Feminist Cultural Studies, Indexicality: Trace and Sign*, Vol. 18, Num. 1, ed. Mary Ann Doane, (Durham: Duke University Press, 2007), p. 88.

¹⁶ The automatic production -the only art that benefits from the absence of man- and the verisimilitude of the produced visual representation with the world, are among the characteristics that define the ontology of the photographic image and become the reasons for Bazin's advocacy for realism.

cf. André Bazin, "The Ontology of the Photographic Image", pp. 13-16.

¹⁷ Noel Carroll, *Philosophical Problems of Classical Film Theory*, pp. 127-128.

¹⁸ Richard Rushton, *The Reality of Film*, pp. 43-44.

Rushton asserts that for the demands of recreating a “feeling” of reality, ‘this is without question what Bazin affirms: a cinematic universe where the integrity of space and duration are maintained, not chopped up and reassembled’.¹⁹ Transposing the representational attributes of photography to define the ontology of the moving image and to determine the link that exists between the cinema and the world, completely forsakes movement –a defining characteristic of cinema– along with any implications it may entail for the representability of time in cinema. This thesis argues that such omission renders invalid the passing from the representational aspect of the photographic, towards the temporal dimension of the cinematic.

Roland Barthes in his attempt to set photography apart from other types of representation, claims that the existential import of a photographic image in relation to its referent, the real world, is not only due to the referential nature of the automatic apparatus that produces the image; it is primarily due to the unique temporality of photography:

Contrary to these imitations (other systems of representation), in Photography I can never deny *the thing has been there*. There is a superimposition there of reality and of the past. And since this constraint exists only for Photography, we must consider it, by reduction, as the very essence, the *noeme* of Photography. What I intentionalize in a photograph (we are not yet speaking of film) is neither Art nor Communication; it is Reference, which is the founding order of Photography. The name of Photography’s *noeme* will therefore be: ‘That-has-been’.²⁰

When concerned with a photograph’s linking to its referent, we are confronted with the complexity of the temporal structures which are at work –in terms of the image’s production and perception– and *temporalize* the time of the photograph. Barthes equates the essence of a photographic image with a power to reference, thus acknowledging a temporal linkage between past coming-to-being with a present perception of the image. The time span that emerges bridges a here and now of viewing photographic images to their past, creating what Barthes refers to as a has-been certainty. Although the photographic image is created in the past, it can only attain its full meaning in the future where perception takes place. When we ask ‘what is the essence of the photograph?’, then, we realize the paramount importance of a temporal structuring, in creating the meaning of the representational sign. It is this temporal ordering, an immutable characteristic of the photographic process, which enables an intelligible understanding of the image. However, for the ontology of the photographic image, a primordial relation of time to the coming-to-being of the photograph must be disclosed. The ways in which such consideration of time retains the connection of representation to the real world, the referent of the image, and anticipates a subsequent perceptual understanding of the photographic image, will be made evident in the following paragraphs.

Time and temporality: “earlier and later” as opposed to “before and after”

In order to enable a fuller understanding of time and its dissimilarity from temporality,

¹⁹ Richard Rushton, *The Reality of Film*, p. 76.

²⁰ Roland Barthes, *Camera Lucida: Reflections on Photography* (London: Vintage Books, 2000), pp. 76-77.

we turn our attention to a unique interpretation of Aristotle's definition of time, as it described in his fourth book of Physics, by Heidegger:

time is that which is counted and which shows itself when one follows the travelling pointer, counting and making present in such a way that this making-present temporalizes itself in an ecstatical unity with the retaining and awaiting which are horizontally open according to the "earlier" and the "later". This, however, is nothing else than an existential-ontological interpretation of Aristotle's definition of "time": τούτο γάρ ἐστὶν τὸν χρόνον, ἀριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ τὸ ὕστερον. "For this is time: that which is counted in the movement which we encounter within the horizon or the earlier and the later"²¹

Aristotle's definition has decisively influenced western philosophy since antiquity and has in most cases introduced a detrimental misconception, that an enumeration of time takes place within movement. This can be simply stated as: firstly, time is spatial, and, secondly, time's spatial character enables its quantification. Chronophotographer Étienne-Jules Marey intuited the erroneousness of dealing with time as the measure of spatiality in motion, and strived to render movement representable without imperilling its continuity. In what can be read as a refutation of Aristotle's definition of time, Marey's confrontation with movement as a continuum forces him to admit:

The understanding of a movement implies a double knowledge, namely, that of space as well as that of time. ...photography could reproduce the trajectory of a body moving in space; but the idea there conveyed of the successive changes in position was not sufficient to define the movement. The power to do so presupposes a knowledge of the relationship existing at any moment between the distance traversed and the time occupied.²²

Within this photographic representation of movement as spatial differentiation for the sake of perceptual intelligibility, lies an entire devastation of the homogeneous nature of a continuum. In reference to time, Heidegger calls this an ordinary –in opposition to ontological– understanding, which he terms temporality. Heidegger's interpretation of Aristotle's definition proposes the conceptual tools for an understanding of time which breaks away from traditional thinking, that ordinarily translates time as spatial enumeration. Aristotle's 'κατὰ τὸ πρότερον καὶ τὸ ὕστερον', is usually interpreted in a literal sense of 'a before and an after' linked to a specific temporal point, the present.²³ Heidegger opts for the temporally charged terms 'earlier and later' instead of using the differential temporal descriptors 'before and after'. This seemingly minor amendment leads to an original understanding of time through the introduction of the concept of *temporalization* of time.

²¹ Martin Heidegger, *Being and Time*, p. 473.

²² Étienne-Jules Marey, *Movement*, trans. Eric Pritchard (London: William Heinemann, 1895), p. 33.

²³ The notion of a differentially defined present, a now, is problematic, since it presumes the existence of temporal and spatial singularities. These singularities, as in the case of numerical sets, are ontologically validated axiomatically and exist as part of predefined ordering systems. cf. David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 125.

Consider the following overly simple but effective example: number 5 comes *before* number 11 in enumeration; this statement is true only when a conventional way of counting is presupposed. Namely, an axiomatically defined system comprised by distinct elements, which is equipped with an ordering principle. But, an equally true proposition can be formulated that number 5 comes *after* number 11, when enumerating from 100 to 1 in decreasing order. As temporal referents, 'before and after' only make known a temporality in which events are not primordially ordered within time, but through reference to an organizational system of the specific set-space. This effectively showcases how the variation of the ordering arrangement results in a multiplicity of interpretation or even different systems of intelligibility and typologies of representational signs. Representation, as part of a complex network of well informed systems –historical, cultural, political, to name but a few– becomes intelligibly perceived only through an ordinary understanding of time as numeric-spatial differentiation, an act which temporalizes time. For, Heidegger argues, being's spatiality is 'far from identical with a "representing" of the spatial' and 'must be grounded in temporality', but 'demonstration that this spatiality is existentially possible only through temporality, cannot aim either at deducing space from time or at dissolving it into pure time'.²⁴ The way that time makes itself known is through directionality or orientation of being, within an ordering which is concerned ontologically with worldly space and time. According to the above example, numbers –like all other concepts, even temporal, which are axiomatically defined as singularities– do not occupy ontological time, but only through the act of enumerating and differentiating them are they immersed in real time. A perceptual act that renders signs intelligible –mathematical, linguistic, acoustic, visual– as part of an analytical system with differential capacity that can be expanded unlimitedly.

An extraordinary attempt to devise a complete differential system of signs is described in Aristotle's *Categories*;²⁵ the ontological dependency of particular entities to the earlier Platonic form is overturned, and primary ontological significance is granted to entities, which retain their singular identities and express universals by differentiation. This affords an independency of the particulars, which henceforth define the ontology of the general form that contains them. This is a philosophical paradigm which, in the case of the mechanical recording and reproduction of the world in motion by the cinematographic apparatus, discloses a similar relationship; the still images recorded serially on the filmic celluloid retain representational characteristics that are particular to the photographic, while gaining ontological significance over the general form that contains them, namely the moving image of cinema. This re-composition of time according to differentiation of the photographic stills, which exist merely to fulfil requirements of the mechanical apparatus, is exemplary of an ordinary understanding of time. And although this analytical representation of time deriving from serial photographic images, impacts determinatively on the aesthetics of the cinematic

²⁴ Martin Heidegger, *Being and Time*, pp. 418-419.

²⁵ Aristotle, *Categories*, trans. E. M. Edghill (Adelaide: Univesity of Adelaide Library, 2007), <<http://ebooks.adelaide.edu.au/a/aristotle/categories/complete.html>>, Web: 05 September 2010.

image, it is not ontologically significant for the moving image, because as Rodowick explains, the moving image adjoins time to movement by utilizing the spatial characteristics of photographic representation, 'the regular unwinding of space is an automation of time represented indirectly as a continuous, linear, chronological, and irreversible succession of identical intervals in space. Alternatively, the autotemporalization of the image opens a new regime of images and signs and thus requires a new set of concepts'.²⁶ Such an attempt to represent the continuum spatially, falsifies the homogeneous continuity of time and impedes a meaningful consideration of the experience of cinema that is immersed in real time, as the primary temporal phenomenon which determines the ontology of the moving image.

Photographic image as has-been and its primordial relation to time

As primordially concerned with time, a photograph's 'earlier and later' refers to the world, its coming-to-being, and a phenomenological experience of the image. The referent of photographic representation exists earlier than the coming-to-being of the image; this uncomplicated ordering discloses an ontological aspect of a photograph which allows Barthes to define this characteristic of 'that-has-been' as its essence. But, as Victor Burgin reminds, 'objects present to the camera are *already in use* in the production of meanings, so photography has no choice but to operate upon such meanings. There is, then, a "pre-photographic" stage in the photographic production of meaning which must be accounted for'.²⁷ This observation, too, does not conclude the examination of the image as a representation of the world, because a photograph is always viewed later than its making. It is through its phenomenological experience that a representation attains its full meaning; so, a photograph records the world, in the form of still images, in anticipation of a future perception. In relation to photographic representation, an ontological concern with time reveals the emerging directionality of the image's being in the way it bridges past, present and future; it is an orientation of time regulated by the creation of the image –no matter how instantaneous– which substantiates Heidegger's counter intuitive reasoning about time, in the complex process of temporalization: 'Temporalizing does not signify that ecstasies come in a "succession". The future is *not later* than having been, and having been is *not earlier* than the Present. Temporality temporalizes itself as a future which makes present in the process of having been'.²⁸ In photograph making, the act of visual imprinting –even involuntarily, as extreme manifestation of its ability to be automatically produced– is less concerned with capturing what is in front of the lens right 'here and now', than a future 'there and then' which will transubstantiate it into 'that-has-been'. The perceptual act which leads to the intelligible understanding of the image, even though it is always immersed in the present time of a phenomenological experience, extends beyond visual characteristics to acknowledge the complete process of a photograph's coming-to-being. During perception a temporalization of the image's time emerges, videlicet, a temporal ordering implied in a phenomenological

²⁶ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 175.

²⁷ Victor Burgin, "Photographic Practice and Art Theory", in *Thinking Photography*, ed. Victor Burgin (London: The Macmillan Press LTD, 1982), p. 47.

²⁸ Martin Heidegger, *Being and Time*, p. 401.

making sense of the image according to existing systems of intelligibility.

In this light, Barthes' description of a photograph as an "image without code" does not refer to an abolition of systems that award meaning to visual representation; instead, he intends to mark a unique relation of photographic representation to time, evident in his claim that, 'to ask whether a photograph is analogical or coded is not a good means of analysis. The important thing is that the photograph possesses an evidential force, and that its testimony bears not on the object but on time. From a phenomenological viewpoint, in the Photograph, the power of authentication exceeds the power of representation'.²⁹ Reducing a world to nothingness, by means of arresting it and keeping it out of time, is necessary to enable its re-immersion in time through a phenomenological experience that validates the photograph as evidence of that world. Such temporal ordering is fundamental for photography and discloses a primordial relation of the photographic image with time. Even today, in a contemporary era of digital photography, the infinitesimal "distance" which intervenes between production and inspection of the image, brings forth the full evidential power of the photographic sign. Questions originated by the advent of digital photography, concerned with the premise of an indexical link of the image to its referent—due to a digitization of its technical production—³⁰ do not affect the ontology of the photographic image. Instead, the indexical link between the image and its referent should be re-examined, in terms of the photograph's time in relation to world and being.

At this point I would like to maintain that representation does not refer only to an image's production but also includes the process that renders such an image intelligible. Early photographic imprints of radioactive materials caused from electromagnetic radiation³¹ are lucid examples of how an understanding of the physical world and scientific phenomena takes place predominantly during perceptual processes that consider primarily the technical aspect of image creation. For the needs of such post-production intelligibility, an aesthetic analysis of the image's visual characteristics is set aside, to prioritize the technical process of photograph making: its technological coming-to-being.³² While Bazin's realist account ascertains the referent of the image—the real world—as the sole proprietor of meaning, the above example acknowledges the technological production of the image as an additional element that partakes in the creation of meaning through an intelligible perception of the photograph. Let

²⁹ Roland Barthes, *Camera Lucida*, pp. 88-89.

³⁰ I am drawing here from a larger discussion on the concept of the Index and its relation to the photographic and cinematic images, that appears in the volume of journal *Differences* which is devoted entirely on indexicality. cf. *Differences: A Journal of Feminist Cultural Studies*, Vol. 18, Num. 1, ed. Mary Ann Doane, (Durham: Duke University Press, 2007).

³¹ Henri Becquerel, who shared the Nobel Prize with Pierre and Marie Currie, describes the experiment he devised to confirm the radioactivity of potassium uranium sulphate. He exposed photographic plates to radiation and imprinted an image of the crystal's outline and the shadow of a coin overnight on the 24th of February 1896, <http://www.practicalphysics.org/go/Resources_12.html>, Web: 06 September 2010.

³² Such analysis echoes Heidegger's abolition of aesthetics for the sake of a phenomenological experience of the artwork that considers both the production of the artwork by the artist and its intended relation to the world, as the main aspects of ontological meaning for the work of art. cf. Martin Heidegger, "The Origin of the Work of Art", pp. 151-166.

us exploit the above paradigm to expose the ontological implications of the photographic image's mechanical production. The photographic apparatus reduces the real world to nothingness, producing a representation that becomes its evidence. Only by such a reduction can the photographic images re-affirm the world's being through the phenomenological experience; this experience draws a past world into existence through the perceptual act that immerses it into real time again. But, what happens in those unique cases when an image's coming-to-being becomes synchronous with its perception? Can we still talk of a representation? This aporia attends to the time of the image in a twofold sense: in relation to a temporality of phenomenological experience, as well as, in concern to the temporal linking between representation and its referent. More importantly, it sets the ground for exposing differences which define distinct ontologies for the still image of photography and the moving image of cinema.

The moving image of the camera obscura

Camera obscura³³ can be considered the delimitative example where perception becomes synchronous with the coming-to-being of an image equally akin to both photography and cinema. As such, it can foreground ontological differences between the still image of photography, the moving image of camera obscura and the moving image of cinema. Differences become more pronounced through the representability of continuity in each of the images –informed by the corresponding technological production and phenomenological experience– in relation to their referent, the real world. Motion of the image visible in a darkened chamber of the camera obscura is not re-created by the optical apparatus, it is world movement transposed onto a projection surface. In contrast, the cinematographic apparatus de-constructs and then re-creates motion, a representational process which is made possible by the threshold of our visual perception of changing images. This cinematographic process of recomposing movement, Metz claims, creates an 'impression of reality', since, a 'strict distinction between object and copy dissolves on the threshold of motion. Because movement is never material but it is *always* visual, to reproduce its appearance is to duplicate its reality'.³⁴ The phenomenological reality of motion, its appearance, withstands the reductive process of representation and perception while maintaining its essential qualities, for it does not possess a material degree of realness. Withal, Metz clarifies, that in "truth" motion cannot be reproduced, and asserts that reproduction of motion only coincides with real movement in an order of reality for the spectator, a perceptual space which is segregated from the real.³⁵ Tom Gunning, in his discussion on Metz and cinematic movement, notes that we should not acknowledge merely a psychological effect that is actively engaged while viewing moving images, but to conceive an entirely new mode of phenomenological perception that the

³³ A camera obscura can range –in terms of construction– from a small box, to a dark chamber, or whole building, and each implementation has differentiated characteristics. For the purposes of this thesis, I will be referring to the simplified and generic model: a darkened room that acts as a camera obscura by projecting an image of the external world –through a pin-hole– on an opposite surface, viewed as a reversed moving image.

³⁴ Christian Metz, *Film Language*, p. 9.

³⁵ Metz does not expand on this segregation of an order of reality of the spectator and the real further. cf. Christian Metz, *Film Language*, pp. 9-10.

cinema demands³⁶ because with its presentation of continuous movement it enables a partaking of the viewer in its unique temporality. In the attempt to understand the ontological difference between cinematic image and the moving image of the camera obscura, this thesis considers the relation of movement with time.

The technical apparatus of the camera obscura creates a moving image which presents the time of the real world on the projected screen, while in the case of a cinematic recording the time of the moving image is a time of the world re-created by the cinematographic apparatus. Although the moving image of a camera obscura represents real world movement it does not represent its time, as real time in a camera obscura is not abstracted by the representational process. This calls for a differentiation between two phenomenological experiences of the moving image as representation, which determines in each case a different temporality, namely an understanding of time to enable the perceptual intelligibility of images. This process of temporalization which exposes its primordial relation to time, determines the ontology of the image. Metz proposes a similar process of *unrealization* which differentiates the real –assuming its *presence* spatio-temporally as 'here and now'– from its intelligible understanding as another reality, as a spatial or temporal distancing: 'An account is perceived as such only as long as a margin, even an infinitesimal one, separates it from the fullness of *here and now*. Certain examples of minimum *unreality* are very enlightening'.³⁷ And in our case, movement in the image of the camera obscura is naturally continuous while the movement of the cinematographic image is mechanically discontinuous, despite the fact that both images visually depict the same real world in motion. To consider the image of the camera obscura as a non-coded image and abolish its representational characteristics would effectively disable its intelligible understanding, evoking the inexplicable and magical. Therefore, the intelligible perception of the moving image of the camera obscura demands the introduction of a temporalization process that resembles the cinematographic method; the world is stilled and an apparatus partakes in the formation of intelligible understanding of the image. Thus, a temporal distance is introduced between the real world and its representation as moving image. For, as long as a temporal disconnectedness, which enables the knowledgeable to partake in a present perceptual process, does not exist, the moving image of the camera obscura cannot be validated as representation.³⁸

³⁶ Tom Gunning, "Moving away from the Index", p. 41.

³⁷ Christian Metz, *Film Language*, p. 22.

³⁸ A main argument for characterizing the moving image as a representation, is the reduction of the material world to the visual two-dimensionality of the projection surface. Even such basic knowledge during perception, is nothing less than the consideration of the whole mechanism that makes the creation and projection of the immaterial image possible. Thus, it comes as no surprise that the optical mechanics of the camera obscura were known and described since 300 BC by ancient Chinese and Greek philosophers. Euclid's *Optics* of 300 BC provides a description of the optical mechanics of a pin hole camera in order to prove light's ability to travel in straight lines. cf. Mark A. Smith, "Ptolemy's Theory of Visual Perception: An English Translation of the *Optics* with Introduction and Commentary", in *Transactions of the American Philosophical Society*, New Series, Vol. 86, No. 2 (Philadelphia: The American Philosophical Society, 1996). Current theories connect the image created by chance as a result of the pinhole camera effect inside primitive dwellings during the palaeolithic era –what is termed a paleo-camera– with the emergence of two-dimensional representation. According to this theory, coming across ethereal moving images that bare close resemblance to the real world, can be linked to ancient, as well as, modern accounts of representation. These ranging from the Platonic philosophical allegory of the

What is it then that differentiates ontologically the moving image of the darkened chamber and the moving image of the darkened cinema theatre? While they share a definitive characteristic of the image as representation –namely the reduction of the material world into nothingness and its re-constitution in another form– they exhibit distinct approaches towards the time of the world and the temporality of its experience. While the moving image of the camera obscura presents a view of the world transposed it does not create a new time for its experience. The moving image of the darkened chamber neither represents nor reconstructs worldly time, but the temporality of its perception is one of synchronisation. The time of the image of the camera obscura is the time of the world and the phenomenological experience is always that of a temporal here where we see the image of the world transposed. It is a present over-looking of a synchronous other whose perception is defined strictly spatially as a here and there –quantitatively disassociated– instead of a temporal now and then –qualitatively compared–. Cinema's moving image achieves something remarkable, to make time representable by reducing real time to the discontinuity of the film reel. It is a reductive process which results to a spatialization of time expressed by the serial photographic still images that are animated to produce the impression of continuous movement. This should not be confused with a temporality of the moving image which refers to a temporal ordering in cinema that secures the perceptual intelligibility of time's representation. The complex interconnection of time, temporality and an understanding of reality through perception, is the subtext of Bergson's account for the workings of a representational abstraction of continuity: 'Homogeneous space and homogeneous time are then neither properties of things nor essential condition of our faculty of knowing them: they express, in an abstract form, the double work of solidification and of division which we effect on the moving continuity of the real in order to obtain there a fulcrum for our action, in order to fix within it starting points for our operation, in short, to introduce into it real changes'.³⁹ A distance separating the real world from its representation critically diminishes with the coming of the moving image since according to Metz, 'In the cinema the impression of reality is also the reality of the impression';⁴⁰ however, this text contends, an impression of the real expressed by spatio-temporal characteristics of cinematic representation differs in kind from a phenomenological experience of the moving image that re-immerses it in real time. The continuum is abstracted during the analytical reduction of the representational process, hence a filmic theory concerned with the representation of continuous phenomena in cinema-like movement and time- considers primarily spatio-temporal characteristics of the image, to devise the theoretical tools by which representation becomes intelligibly perceived. Taking into consideration that the perception of moving images is homologous with a phenomenological experience of

cave and world as a shadow of the real to Heidegger's concept of truth as a moment of vision which actualizes being in the world, an unveiling, a coming forth to the light. cf. Matt Gattton, "First Light: Inside the Palaeolithic camera obscura", in *Acts of Seeing: Artists, Scientists and the History of the Visual - a volume dedicated to Martin Kemp*, eds. Assimina Kaniari & Marina Wallace (London: Zidane, 2009).

³⁹ Henri Bergson, *Matter and Memory*, p. 211.

⁴⁰ Christian Metz, *Film Language*, p. 9.

cinema which re-immerses the moving image in real time⁴¹ this thesis argues that, the ontological significance of cinema lies in its capability to preserve –enduring the representational reduction– and subsequently re-constitute –during the phenomenological experience– the continuum. Prior to concerning the cinematic phenomenological experience, this text discusses the moving image's coming-to-being specifically in relation to the mechanical process of recording and re-producing movement.

Chronophotography and representation of continuous movement

The birth of the moving image of cinema is intrinsically linked to the work of photographers Eadweard Muybridge and Étienne-Jules Marey. This thesis examines the depiction of movement in relation to the iconic seriality of still images that characterizes the sequential abstraction of motion that occurs in chronophotography⁴² with the intention of drawing attention to certain examples that deviate from this prescript and provide a new perspective on the representation of continuity. While it was Muybridge and Marey who drew the analytic deconstruction of movement to its extremes there have been earlier attempts to depict continuous movement photographically; representability of the continuum that emerges through such examples redefines the moving image ontologically. Mary Ann Doane mentions Frank Gilbert, who photographed the recurring actions of factory workers in an attempt to describe the most effective way of performing repetitive tasks.⁴³ Gilbert attached lighted sources to bodily parts and took long exposure photographs which allowed him to trace visually the trajectories of continuous movement in still images called chronocyclographs,⁴⁴ intending to improve the efficiency of mechanical and repetitive actions by the introduction of canonical models for the tasks performed. Interestingly, in his pursuit of rendering the quality of work measurable we can observe for the first time the dark gridded surface used as a background for the images of the lighted trajectories, which later also appears in the chronophotography of Eadweard Muybridge. This metric grid, other than aiding technical aspects of the photographic process, signifies the belief that movement –time con-fused with space– is spatially representable, scalable and measurable. Therefore the question arises: “What does the grid aspire to provide a quantifiable scale for: length, space, or even time itself?”. The chronophotographic visual analysis of movement and Bergson's description of continuity's spatial determination –a consequence of its abstraction by the discontinuous perception– bear a striking resemblance:

⁴¹ Although this thesis adopts a methodology that follows Heidegger's criteria of an ontological investigation that considers time as ontologically significant for being, we can also recognize an adherence to a Kantian subversion of time's subordination to movement which, as Rodowick suggests, is an analysis utilized by Deleuze to explicate time's forms of being known in relation to the cinematic image. A consistently converging move towards an ontological determination of the image that is seemingly characterized by two distant approaches can be justified. On the one hand, Heidegger clearly demands that in every step of the investigation the primary concern is the ontological determination. On the other hand, Deleuze connects a crisis regarding the true caused by a new stance of philosophy towards time and movement, as a condition that demands the new ontological definition of representation. cf. David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 130.

⁴² When referring to chronophotography this text acknowledges all various techniques of chronophotographic practice including stroboscopic photography.

⁴³ Mary Ann Doane, *The Emergence of Cinematic Time*, pp. 5-6.

⁴⁴ The term “chronocyclograph” indicates both the temporal and periodic nature of the representation.

A thousand incidents arise, which seem to be cut off from those which precede them, and to be disconnected from those which follow. Discontinuous though they appear, however, in point of fact they stand out against the continuity of a background on which they are designed, and to which indeed they owe the intervals that separate them.⁴⁵

Here Bergson reveals that both space and time are continuous despite the false belief that space is quantifiable and time qualitative. The metric grid discloses that space in photography undergoes a reductive abstraction. Photography renders time representable intertwined with space within the movement; thus the grid of the chronophotographic images also acquires the capacity to quantify time. Yet, its representability comes at the expense of thinking about time in spatial terms.⁴⁶ Like Bergson's mathematician⁴⁷ the chronophotographer retains of movement only the changes in length⁴⁸ and misses its true essence: that movement is open, qualitative and in constant flow. Therefore an unexpected conclusion is reached: that the appearance of the grid is the chronophotographer's admittance of the spatial abstraction of time, while the removal of the grid for the depiction of movement against a homogeneous black background falsifies the space and time of chronophotography as continuous.

The chronophotographic practice of Étienne-Jules Marey

This spatialization of time demands a reconsideration of the linkage between the ontology of the moving image and the utilization of serial photographic still images for the representation of continuous movement. A closer examination of the chronophotographic practice of Muybridge and Marey exposes two distinct approaches in relation to the reconstitution of continuous movement. Although Marey's work is heralded as an ancestor of the moving image of cinema, it is focused on the extraction of static visual poses that provide an analytic de-construction of movement enabled by the advent of photography. Revealingly, the major volume of his monumental book *Movement* is dedicated to a detailed description of specific methodological approaches and the technical aspect of chronophotographic practice. Permanently challenged by the need for greater analysis—in terms of achieving an even shorter temporal interval between each photographic static pose—he results to the presentation of two series of images on a single photographic print, one on top and one below, that describe the movement not sequentially but following a pattern of viewing that is regulated by the original sequence of taking the photographs.⁴⁹ Clearly the analytic de-construction of movement is prioritized over the subsequent re-composition which can recreate an impression of movement, for the viewer, phenomenologically. Marey's chronophotographic representation of movement is a testament to his effort to extract from the continuum an unprecedented

⁴⁵ Henri Bergson, *Creative Evolution*, p. 3.

⁴⁶ Étienne-Jules Marey writes on the subject of representation of space in chronophotography in relation to the use of the grid: 'The positions of bodies in space, their forms and dimensions, find their natural expression in geometrical drawings. Such drawings, executed to a known scale, supply all the information that is required.' cf. Étienne-Jules Marey, *Movement*, p. 18.

⁴⁷ Henri Bergson, *Matter and Memory*, p. 193.

⁴⁸ Marey's reference to time's representability is characteristic: 'Time, like other magnitudes, can be represented in graphic form by straight lines of various lengths'. cf. Étienne-Jules Marey, *Movement*, p. 1.

⁴⁹ Étienne-Jules Marey, *Movement*, p. 63.

level of precision that challenges our sensible perceptibility, thus establishing the analytic superiority of the automatic representational apparatus –photography as a suprasensible machine. The prioritization of a visual –spatio-temporal– analysis of movement in Marey's chronophotography, discards the homogeneous nature of the continuum and severely abstracts the continuity that characterizes movement and time into a single photographic aspect: visual spatiality. The seriality of photographic static poses in stroboscopic chronophotography is the epitome of the aspiration to express continuous movement analytically. The employment of the photographic apparatus for Marey's chronophotography is thus antithetic to the nature of its utilization by the cinema for recording moving images. This thesis argues that, when the resemblance of the chronophotographic print with the cinematic film strip is either proposed as proof of their common genealogy, or, conceptualized as an inevitability of the mechanical apparatus, the kinship of chronophotography with the moving image of the cinema is reduced to a matter of appearance, rather than one of substance.⁵⁰

Marey's approach towards continuity in his chronophotographic practice is made evident by considering the utilization of the photographic gun:⁵¹ a technical apparatus which correspondingly to the cinematic camera could inscribe movement on a circular photosensitive surface, in the form of serial photographic still images. The design of the photographic gun was adopted by Étienne-Jules Marey to be used for recording birds in flight, after coming across the work of Eadweard Muybridge and his attempts to represent the animal and human body in motion. Further advancing the design of the device Marey achieves to photograph the aerial movement in sixty frames per second on film stock that moves in a cinematographic manner – a serial progression of single frames which remain still while their exposure is taking place– and then project them in slow motion. He admits that this kind of successive imagery may be the only kind of representation that depicts actual movement,⁵² implying a subtle but direct relation between the numerocity of frames and the completeness of movement's representability as a continuum. But, the invention was promptly rejected as imperfect, since:

The gun did not provide the spatial dimension of the movement; it did not supply an impression of the exact path or distance traversed within the defined time. This meant that the precise speed of the flight could not be determined. Since Marey had already been able to register such factors with his graphing machines the photographic machine had to be made to provide at least this minimum if not more.⁵³

The photographic gun managed to catch a glimpse of what would become the essence of cinematic attitude towards representation of movement: disinterested in the measurability and quantification of motion it demonstrates the homogeneity of continuity by being

⁵⁰ This text engages with Deleuze's philosophy of Difference to make clear, later in the thesis, why the appearance of seriality is a necessity in the attempt to express continuous phenomena like time and movement.

⁵¹ The photographic revolver was created in 1873 by Marey's colleague, the astronomer Pierre-César Jules Janssen (1824-1907), and was used to record the transit of Venus across the sun on the 8th of December, 1874.

cf. Marta Braun, "The Science of movement and the image of Time" (2009),

< <http://www.bium.univ-paris5.fr/marey/>>, Web: 07 December 2010.

⁵² Étienne-Jules Marey, *Movement*, p. 238.

⁵³ Marta Braun, "The Science of movement and the image of Time".

indifferent towards the privileged or crucial instants of the photographic apparatus. It also promotes the indexicality of the recorded image as a quality that overcomes its impressionistic aesthetic—as in the first short films—and relies on a highly affective perception to ascertain its referent, the real world. It is exactly these cinematic characteristics that Marey opts to suppress, in exchange for a legible reading of the image that the rationalization of systematically abstracted movement provides. Fortuitously, within the spatial and temporal stasis of his chronophotographic still images endures something remarkable; according to Doane, Marey in his photographs and later cinema itself, 'invested in a conceptual framework that foregrounded the tension between the representation of time and legibility, and did so in relation to the opposition between continuity and discontinuity'.⁵⁴

Marey, aware of the fact that the continuum's essence is what renders it unrepresentable, is forced to reductively abstract continuous movement into analytic representation for the sake of its intelligible perception. Thus, he highlights the aspects of differentiation and analysis of movement in Muybridge's work and views chronophotography as an informed cataloguing of static poses that offers to the visual artist a wider repertoire for extracting a single highly charged moment,⁵⁵ rather than anticipating the future reconstitution of continuous movement. Marey's temporal analysis is a technological delineation of the event that provides an image of its temporality, engaging with the representability of time as a measurable phenomenon. He provides a detailed explanation regarding the creation of a graphic mapping of instants which describe a duration of movement, loosely based on the Morse code. His method distinguishes "privileged" instants for the presentment of actions that correspond to the precise triggering of the photographic apparatus, securing the intelligible representation of movement by the capturing of "key" frames which in sequential series can depict the completed event.⁵⁶ In Marey's assertion of instantiation, and its significance for the depiction of continuous movement, this thesis recognizes a concealed system for spatial abstraction; although it is unseeable within the chronophotographic print, it still acts as a metric grid that renders time representable in the form of temporality of the event: quantifiable, measurable and devoid of the homogeneous substance of the continuum. The lack of an actual grid is exchanged by movement's comparative measuring apparent in Marey's presentation of the entire action in a single frame; a reductive compression that provides simultaneously the event's spatial and temporal determination, declaring that a duration of movement can be extracted from the flow of time to become encoded within the photographic representational medium for future precise calculation and analysis. Using this systematic and methodological coding allows Marey to proceed to a purely graphic presentation of action and movement and their temporality. Doane detects an antagonistic relation between the representation of continuity and the representation's legible understanding, in the progression that caused the photographic to disintegrate into a purely graphic depiction of movement; she

⁵⁴ Mary Ann Doane, *The emergence of Cinematic Time*, p. 26.

⁵⁵ Étienne-Jules Marey, *Movement*, pp. 169-185.

⁵⁶ Étienne-Jules Marey, *Movement*, pp. 6-15.

claims 'for Marey, time was an objective plenitude that always seemed to escape the grasp of his photographic technique. It could be adequately "represented" only at the risk of illegibility'.⁵⁷ Bordering on a true representation of continuity Marey's chronophotographic images digress towards higher degrees of visual abstraction, bringing to the foreground the problem of the representability of the continuum in relation to its intelligible perception.

The chronophotographic practice of Eadweard Muybridge

The conflict between continuity and discontinuity is also evident in the chronophotographic work of Muybridge in relation to the representability of movement and time. Multiple recordings of the same action are nothing but the reminder that, for Muybridge, the photographically recorded and viewed –discontinuous abstraction– is always a single version of that which remains imperceptible and unrepresentable –the continuum–. Although the connection of his chronophotography with the moving image of cinema is well established, less considered⁵⁸ chronophotographic examples which exhibit a fascination with the representability –or its impossibility– of continuity are disregarded simply because their chronophotographic prints do not resemble the cinematic film strip. It is an intention of this text to emphasize the acute philosophical aspect that these examples provide, in relation to continuity's rendering into image. Characteristic illustrations, like his early prints of wide panoramic views⁵⁹ –the substantiation of a complete perspective from a singular point of view, and provision of a visual analogy to the modern philosophical concept of subjectivism–,⁶⁰ and his brilliant *forthshortenings*,⁶¹ photographic prints that depict multiple perspectives of an instantaneous action –paradigmatic of Bergson's demand for an omnipresent spectator and a complete visual analysis–,⁶² never receive paramount theoretical interest in the attempt to define the ontology of the moving image. Even though the unique film language, which is expressed by the mobile cinematic camera and its ability for constant shift in perspective, resides in the heart of the aforementioned examples such comparability remains unvoiced to this day because it refers to the image's perception and not to the image itself. The problem lies in the paradox that the photographic image changes into a new kind of image for the cinema but its perception remains unchanged; for perception was already apt for an

⁵⁷ Mary Ann Doane, *The emergence of Cinematic Time*, p. 26.

⁵⁸ The most iconic images of Muybridge's chronophotography present galloping horses. The pragmatic aim of his research –funded by the former Governor of California Leland Stanford, a race horse owner– was to study the detailed movement executed by the animal and ascertain whether all four hooves of a horse leave the ground while racing.

cf. Eadweard Muybridge, *The Human Figure in Motion* (London: Chapman and Hall, 1907), pp. 1-9.

⁵⁹ Referring here to Muybridge's 360 degrees panorama of San Francisco in 1878 which was published as a set of albumen prints mounted on cabinet cards with the title *Panorama of San Francisco from California Street Hill*.

⁶⁰ Subjectivism appears as the modern alternative to the ancient objectivism in thought.

cf. John Dewey, "The Objectivism-Subjectivism of Modern Philosophy", in *The Journal of Philosophy*, Vol. 38, No. 20 (New York: Columbia University Press, 1941), pp. 533-542.

⁶¹ Forthshortenings is the term used by Eadweard Muybridge to describe the chronophotographic prints that present a single moment of an action from multiple points of views. He often provides a chronophotographic and "forthshortened" view of the action simultaneously by including in one page multiple chronophotographic recordings from different points of view. Hence Muybridge deems an analysis of movement more complete when it is both temporal and spatial. cf. Eadweard Muybridge, *The Human Figure in Motion*, pp. 29, 65, 101.

⁶² Henri Bergson, *Matter and Memory*, p. 112.

apprehension of the real world as moving image. Bergson explains:

we imagine perception to be a kind of photographic view of things, taken from a fixed point by that special apparatus which is called an organ of perception – a photograph which would be then developed in the brain-matter... But is it not obvious that the photograph, if photograph there be, is already taken, already developed in the very heart of things and at all the points of space?⁶³

The task cinema sets to the philosopher is not only to describe its new image but to determine the perceptual process that renders moving images, along with their novel representability of continuity, intelligible. It is precisely the genesis of this process which we can observe in chronophotography.

To expound the perceptual process that renders intelligible an image of the continuum, is to overcome the fascination with the analytical capability of automatic representational apparatuses. Marey was engrossed by his attempt to represent continuity analytically; he employed stroboscopic photography to record multiple exposures on a single photographic plate and presented actions in a series of instants. Time becomes visible and spatially contained, but is no longer homogeneous; it is de-constructed in the form of temporal seriality, a representation of the temporality of an action. The resulting multiple appearance of a singular subject in the same frame and the superimposition of temporal instants, creates an image that is removed from reality.⁶⁴ This extraordinary depiction of an action integrates the method of technical production to the image; it is the provision of a manual within the image that regulates the process of its perceptual understanding and which is concerned with the analytic legibility of continuity. This is a fundamental difference, noted by Mary Ann Doane, between chronophotographic images and cinema; cinema's moving image 'eliminates the scientific clock' and 'does not speak its relation to time'.⁶⁵ Interestingly, and despite the continual use of the gridded background, symbol of chronophotography's metric capacity, it is Muybridge who gradually subdues spatial determination of movement, for an increasingly aesthetical presentment of action.⁶⁶ He exhibits a fascination with the arbitrariness of motion, explicit in his preoccupation to depict the random behaviour of clothing and fluids. In Muybridge's aesthetic treatment of action as a chancefull occurrence indwells a recognition of the impossibility to represent continuous movement in chronophotography, substantiating its qualitative-unquantifiable nature. It is a primary step towards the conception of the cinema, for it overcomes the requirement of an analytical representation of movement and replaces it with its phenomenological reproduction that retains the impression of the continuum. This

⁶³ Henri Bergson, *Matter and Memory*, p. 38.

⁶⁴ Marey himself stresses the importance of a naturally perceived representation of movement. He writes: 'Although chronophotography represents the successive attitudes of a moving object, it affords a very different picture from that which is actually seen by the eye when looking at the object itself. ... This education of the eye may, however, be rendered still more complete if the impression of the movement is conveyed to the eye under conditions to which it is accustomed.', cf. Étienne-Jules Marey, *Movement*, p. 304.

⁶⁵ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 214.

⁶⁶ There are multiple characteristic examples with women pouring water, that exhibit both a sensual presentation of the female body and a photographic aestheticism in the portrayal of the clothing and the pouring water. cf. Eadweard Muybridge, *The Human Figure In Motion*, pp. 231-251.

thesis considers that, Muybridge's disaffirmation of the analytic power of chronophotography, is nothing less than his anticipation of a novel medium with the ability to represent continuous movement.

Conclusion: a founding tenet of the cinema

Bergson, in his description of the cinema in *Creative Evolution*, comes to the conclusion that cinematic motion cannot be extracted from the immobile photographic stills. It is the movement of the apparatus that is used to reconstitute the image of the world in motion:

This is what the cinematograph does. With photographs ... it reconstitutes the mobility. ... It is true that if we had to do with photographs alone, however much we might look at them, we should never see them animated: with immobility set beside immobility, even endlessly, we could never make movement. In order that the pictures may be animated, there must be movement somewhere. The movement does indeed exist here; it is in the apparatus.⁶⁷

With his explanation Bergson provides a lucid understanding of cinema's technological nature. However at the same time on an ideological realm he manages to evade what would be an apparent incompatibility between the quantitative nature of photographic representation of continuity, with the qualitative nature of continuous movement. Alain Ménil writes, 'cinematic projection cannot be reduced to the mechanism which makes it possible and the cinematic illusion does not consist in obtaining movement from static poses, a kind of "snapshot logic"'.⁶⁸ This original representability of the continuity by the cinema tags along the new understanding of worldly time; according to Ménil, it is only by the coming of Deleuze and his theory of the image that cinema is considered not only as a new mode of representation, but also a new mode of perceiving and thinking, for Deleuze exposed 'the fundamental misunderstanding behind Bergson's condemnation of the cinema, by showing how it was possible not only to reinvent his analysis but also to demonstrate that it could be truly productive in its suggestion that the cinema was a temporal art, but a temporal art purified, disengaged from spatiality and also from submission to the movement of the object'.⁶⁹ Time's subordination to movement is overturned and the newly emerged cinematic time is defined by its own kind of temporality. Chronophotographic practice enabled this overturning by disengaging time from movement's spatiality, thus making known the new representability of time by the moving image.

Muybridge's final step towards the re-constitution of continuous movement, is taken with the invention of his Zoopraxiscope machine in 1879, an apparatus that animates still images to produce short sequences of moving images. This representation of continuous movement disengages time from space, and as Bergson suggested, it takes into account that for the re-constitution of its continuity 'there is more in the transition than the series of states, that is to say, the possible cuts – more in the movement than the series of positions'.⁷⁰ In order

⁶⁷ Henri Bergson, *Creative Evolution*, p. 305.

⁶⁸ Alain Ménil, "The Time(s) of the Cinema", p. 87.

⁶⁹ Alain Ménil, "The Time(s) of the Cinema", p. 87.

⁷⁰ Henri Bergson, *Creative Evolution*, p. 314.

to satisfy the requirements of the new mechanical apparatus, the chronophotographic images need to be slightly deformed; new images are painted on a circular plate by hand, recomposing the seriality of the photographic images of the chronophotographic print. They are elongated and moderately curved to counteract the optical distortions that the moving apparatus introduces during their animation.⁷¹ This conformity to the requirements of the technical apparatus, means that the images rescind their photographic indexicality which is based on principles of verisimilitude and visual specificity. Only the impression of movement is retained, a qualitative representation of its continuous nature. The time of the event presented is also subject to similar de-construction and creative re-composition. The representation of an event's duration in chronophotography is resolutely bounded by its beginning and ending; extracted from the constant flow of time movement it becomes temporally enclosed, and as a result it is spatially determined and subject to quantification. Oppositely, the repetitious presentation of an action by the Zoopraxiscope results in a recurring movement that allows the duration of the event to remain open, undetermined by any start and end point. Lacking such temporal determinants, the time of the event is no longer subject to metric measurement. More importantly, the time of the event is now substituted by the time of its phenomenological experience. These observations concerning the representability of time by the Zoopraxiscope closely match the characteristics Doane attributes to a cinematic representation of time when she writes: 'The effectiveness of the cinematic representation of time rests precisely on its unquantifiability. It was necessary to eliminate the temporal specificity of the image to produce the experience of time.'⁷² Thereof this thesis argues that the true heritage Muybridge left for the cinema is the correct attitude of an apparatus that animates continuous movement towards the representation of time.⁷³

Marey's practical research glorified chronophotography's capacity to represent movement analytically. Even so, he understood that presenting successive positions of the

⁷¹ The distortion is produced due to the use of circular plates. Effectively the part of the image that is further away from the centre of the plate moves at a higher speed and is viewed for a shorter interval while the plate spins. To achieve uniform viewing for the entire plate, images are elongated according to their distance from a centre.

⁷² Mary Ann Doane, *The Emergence of Cinematic Time*, p. 214.

⁷³ Providing Bergson's full account on the representation of movement by chronophotography in relation to its attitude towards time, can reveal the primary signs of an indifference towards time's quantifiability: 'time is not divided objectively in one way or another by the matter that fills it. It has no natural articulations. We can, we ought to, divide it as we please. All moments count. None of them has the right to set itself up as a moment that represents or dominates the others. And, consequently, we know a change only when we are able to determine what it is about at any one of its moments. The difference is profound. In fact, in a certain aspect it is radical. But, from the point of view from which we are regarding it, it is a difference of degree rather than of kind. The human mind has passed from the first kind of knowledge to the second through gradual perfecting, simply by seeking a higher precision. There is the same relation between these two sciences as between the noting of the phases of a movement by the eye and the much more complete recording of these phases by instantaneous photography. It is the same cinematographical mechanism in both cases, but it reaches a precision in the second that it cannot have in the first. Of the gallop of a horse our eye perceives chiefly a characteristic, essential or rather schematic attitude, a form that appears to radiate over a whole period and so fill up a time of gallop. It is this attitude that sculpture has fixed on the frieze of the Parthenon, But instantaneous photography isolates any moment; it puts them all in the same rank, and thus the gallop of a horse spreads out for it into as many successive attitudes as it wishes, instead of massing itself into a single attitude, which is supposed to flash out in a privileged moment and to illuminate a whole period'.
cf. Henri Bergson, *Creative Evolution*, p. 332.

moving object or body on a single photographic frame, resolved the issue of continuity's representability rather awkwardly and offered more stimulus for the imagining of movement rather than its sensible perception. He also envisaged the creation of a representational apparatus that would provide a phenomenological experience of continuous action. In the final chapter of his book *Movement*, we come across what can be considered a founding tenet of the cinema. Marey provides a complete description of the cinematographic apparatus by referring to a machine which can record the real world in motion, which also integrates the principle of subsequent presentation of moving images, under conditions that the sense of vision regulates. His account of the physiological mechanism that enables the animation of still images into a moving sequence is characteristic:

if an image is placed before our eyes ten times in a second the idea of discontinuity is lost, and the images appear to be in continual evidence. If the images shown to us are represented in the successive positions assumed by the object in motion, the impression conveyed to the eye is that of a continuous movement with no intermission.⁷⁴

Marey's statement foregrounds both the conditions that need to be satisfied for the animation of photographic stills to produce the impression of motion during their visual perception: succession of presentation in a pace that exceeds the threshold of our ability to visually perceive optical change; and, retaining the successive nature of the recorded continuum in the presentation order. This second condition can be more constructively rephrased: in order to maintain the impression of movement, the sequential still images ought to approximate each other enough to sustain the phenomenological experience of continuity and instill evidential credibility to its representation. Marey even goes as far as to prognosticate cinema's diegetic causality and the premises that will allow multiple screenings for large audiences with staggering precision.⁷⁵ The final revelation comes when he is confronted with a bold suggestion to use the photographic apparatus to record the human body as it ages over a very long period of time, and then present the series of images using a machine capable of animating them into moving sequences.⁷⁶ Marey finds himself exposed to the possibility of representing time itself dis-joined from movement, since applying the chronophotographic principle in a manner that condenses an enormous temporal interval into a perceivable short duration would result in a representation of bodily movement not in space, but in time.

⁷⁴ Étienne-Jules Marey, *Movement*, p. 305.

⁷⁵ Étienne-Jules Marey, *Movement*, pp. 313-318.

⁷⁶ Here is the complete description of the proposition by Marey: 'Professor Mach, of Vienna, suggests a curious line of research by means of this method. His idea is to take a number of photographs of an individual at equal intervals of time, from earliest infancy until extreme old age, and then to arrange the series of images thus obtained in Plateau's phenakistoscope. If this were done, a series of changes, which had been brought about during a period of many years, would pass before the eyes of the beholder in the course of a few seconds, and thus the stages of a man's existence would pass in review before the gaze of the onlookers in the form of a strange and marvellous metamorphosis.', cf: Étienne-Jules Marey, *Movement*, pp. 312-313.

Noah Kalina is currently realizing a similar project by taking a picture of himself each day for the past decade. His project "Everyday" can be viewed at: <<http://everyday.noahkalina.com/>>, Web: 03 March 2010.

The truth-machine: critical reflection on the practice as research

This chapter provides a critical reflection on the practice as research. The first year research engages with the issues of the representability of continuous movement by the moving image and the falsification of perception of the moving and still image. Short videos simulate the set up of a scientific experiment, in an attempt to examine a single representational characteristic of the moving image each time –movement, time, space, scale, matter, image, sound, rhythm, colour and language–. Observations during the making and viewing of the videos improved the understanding of movement's representation. More importantly they led to the production of cinematic devices that were used in the making of the non-fiction film during the second year of the practice as research.

The feature length documentary *an Anthology of Easter* engages with the issues of intelligible perception of the real world, as referent of the image. Filmed during the celebration of Greek Orthodox Easter, it allows the religious subtext of transcendental belief to saturate the moving image and challenges the conventional poetic and aesthetic modalities of non-fiction film. The film addresses the question of the continuity of movement, time and space, that is also the focus of the written thesis. Specific formal devices created during the first year of practice as research and other cinematic tools appointed in the course of the second year research, are used to provide an unusual visual record of women working together to bake a special pastry for the Pasch.

The modern fact is that we no longer believe in this world. We do not even believe in the events which happen to us, love, death, as if they only half concerned us. ... The link between man and the world is broken. Henceforth, this link must become an object of belief: it is the impossible which can only be restored within a faith. ... The cinema must film, not the world, but belief in the world – this is the power of modern cinema ... to replace the model of knowledge with belief.¹

Gilles Deleuze

First year practice as research: the experimental set up

The tension between continuity and discontinuity permeates theoretical writings that inform multiple aspects of this thesis. The most severe expressions of this discourse stem from Bergson's postulation concerning the impossibility to represent continuity, due to the analytical character of our representational systems. Such a differential understanding of the continuum, he claims, is nothing but a manifestation of the cinematographic nature of our perception of the real world; that is to say, we can intelligibly perceive a moving world only as stilled images, immobile poses extracted from the flow of continuous time, to which we imbue fixed meaning. In our attempt to reconstitute continuity we utilize privileged instants or points and formulate extremely detailed systems of differentiation, thus glorifying analytical discontinuity. Despite the ever expanding capacity for analysis, the continuum's true nature will always evade our understanding. Analytical discontinuity generated an ability for precise quantification that was utilized by modern science, especially for the measurement of minute phenomena during scientific experimentation. Although the capacity for extreme analysis and measurement led to the advancement of modern science, Bergson makes an observation that affords a different perspective regarding its attitude towards the quantification of the continuum; he locates the departure of modern scientific thought from antiquity, in its treatment of time. Every moment becomes equally significant during the monitoring of an experiment, therefore modern science foregrounds the problem of continuity's perceptibility; Bergson states that 'for a science that places all the moments of time in the same rank, that admits no essential moment, no culminating point, no apogee, change is no longer a diminution of essence, duration is not a dilution of eternity. The flux of time is the reality itself, and the things which we study are the things which flow'.² This treatment of time –as well as, other continuous phenomena like space and movement– and the methodology of the scientific inquiry, will be adopted by the first year practice as research in an attempt to set up visual experiments that study the behaviour of an

¹ Gilles Deleuze, *Cinema 2: The Time-Image*, p. 166.

² Henri Bergson, *Creative Evolution*, p. 344.

individual parameter of the moving image while keeping other parameters constant. Similarly to scientific experimentation –specifically in concern to the representation of continuity by the moving image– practice based research provides insights that affirm the theoretical findings and conclusions. But, as Mullarkey suggests, a connection between practice and theory cannot be reduced to an accommodation of the one to the other, their “resonance”, is not a reduction ... the relationship between theory and practice is “never one of resemblance” but “relay”.³ Approaching the same issues that were discussed in the written thesis, from the perspective of practice as research, provides constructively unique possibilities to examine the representation and perception of continuity.

Acknowledging the qualitative characteristics of motion and duration, I refrained from introducing any form of metric system within the experimental short videos, so that the lack of units of measurement or scale, would predicate an affective and intuitive understanding of the phenomenological experience. Hughes praises the experimental nature and the experience of the artwork, for both these characteristics enable the departure from the knowledgeable; the capacity for innovative and qualitative apprehension is an expression of the creative freedom that they provide, for as he claims:

The experience/experiment of the work presupposes a completely free field of creativity out of which the work itself is produced each time for the first time. There are no pre-given categories, and there are no rules. Nothing is given in advance except for the possibility of anything whatsoever. Instead of finding its rules outside of itself, each work gives us the rules insofar as we approach it within this structure of arbitrariness.⁴

Coming from another angle, Hughes also values the emergence of the contingent, the abolition of categorial systems and the neutralization of previous regimes of knowledge, as foretokens of an authentic understanding of the continuum's essence. Especially in concern to movement's representability in the cinema, the importance of the experience of moving images becomes explicit. Tom Gunning –whose writings provided important guidelines for the methodology of the theoretical research– concludes his discussion on movement with a call for experimental research, by admitting that movement 'even when specified as “cinematic motion”, probably includes multiple aspects, not just one perceptible factor. The extreme spectator involvement that movement can generate needs further study, both in terms of perceptual and cognitive processes (which I think call for both experimental and phenomenological analysis)'.⁵ Thus, the first year's practice-based research undertakes two basic tasks: firstly, to examine the continuum's representability through the study of the representation of movement by the cinematic image; and secondly to formulate, in the course of the aforementioned investigation, formal cinematic devices that will be used in the context of non-fictional film-making.

³ John Mullarkey, *Refractions of Reality*, p. 79.

⁴ Joe Hughes, *Deleuze and the Genesis of Representation*, p. 113.

⁵ Tom Gunning, “Moving away from the Index”, pp. 47-48

Example⁶ short videos series: representation of continuous movement

Cinematic representation is a machine powered by dichotomy; it attempts to provide a record of the real world, by re-creating the perceptual appearance of its movement through animation of photographic still images. Motion is inherently continuous; whether the essence of its continuity subsists the motion's abstraction by the cinematographic representation and perception, is the consideration of the *Example* series of short videos; for, each video provides an example of movement by material bodies –balls and marbles with variant characteristics– focusing on individual elements of their motion. Metz's vivid description of the characteristics that motion bestows to represented objects, tellingly reckons the medium's ability to depict the real world:

Motion imparts corporality to objects and gives them an autonomy their still representations could not have; it draws them from the flat surfaces to which they were confined, allowing them to stand out better as figures against a background. Freed from its setting, the object is "substantiated." Movement brings us volume, and volume suggests life. Two things, then, are entailed by motion: a higher degree of reality, and the corporality of objects.⁷

The motion that Metz identifies here as unique to cinematic representation, refers specifically to the movement of material bodies that sets them apart from the background and gives rise to the cinematically produced natural three dimensional spatiality. Within the *Example* series such evident operations of cinematic motion were subdued, so that other characteristics of movement would become noticeable. Resultantly, the background was neutralized –by opting to film uniform settings– and the material objects used were self-evidently corporeal and inanimate; moreover, they were always shown to move horizontally or vertically, thus voiding motion towards or away from the recording apparatus and traced flattened trajectories that suppress the sense of volume.⁸ The simplistic cinematic set up and use of basic objects, resists narrative formulation and conventional modes of emotional engagement with the cinematic image; resultantly, the viewer's attention is directed towards motion's representation and the process of its perceptual understanding.

Trajectory of continuous movement: Example 01

The first short video *Example 01* presents two different balls, one at a time, crossing the screen from one side to the other. The video lacks sound and the movement's background is a plain wooden surface. The trajectories of the moving objects undergo a gradual de-construction through the utilization of the cinematic cut, that fragments in three distinctive segments and re-arranges the two trajectories. Further manipulation of the motion occurs through reversed, accelerated and decelerated reproduction. An unproblematic representation of movement that would warrant the perception of the trajectory as continuous, is upset; instead, the short video

⁶ Appendix A: Charalambos Charalambous, *this eye is bigger* (Kent: University of Kent, 2009).

⁷ The *Example* series of short videos is included on the DVD *this eye is bigger*.

⁸ Christian Metz, *Film Language*, p. 7.

⁸ These characteristics do not apply to the final short video of the series *Example 05: pendulum and movement* that brings together observations from previous videos to examine the periodic natural motion of a pendulum.

highlights the incompatibility between continuous movement and the mechanical recording of motion by the apparatus –an effect that is emphasized by the flickering of the image, caused by a clash in the frame-rates of the recording and reproduction devices–. The discontinuity of the cinematic representation of motion due to the mechanical nature of the cinematographic apparatus, is rendered visible and therefore it is exposed to the viewer. Bergson discloses the principle that underlies the production of an appearance of continuous movement when he writes:

We discover here, at its outset, the illusion which accompanies and masks the perception of real movement. Movement visibly consists in passing from one point to another and consequently in traversing space. Now the space which is traversed is infinitely divisible; and the movement is, so to speak, applied to the line along it passes, it appears to be one with this line and like it divisible.⁹

Con-fusing continuous movement with its trajectory, forces motion to conform to a spatiality that renders it representable and measurable. The employment of the cinematic cut reveals that movement does not coincide with its trajectory. While, acceleration and deceleration are characteristics that can only be used for the qualitative description of motion, de-construction and fragmentation concern the trajectory of the movement alone. Therefore, the distinction is introduced between motion and trajectory, allowing the viewer to intuit the spatial abstraction of the continuum by the cinematic representation.

Multiplicity of the object and motion: *Example 02*

To retain the openness of motion and acknowledge the impossibility of extracting fragments from the continuous flow of the continuous, movement in the *Example* series always extends outside the limits of the frame –the start and end points are not visible– and therefore cannot become perceived as a totality. Previous characteristics of the series, such as, uniformity of the background, the qualitative manipulation of the motion and a variation of the moving material objects, are retained. The newly introduced elements in the short video *Example 02* are sound and multiplicity of motion. The screen is divided in four vertical segments that accommodate the trajectories of the movement. Although the motion is not fragmented –except by the limits of the frame itself– multiple movements of the same object can appear simultaneously filling some or all four of the segments on the screen. When the material moving object is the same, the misconception can arise that: it is the movements taking place simultaneously that are different. This apprehension is soon deemed false, for other than the obvious differentiation of their spatial characteristics like direction and positioning, movements also exhibit qualities, like fast or slow pace, that differentiate them qualitatively. Through a differentiation of the moving object particular kinds of movement also assume variation; for, the fast movement of the small glass marble differs qualitatively from the corresponding motion of the large metal sphere. Therefore, perceiving qualitative characteristics of movement attached to the material object, can lead to the erroneous conceptual pairing of motion with matter; these completed units can then become repeated and differentiated on the basis of the material object's individuality;

⁹ Henri Bergson, *Matter and Memory*, p. 189.

thereof, conjoining the qualitative nature of the continuum to materiality. In order to prevent the falsification of the continuum's qualitative nature –that ensues movement's conformity to materiality– we ought to conceive the multiple movements of the individual material object as the differential expression of the one and the same movement. Therefore, the concept of virtuality is introduced, allowing for multiple instances of actualization of the same event. In other words, spatial determination of the trajectory, means that differentiation that emerges due to the multiplicity of movement by a single object, leads to the creation of multiple new trajectories; but, defining the movement that characterizes an individual object qualitatively, allows for the differential actualization of movement without considering that each repetition produces the movement anew .

Recreating the event: *Example 04*

A spatial determination of the trajectory can lead to the falsified reconstitution of movement's continuity. The short video *Example 04* presents the falling of a ball over the edge; the event is recreated using three segments from different trajectories. The recreation of the movement does not specify the directionality or orientation of the event –since it can occur both naturally and in reverse– and does not enclose the event temporally by providing its start and end points. Taking the lead from the previous example, it also presents segments of the trajectory that remain void of motion. In this video, the trajectory of the motion becomes the organizing principle that gives meaning to the parts that reconstitute the event. Even though two out of three segments are not actual recordings of the action of falling, their final arrangement is perceived as such an event. Therefore, although the trajectory of the movement is never recreated completely –for it remains fragmented due to the variation of the material moving objects– the action of falling as worldly motion is completed. The multiple re-arrangements of segments that re-constitute the motion, do not cause the loosening of the action's meaning, for, the event is represented by parts of temporal duration which retain their openness. The re-constitution of the movement's totality makes this animated mosaic a mutinous representation because instead of utilizing immobile segments for the presentation of action, it employs open durations –and makes their use visible– as representational components.

Pendulum and movement: *Example 05*

Bergson describes the psychological need to spatially abstract movement that eventually leads to the misconception of duration: 'The indivisibles of duration, or moments of time are born of the need of symmetry; we come to them naturally as soon as we demand from space an integral presentment of duration'.¹⁰ Therefore, the inherent quality of indivisibility in space is consistent with the homogeneous nature of the continuum. Alas, in our attempt to understand movement by introducing to it spatial characteristics like directionality, start and end points, divisible segments and units of measurement, a system of spatial differentiation is constructed. Such geometrical understanding solidifies the space and renders it immobile in order to enable representability and quantification of motion. The nature of the space, then, is not inconsistent

¹⁰ Henri Bergson, *Matter and Memory*, p. 191.

with the homogeneity of continuity, but our systematic understanding of spatiality as geometry abstracts its homogeneous nature. For the last video of the series *Example 05* the device of the pendulum was employed since it can delineate simultaneously the concepts of continuous movement and time. The moving image does not attempt to retain our ability to quantify movement or time and as a result the trajectory of the pendulum is destructively deconstructed. Through the multiple re-arrangements of temporal and spatial parts an attempt is made to reconstitute the movement of the pendulum as a whole, but even when the complete trajectory is recreated the totality of motion is not restored. According to Deleuze, 'Far from breaking up the whole, false continuities are the act of the whole, the hallmark that they impress on sets and their parts, just as true continuities represent the opposite tendency: that of the parts and the sets to rejoin a whole which escapes them'.¹¹ To express the continuity of the whole, its representation ought to reveal the connection between its parts; in the case of the pendulum, the representation ought to make time's relation to movement known.

***MoodSwing*¹² short videos series: motion as perceptual change**

MoodSwing 01

The *MoodSwing* series of short videos aims to make noticeable the continuous alteration of the image's meaning that occurs during the phenomenological experience of cinematic images. *MoodSwing 01* creates the moving image by utilizing an ability of the modern non-linear editing suites to perform composite motion within a digital still image. The initial scale of the presentation, of a scanned black and white photograph, does not allow for a perception of the complete image. Even though the image is still visually unintelligible, we make sense of a vague appearance of human figures and apply meaning to the image. The material nature of the original photograph can be perceived as texture of printed paper through the digital medium. Finally, sudden motion –that emulates the mobility of the cinematic camera or the mechanical action of zooming-out– causes a drastic change in the scale of presentation and reveals the whole photograph. It depicts factory workers lined-up at the yard of an industrial site; this newly exposed image requires the reevaluation of the moving image's meaning. Therefore, the concept of action and motion within the cinematic image, is interlinked to the concept of perceptual change.

MoodSwing 02

MoodSwing 02 retains the use of the same device –composite motion within the digital image– but proceeds to introduce specific linguistic and acoustic signification to the moving image, in order to create a more complex perceptual process which constructs intelligible meaning from the interconnection of various types of signs. The short video begins with the sound of sirens and the acronym SOS –which is part of the complete photograph that is still unseen– gradually

¹¹ Gilles Deleuze, *Cinema 1: The Movement-Image*, p. 29.

¹² Appendix A: Charalambos Charalambous, *this eye is bigger* (Kent: University of Kent, 2009).
The *MoodSwing* series of short videos is included on the DVD *this eye is bigger*.

becomes visible. This initial sense of emergency and emotional tension is gradually subdued, as the moving image presents, through continuous motion, parts of the underlying image. Finally, the completed view of the photograph reveals a scene from everyday urban life in the 1950s and that the acronym SOS was merely letters from the sign of the coffee shop PARNASSOS. The example lacks the effectiveness of *Moodswing 01* in promoting motion as a constant change in perception that requires the revaluation of the image's meaning. This occurs for many reasons, the most obvious are: the provision of the initial signification by the use of sound and the word SOS, in a sense "anchor" the meaning of the moving image and make it more resilient to the continual revaluation that the motion demands. More importantly, the motion itself, due to the pronounced texture of the printed photograph is easily mapped, thus a spatialization of the movement takes place that nullifies its capacity for becoming homologous to continuous perceptual change.

***this eye is bigger*¹³ short videos series: moving image as thought process**

Breaking the sensory-motor link: *this eye is bigger 04*

The series of videos *this eye is bigger* becomes a final test of the methodology of the overall practice as research; for, each video introduces a new tool, that will be used for the making of the video *this eye is bigger 01* that concludes the series. The overarching concern of the series is to study the concept of motion as perceptual change as it has emerged from the *MoodSwing* series of short films. The video *this eye is bigger 04* discloses limitations that characterize visual perception by inserting an imperceptible cut in what appears as continuous cinematic motion. The cut is not perceived, yet the viewer is confronted with a dramatic change in representation as an image of the real world is exchanged with a graph that delineates the world conceptually.

The failure of representation: *this eye is bigger 03*

The short video *this eye is bigger 03* attempts to render perceptible thought processes taking place during the phenomenological experience of the moving image. Two indistinguishable images are initially shown on the screen. As the images of the two objects are revealed by the use of cinematic motion –digital zoom out– the meaning of representation is modified. At first we only perceive self-contained qualities –likeness of colour between the two images–, then, different shapes become noticeable. Finally, recognition of two different objects –a pink ball and a pink marker– is made possible. The sound of two metronomes falling in and out of sync enacts this perceptual process; for, the perception of the images initially coincides and then drifts apart until the moment of their identification. In addition, the explication of the progress of our perceptual understanding by the use of words that appear on the screen, discloses the reductive nature of the representation which the perceptual process explicates during the film while producing the moving image's intelligible meaning.

¹³ Appendix A: Charalambos Charalambous, *this eye is bigger* (Kent: University of Kent, 2009). The *this eye is bigger* series of short videos is included on the homonymous DVD.

this eye is bigger 02

The complex interconnection of the elements that guide our perception towards formulation of meaning is the subject of *this eye is bigger 02* that introduces multiple interchangeable signs which have the eye as their referent –written word, spoken word, image of an eye–. As each of the signs that is partaking in the representation of the eye disappears, remaining signs amplify their intensity –most notably the sound of the mechanical voice– to direct our perception towards the previous intelligible understanding. But, this very process is also making noticeable the absence of previous signification, leading to an apprehension of perception as a composite of multitude of signs.

this eye is bigger 01

All the previous cinematic devices are used simultaneously in the short video *this eye is bigger 01* and engage with the concept of motion as perceptual change. In addition, language –the ultimate system of signification– is subverted and given new aesthetics through the use of the computerized mechanical voice-over. The attempt to express affective emotion in this new mechanical way of speaking about the world, is an analogy for the equivalent attempt to convey the qualitative and continuous motion of the real world by the mechanically produced cinematic image. The video begins with a black and white digital image of a coastal landscape that shows a young woman amidst action; in addition the word “I”, written with a ball point pen, is clearly visible in the upper part of the picture with an arrow painted pointing towards the human figure. A set of dualities is introduced in this very first image –immaterial image-material world, colourless-colourful, inanimate-animate, photographic-cinematographic, still-moving, digital-analogue– echoing the ultimate dichotomy between continuity of motion and discontinuity of the cinematographic representation, which concerned the first year practice as research. The computerized narration draws attention to these binary qualities so that the film can exploit the contrast of a phenomenological experience of the image –both moving and still image– with the phenomenological experience of the real world. Continuous motion immerses the viewers into the photograph and, following an elliptical diegesis, returns them back to the initial landscape; but the arrested image has changed, for, the word “I” has been exchanged with “eye”, causing a shift in our perception of the moving image as a whole. Therefore, motion is interconnected to the continual change of our perception of the cinematic image.

The apprehension of the concept of continuous motion during the first year of practice based research, asserts findings of the theoretical research which suggest that motion in cinema does not correspond directly to the idea of a spatio-temporal movement, but refers to the broader understanding of the world and being. Motion, in this context, can be conceptualized as the continuous trace of our perceptual position within the continuum. This continuous perceptual dislodging can be realized through the change of our perspective towards the real world. Such relentless force that changes our perception of the world can be made known only through the renewed understanding of continuity, time and motion, that the moving image affords. Earlier in the thesis it was suggested that moving images can disclose the relation between time and

thought; that is to say, the cinematic representation's intelligibility emerges through perceptual processes which relate moving images (parts) with time as Open (whole). This is the manner in which the cinema's image "thinks" about the world and being, and as Rodowick remarks 'this is not necessarily "thought" which implies an accomplished event, rather thinking is posed as an act, an event in the form of becoming – in short, as movement'.¹⁴ Utilization of experimental cinematic devices during the first year of practice-based research, led to the production of new types of moving image – each type advancing different modes of thinking about the real world. The effect(s) of a cinematic device on the perception of the moving image can be identified by examining the processes that give rise to intelligible understanding in each case; therefore, the question of relating time and thought within processes of meaning creation, can be exchanged with the question of a moving image's genetic constitution. This interconnectedness between a genealogy of images that derives from a specific cinematic device, and the particular way the moving image becomes a thought process which makes time known or felt as a force, will be made explicit during the critical reflection on the second year practice as research in the course of the discussion on how such devices have been employed for the making of the documentary *an Anthology of Easter*.¹⁵

Opening up the image: this eye is bigger

The first year of practice as research led to the development of an arsenal of cinematic tools that emerged from a series of short videos which were defined by avant-garde aesthetics. Each example focused individually on a single characteristic of the moving image –like continuity, movement, time, space, scale, matter, image, sound, colour and language– in an attempt to engage with the perception of the image and explain the workings of cinematic representation in a manner that reproduces the set up of a scientific experiment. The final short video of the series *this eye is bigger* was produced to study whether previously observed functions of the aforementioned devices are subverted in the case that they do not partake in the image's genesis, but engage with the meaning creation process in a later stage. By creating cinematic images which evoke both realistic and fictional representational characteristics, the ability to harness the avant-garde aesthetics of the filmic tools so that they can be used for the purposes of non-fictional film-making, was put to the test. In the process of working with the image it became apparent that the formulated devices could be controlled and optimized to reinforce desired perceptual and emotional responses. Computerized narration was awarded a higher degree of realness which as a result produced intense affective engagement of the viewer. Continuous motion was purposefully adjoined to the constant change of the moving image's perceptual intelligibility; and finally, multiple elements –scale, motion, colour and sound– contributed towards the homogeneous quality of the constructed cinematic world. But the experimental nature of the devices used, along with their avant-garde aesthetics, introduced a distance between the produced moving images and the real world. This antagonistic relation between the traditional aesthetics and poetics of the non-fiction film, pushed to its limits due

¹⁴ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 131.

¹⁵ Appendix B: Charalambos Charalambous, *an Anthology of Easter* (2010).

to the synchronous use of multiple experimental devices, led to the creation of an out-worldly and fictitious filmic world, even though ordinary imagery was used for the making of the film.

Despite the failure of *this eye is bigger* to successfully bridge the aesthetic and poetic modality of non-fiction film with the avant-garde nature of the formulated cinematic tools, an important observation that would guide the next stage of practice-based research took place: the use of experimental devices, subjects the moving image to an opening which activates the cinema's operation on reality. Affecting the moving image through the use of experimental tools, causes traditional types of cinematic images to mutate, thus necessitating the establishment of a new set of connections between an image and its representational referent, to secure an intelligible understanding of the real. As a result new representational modalities emerge which demand a rethinking of the perception process. If multiple experimental devices operate simultaneously on the moving image, it becomes an increasingly complex task to decode the relate of the representation with the real world. Consequently, the moving image's intelligible perception relies on affective and intuitive processes, causing the link between reality and representation to weaken. Unsurprisingly the produced moving images, still exhibit consistent behaviour and homogeneous characteristics, for, their common genealogy gives rise to a new typology. But in order to observe the mechanics behind the formation of a family of cinematic images –a result of utilizing experimental devices to determine the moving image's genesis– and understand a subsequent process of meaning creation, only a single device would be employed at each time during the making of the non-fiction film. Therefore, a connection between the moving image and the real world, upon which the documentary is founded, would be disclosed by tracing the cinematic image's genesis.

Second year practice as research: novel aesthetic and poetic modalities

A primary objective of the second year's practice as research was to successfully apply the full range of experimental cinematic devices during the making of the film *an Anthology of Easter*. Experimental techniques would severely affect the poetic modality of the documentary, but more importantly they would divert the film's aesthetics away from realistic representation towards visual abstraction and a non-narrative episodic structure. Employing the specific tools that were developed under controlled conditions during the first year's practice as research, required to bridge their avant-garde aesthetics with the seemingly incompatible aesthetic and poetic modalities of the non-fiction film. In the case of the creative documentary, blurring the differences between a cinema of fiction and a cinema of reality can, according to Deleuze, give rise to another type of time-image, which instead of being concerned –as it is often the case in fiction– with the *order of time*, expressed by the coexistence of relations or the simultaneity of the elements internal to time, it deals with the *series of time*.¹⁶ This proposition provided basic anticipations for the function of experimental devices: regulating the moving image's coming-to-being aims to disclose the principle that relates the parts with the whole –in the case of the documentary *an Anthology of Easter* a connection of cinematographic images with time as the

¹⁶ Gilles Deleuze, *Cinema 2: The Time-Image*, pp. 150-151.

Open—; such insight is made possible by exposing a link between a moving image's genesis, to the analytical process of representation and perception, thus making known a seriality intrinsic to the temporality of events which remain open.

This anticipation of new types of moving image installed a straightforward question at the core of all stages of production of the second year practice-based research: "How does the Deleuzian typology of moving images (movement-image, time-image, crystal-image) emerge in the non-fiction film?". For, even though such images have been identified by Deleuze in the work of numerous filmmakers,¹⁷ the examples provided are almost exclusively concerned with fiction cinema. This effort to create similar typologies of moving images in documentary filmmaking, is also a consideration of the cinematic image as a thought process concerned with the real world. As such, the potent link between the moving image and reality—which is an even more pronounced characteristic of documentary film—does not suppress the symbolic richness of the image, but instead retains the full gamut of expressive tools that characterizes a cinema of fiction. This thesis already enumerated many of the characteristics Deleuze attributes to the time-image; David Rodowick provides some more general qualities to the new kind of image: 'this quality of incommensurability: indiscernibility of the real and the imaginary in the image; inexplicability of narrative events; undecidability of relative perspectives on the same event, both in the present and in the relation of present and past; and, finally, the impossibility of narrative worlds'.¹⁸ The sum of characteristics that describe this particular type of cinematic image, set the guidelines that pervaded all stages of the documentary's filming and shaped its poetic and aesthetic modalities.

Filming the ordinary as the extra-ordinary

The will to make a documentary about Greek Orthodox Easter, was based on a memory of the image of the world of matter being transformed during the Pasch, by something other than the religious celebration's transcendental subtext. Remarkably, it was the communal activity that caused the transmutation; people's belief bearing on the material nature of their everyday worldly existence. The main event, among the rest of the communal practices that take place during the celebration of Easter in Cyprus, is the baking of *flaounes*.¹⁹ Annual covering of the custom by national television led to the creation of conventional aesthetics for its presentation. Moreover, it introduced a specific performative aspect within documentation

¹⁷ The prolific example of a crystal-image is provided by the film *Last Year at Marienbad* (1961) by Alain Resnais. Deleuze cites as examples of crystal-images films by Max Ophüls, Krzysztof Zanussi, Werner Herzog, Federico Fellini, Alfred Hitchcock, Tod Browning and Andrei Tarkovski among others.
cf. Gilles Deleuze, *Cinema 2: The Time-Image*, pp. 66-94.

cf. Alain Resnais, *Last Year at Marienbad* (1968).
¹⁸ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 179.

¹⁹ *Flaouna* (Greek Cypriot φλαούνα) is a traditional pastry that is baked during the period of Easter exclusively in the island of Cyprus. Its baking process is a communal practice that is undertaken solely by the women of the community and it is related to various agricultural traditions and religious customs.
cf. Constantinos Yiangoillis, *Cypriot Traditions and Customs, of the circle of life, religious celebration and their relation to the agricultural practices* (Nicosia: Theopress Ltd, 2008).
The original title of the book is "Κυπριακά Ήθη και Έθιμα, του κύκλου της ανθρώπινης ζωής, του εορτολογίου και των μηνών, με στοιχεία γεωργικής λαογραφίας".

since the behaviour and appearance of subjects –usually a group of females– is appropriated for public exposure; such presentation contradicted my experience of the same event. Trinh T. Minh Ha claims that ‘by putting representation under scrutiny, textual theory-practice has more likely helped to upset rooted ideologies by bringing the mechanics of their workings to the fore’.²⁰ Attempting to overturn the established aesthetic regime of images and to depart from the normative poetic modality of non-fiction film-making, I opted to employ a cinematic tool that would cause definite disintegration of the conventional representation of Easter. My intention was to present a more authentic image of women baking *flaounes*, even at the expense of the actual event’s coherent recreation. Therefore a critical decision was reached during a pre-production stage to film large parts of the documentary –especially the procedure of baking *flaounes*– exclusively in extreme close up; this decision severely affected both the aesthetics and poetics of the film *an Anthology of Easter*.

Although non-fiction film-making is founded upon a principle of preservation of the moving image’s legible relation to the world –commonly based on its indexical link to reality– documentaries often conform to a set of conventions that are not dissimilar from those of the fiction films. Rodowick, referring specifically to ethnographic cinema, voices such a reproval: ‘In conventional documentary, the perspectives of observer and subject are divided and opposed in hierarchical fashion that is all too familiar in fiction films’.²¹ To suspend a distinction between myself as observer and the subjects, the decision was taken not to include voice-over narration since its conventional use in non-fiction film introduces a hierarchy that separates a film-maker from the subject. In an attempt to integrate stealthily with the subjects I chose to film people that I had known for years, immediate family and neighbours; in addition, I would employ the unfamiliar scale that the extreme close up introduces, to annul the performative elements of their behaviour. Turning this non-fiction film into a home movie complicated my relation as film-maker with the moving image during filming and especially in post-production. Heidegger is correct in suggesting that, truth has an ability to disguise itself in the ordinary:

We believe we are at home in the immediate circle of beings. Beings are familiar, reliable, ordinary. Nevertheless, the lighting is pervaded by a constant concealment in the double form of refusal and dissembling. At bottom, the ordinary is not ordinary; it is extra-ordinary. The essence of truth, that is, of unconcealedness, is dominated throughout by a denial. ... Truth, in its essence, is un-truth.²²

When viewing the moving images of ordinary life, the extra-ordinary that we usually deny in the course of the everyday comes forth to the light; whether it is the relentless passing of time on familiar faces, the “unethical” stance of your community towards immigrants, or even the fraudulence of ceremonial religious practice. Upon careful and critical inspection of the footage during post-production I can say with conviction that the decision to film intimate people was revealing and enriched the image of the documentary. On the other hand, filming unfamiliar

²⁰ Trinh T. Minh Ha, “The totalizing Quest of Meaning”, in *Theorizing Documentary*, ed. Michael Renov (Routledge: New York, 1993), p. 101.

²¹ David N. Rodowick, *Gilles Deleuze’s Time Machine*, p. 157.

²² Martin Heidegger, “The Origin of the Work of Art”, p. 176.

people is communicated within the documentary by the conventional presentation of action and traditional framing of the subjects, up until a moment in the flow of images that reveals something that is out of the ordinary; then, the extreme close up is engaged again to disrupt conventional aesthetics. This formalized behaviour of the camera acknowledges the device of the extreme close up, and by visualizing the workings of this cinematic tool it provides the manual –integrated within the documentary itself– for the explanation of the specific device.

The cinematic device of the extreme close up

Let us observe this disruptive function of the close up as it is used during one of the film's more conventional sequences. The second episode that presents the process for making the *flaounes* involves initially two subjects alone, a mother and daughter baking very early in the morning. We can see them interact while they are preparing the mixture for the pastries, talking softly –bordering on the verge of being inaudible– about the recipe and mechanically performing the whole procedure. This sequence that appears early in the film is not concerned with the development of the characters, nor does it present the complete baking procedure and the finished pastries. Moreover, although the activity appears to retain a spatio-temporal homogeneity, the black and white photographs on the wall over-looking the subjects introduce another time and space. The mother recognizes herself as a child in one of these photographs and proceeds to describe the rest of the people and the image's story; the camera moves into a close up view of the photograph and attempts to keep up with the live description following the narrative within the picture. Contradictory states of being –animate-inanimate, living-dead, moving-still, colourful-colourless, cinematographic-photographic– come together and merge by this drawing of the past into the present. The representational co-existence of antithetic conditions within the documentary causes an indiscernibility between differentiated aspects in the image. For example, the viewer simultaneously perceives two versions of the past, one animate and the other inanimate, but none of the two is prized with greater authenticity as an image of the real world; such interchangeability is symptomatic of the Deleuzian new type of image. Before abandoning the extreme close up to return once again to a conventional documentation of the women, the key tool that enables this indiscernible mergence of the virtual and actual images is uncovered by the character's aporia: '*Will you film me in close-up now?*'. The extreme close up that was deemed suitable for the presentation of herself and other people in the photograph –voiding spatial and temporal characteristics of the present to acknowledge another time and space inherent to the photograph– is considered by the woman inappropriate for the documentation of her being and action in the real world. Representation is conceived as a thought process that explains the real world with images.

The extreme close up jeopardizes the integrity of the documentation, but it does so in exchange for a novel representability of continuity. Most importantly, the persistent use of the close up bespeaks for the lack of homogeneity in cinematic space and time, noticeable in the attempt to re-construct the fragmented image. Space and time remain irreparably fragmented and the documentary cannot recreate the complete procedure of the baking for the spectator

even during post-production through editing of the filmed material. The erratic motion of the camera is both the admittance of the inability to grasp the complete object or action, and the manifestation of their virtuality. The virtual nature of objects and actions is a result of constant re-framings –changing perspectives spatially and temporally– in the attempt of the recording apparatus to reconstitute their being. Deleuze compares this ability of the camera for constant re-framing with the continuous renovation of representation by the thought process; he writes that, movement of the camera 'in every case (it) subordinates description of a space to the functions of thought. This is not the simple distinction between the subjective and the objective, the real and the imaginary, it is on the contrary their indiscernibility which will endow the camera with a rich array of functions, and entail a new conception of the frame and reframings'.²³ The quintessence of Easter is the indiscernibility between the real world and its idealistic reconstitution through belief. But such transmutation is not sought in religion, instead it is sought in the actions of people and their investment of belief in the material nature of the world. Thus, the use of the extreme close up provides a new signification to the moving image; not only does it possess a capacity to present reality in extreme detail, but it can also delve in and become inexplicably linked with the material world. This device grants the non-fiction film a representational mode which amalgamates the material and idealistic views of the world. Bergson claims that, the actuality of a *present* image has to be lost to become a *representation*; this is a kind of neutralization that re-turns the image back to its virtuality. To avoid a loss of its actuality, the representation has to be converted to an image that is concerned only with the superficiality of matter through an isolation of the shell or the instantaneous.²⁴ The extreme close up, then, satisfies Bergson's requirement for retaining the actuality of representation, but the image of matter's superficiality that it provides is denied the phenomenological constancy upon which Bergson founds a theory for the perception of matter. Rodowick confronts a similar impossibility to affirm simultaneously both an actuality that precedes representation and the virtuality that continuous time introduces; hence, he proposes that 'Belief is no longer belief in a transcendent world, or in a transformed world, but belief in *this* world and *its* powers of transformation'.²⁵ Such is the capacity of the moving image as a representation of the world, to present its realness and bear on its meaning.

It is not only the device of extreme close up that produces fragmentation. Throughout the documentary, narratives are followed intermittently and then they are abandoned without justification, denying the conception of a coherent spatio-temporal structure. Facts about the lives of the characters find their way into the dialogue only to remain unexploited, leaving the stories to linger inconclusive. Finally, none of the characters is given a central role despite their recurrent appearance throughout the non-fiction film. Bordering on unintelligibility, the need to introduce a framework that would constrain these fragments emerged; therefore, recurrent formally framed shots of the female characters individually presenting their *flaouna* directly to

²³ Gilles Deleuze, *Cinema 2: The Time-Image*, p. 22.

²⁴ Henri Bergson, *Matter and Memory*, p. 36.

²⁵ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 192.

the camera, provided a counterpoint to the aesthetics produced by the hand held camera, the extreme close up and their erratic mobility. The all-encompassing fixed frame and the stillness of these sequences, alludes to the overarching unity of the de-constructed representation; for they do not only signal the start and end points for episodes that structure the documentary, they also present right from the beginning an image of the women, not as fragmented bodies and individuated characteristics, but as complete beings who in their brief appearance in front of the camera involuntarily perform the complete range of their personality, in agreement to their depiction using the extreme close up during the baking process. The same sequences are also evidence that the various materials that were used for the baking will eventually come together to produce the pastries. But the fragmentation is not only spatial; the montage of the close up images cannot recreate the continuity of homogeneous time. Temporal fragments are slipping in the in-between of the moving images and remain missing during this operation of violent fracturing. This demand that is introduced by all the fragmentation devices, for the re-conceptualization of the moving image's relation to time, is yet another aspect of the image's concern with the real world as a thought process. Rodowick's description of the relation of thought with the image is revealing:

the irrational interval assures the incommensurability of interval and whole. Succession gives way to series because the interval is a dissociative force; it "strings" images together only as disconnected spaces. ... The irrational interval is autonomous and irreducible. It is not spatial, nor does it form part of an image. Rather, it presents the force that unhinges images and sounds into disconnected series, which can no longer form a whole.²⁶

Such characteristics of the irrational interval can be observed in a characteristic episode of the documentary that presents the image's becoming into a thought process about the real world.

Examples of the thought-image are provided throughout the documentary: the walk of the elderly woman, Judah's effigies on the bonfires, the ship crossing the seascape and more. When perception of the representation is engrossed entirely by the manifestation of thought processes within the moving image, the actual event is discharged altogether in exchange for a perception of the real world as whole that undergoes constant transformation in the duration of the event. In these cases the function of the irrational interval, as defined by Rodowick, can be seen at work, causing the image's becoming into a thought process. The episode with the women paying respect to the crucifix is paradigmatic for an understanding of the moving image as thought process. While filming, observing the women leaning forward to kiss consecutively the wooden cross led to a conception of the image of this recurrent action as evidence of their religious belief; thereof, the framing of the crucifix eliminates any religious iconography leaving the cross partially viewable from the rear, so that the image retains only the visual information that is concerned with the perception of its material nature. The perceptual process that grants meaning to the moving image and enables a transcendence of its worldly material form, by attributing to the wooden cross its symbolic meaning, is not yet constructed entirely. Working

²⁶ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 178.

systematically with the footage, it soon became apparent that the moving image was not documenting simply the action of women, or the religious practice of the community. This was merely a backdrop for the truer event: an extending of a material object's essence to integrate its idealistic meaning. To emphasize the fact, that it is the action of the worldly beings that transforms the material essence of the real world, during the editing the moving image is cut so that it corresponds to the motion of women leaning forward and again when their lips touch the crucifix. This method led to a sequence of moving images with shared characteristics and meaning; such a formation of new typology of images is the outcome of a process that thinks the world and creates families of images for its representation. The moving image, then, is not the mere reproduction of the real world, its mimetic record; but as thought-image it renders visible the image of our thought that is concerned with the world.

Transcending the world of matter

Adopting an analogous approach to the written thesis, that intends to overcome the futile distinction between realism and idealism, this documentary represents both matter and belief, reckoning their capacity to reveal the true in worldly context as equally valid. Therefore, the camera records the unexplained and extraordinary, along with the mundane and directly observable. Bergson advises that:

to ask whether the universe exists only in our thought, or outside of our thought, is to put the problem in terms that are insoluble, even if we suppose them to be intelligible; it is to condemn ourselves to a barren discussion, in which the terms *thought*, *being*, *universe*, will always be taken on either hand entirely different senses. To settle the matter, we must find a common ground where combatants may meet; and since on both sides it is agreed that we can only grasp things in the form of images, we must state the problem in terms, and of images alone.²⁷

Blurring the boundaries between the material and idealistic world, is yet another aspect of the moving image's becoming into a thought-image that is concerned with the meaning of worldly being. The documentary *an Anthology of Easter* engages this issue by creating moving images that exemplify a co-existence of the material and idealistic perspectives during the intelligible perception of the real world. More importantly, such thought processes that characterize the moving images, are not preconceived or supplementary added; rather they are extracted from the image itself during the making of the documentary. Resultantly, along with the presenting of events, this film also presents the moving image's transmutation into a thought process. For, to intelligibly perceive the real world as moving image, both of these presentations have to be acknowledged.

Even though the thought-image retains the analytical qualities of representation it can also become the evidence for a transcendence of the material world. I have already described how the wooden cross loses its equipmental nature as a worldly object due to a transcendence of its materiality caused by the people's belief in its idealistic nature. Comparably, the yellow

²⁷ Henri Bergson, *Matter and Memory*, p. 26.

flowers that are introducing and concluding the same episode, amidst the sound of brewing, undergo another material transformation. The customary procedure of pyrolytically extracting colour from flowers and vegetables, is used to colour tint boiled eggs for the celebration of Easter. The cause of this transubstantiation of matter is now a physical phenomenon; although the yellow-ness of the flowers is an evident quality within their visual representation, the pyrolytic process can extract the yellow colour materially. Therefore, distillation of colour within the moving image occurs dually: yellow can be extracted as a purely conceptual quality during our phenomenological perception of the flowers; or, it can be perceived as extraction of the same colour from flowers through a natural process that actualizes this phenomenon materially. The qualities that can be extracted from a representation of the real world as moving image, can be perceived interchangeably as material or idealistic characteristics. In a similar manner, religious belief becomes perceived as an idealistic notion –signified by the sound of the liturgy and the religious iconography– and as the real action of the women kissing the cross –becoming felt as the force that is causing the recurring motion–. Belief is the motor behind the movement of material bodies; like a gravitational power, invisible but present, it compels the beings to lean forward. This action is full with meaning, for it is experienced not only by the non-fictional characters within the documentary, but also by the viewers. During the representation of the community's religious practice, transcendental belief is rendered visible by the actual recurring movements of worldly beings; the tracing of movement by the cinematic image brings forth to the light those collective thought processes that bind together beings and their world as they continuously move and change. The moving image does not provide us with a symbolic image for the concept of belief, but defying an urge to alternate 'from image to concept, or from concept to image, [it becomes] the identity of concept and image. The concept is in itself in the image, and the image is for itself in the concept. This is no longer organic and pathetic but dramatic, pragmatic, praxis, or action-thought. This action-thought indicates *the relation between man and the world*'.²⁸ To put it simply, the most effective way for the image to present a material object or a concept, is for the image to become simultaneously with that which is presented. In the cinema the becoming is synonymous with the "moving" aspect of an image. The cinematic image is the image in the process of becoming; most vitally this becoming is equivalent to the thought process that changes our understanding of both the image and the represented world. That is why the fragmentation of motion unexpectedly leads to creation of moving images that exhibit an extraordinary consistency during the documentation of both the material and idealistic aspects of worldly being.

Thus, the transcendental nature of Easter must not be exclusively spiritual. The women experience and enact a transcendence of the material world corporeally during the baking of the pastries. For, they put their faith on the material ingredients used for the *flaounes*, manifested in the documentation as the recurrent evocation of the holy and the blessing of the ingredients (objects), themselves (bodies) and their work during the baking process (actions).

²⁸ Gilles Deleuze, *Cinema 2: The Time-Image*, p. 156.

Transposition of religious faith to a world of matter brings to mind pagan spring celebration rituals –indicating the connection of such communal practices with the agricultural traditions of the community– but in this case investment of belief on the materiality of the ingredients is founded on the profound understanding of their worldly material essence. The women's faith relies on an extremely rigorous quality test; the thorough examination of the ingredients includes checking their colour, their smell and their feel, in a manner that sensible perception of material qualities extends beyond the surface of materiality. More revealingly they trace and confirm the origin of the production of the ingredients, use brands that were traditionally used for the making of *flaounes* and finally, through the physical sense of their hands merging with the ingredients during the baking process, they ascertain that the mixture has the right quality. The superficial materiality of the ingredients' appearance does not verify their suitability; for, all other sensible qualities and beliefs that determine their worldly essence, also contribute to the excellence of the pastries in an inexplicable way. The women perceive the material world profoundly and in a manner that penetrates its visual exteriority and their interaction with the world leads to the transcendental transformation of its materiality.

The extreme close up reveals the real world by showing its material nature in extreme detail; thereof, the documentary's presentation of the ingredients, the dough and the mixture used for the pastries is persistent. This kind of representation, homologically to the women's understanding of matter, alludes to a perception of materiality that extends beyond its visual surface. Is it the very perception that guides the physical bodies as they become fused with the materials –feeling their texture, tracing their shape, altering their form, mixing or blending, assessing the behaviour of ingredients in a purely intuitive manner– especially when certain of the women's choices contradict the recipe –the idealistic organizing principle that regulates the baking process–. When bodies act on the real world it changes, only to inform the bodies by acting in reversal; this two-way movement of being towards the world, and world towards the beings, enables a constant interaction which leads to the reformation of both. The women act on the world as material bodies; consequently the recording apparatus does not engage a different representational mode for the depiction of the women. The extreme close up grants to their faces texture and detail as it fragments both their physical appearance and personality. Thus, the exemplified gestures, understated gazes, subtle facial expressions, and especially the unbearable veracity of the decaying skin constitute the body's material essence. In the course of baking *flaounes* the women enact a transcendence of their material nature, expressed by the newfound capability of their corporeal body to surpass its physical limitations; for, they are working for long hours, staying awake through the night, rushing to assist neighbours to bake while still coping with their daily demanding responsibilities and keeping up with the religious canon of the institutional church during the Holy Week. This is the true transcendence of the body's materiality that takes place during the period of Easter.

Representation of the continuum: movement and time

Bergson's theory of the image intends the description of the perception of the material

world. For Bergson movement is nothing but action of matter on the world and the reciprocate action of the world on matter. The incapability of our physical bodies to reconstruct and repeat continuous movement, is expressed by a corresponding impossibility to represent movement. This position epitomizes the material and discontinuous nature that is erroneously ascribed to representation, that Bergson resultantly considers as the limiting factor for the representation of movement by the cinematic image. Bergson categorically declares that worldly 'movements appear ... to concern action, and action alone; they remain absolutely foreign to the process of representation'.²⁹ In an attempt to overcome this impossibility I strived to depict the movement as interchangeable with its representation as moving image –effectively causing representation and movement to become one and the same–. The documentary engages this issue during the sequence that presents the walk of an elderly woman. Her walk is shown in its entirety; the full duration can be endured by the viewer in real time. Then, by utilizing an imperceptible cut and reversing the motion of the cinematic image, the complete movement is repeated backwards. The duration of the reversed footage exceeds that of the original walk, therefore it discloses the images that precede the start of the motion. Working with this footage during post-production led to an unexpected observation: that the qualitative characteristics of the elderly woman's physical movement permitted for a reversal of her walk in a manner that it retains an uncanny continuity of motion. The slow pace of movement, the lingering steps, her inflexible body posture and wearisome effort made the montage feasible; hence, movement's qualitative character subsisted its representation. But, what is the purpose of such an artificial reversal of movement? Continuous movement should be conceived only in terms of qualitative segments, open durations. According to Bergson 'indivisibility of motion implies, then, the impossibility of real instants; indeed, a very brief analysis of the idea of duration will show us both why we attribute instants to durations and why it cannot have any'.³⁰ Re-constitution of movement in cinema through the employment of the photographic instant is, for Bergson, symptomatic of the analytical nature of all representations and the cinematographic kind of perception of continuity. The cinema's allure was its promise for an image of the world in motion but instead, Bergson suggests, it glorified the analytical discontinuity of the instant. During the spectator's phenomenological experience of the represented walk as a whole, the moment that interrupts its duration and breaks motion in two parts –the forward-real movement and the reversed-imagined movement– is under the guise of an imperceptible cut. A seamlessness that affirms the homogeneity of the spatio-temporal exteriority of movement can only give rise to a kind of continuity which subordinates time to motion. But in this case, the seamless cut creates an irrational spatio-temporality that renovates motion; for, it introduces the indiscernibility of the instant that determines the newly constructed time as homogeneous. Resultantly, movement that is contained within this homogeneous spatio-temporality is qualified as continuous. For, a tension between continuity of motion and the discontinuity of cinematographic representation and perception, is the symptom of time's homogeneity.

²⁹ Henri Bergson, *Matter and Memory*, p. 33.

³⁰ Henri Bergson, *Matter and Memory*, p. 191.

It was Deleuze who rectified the misconception regarding the cinematic representation of continuity, on the basis of a critical modification in Bergson's thinking in relation to duration; he claims that, initially Bergson considered duration to be subjective –the constitution of our interior state– but later he resolved that, the only subjectivity is time itself and it is we that we are internal to it. Therefore Deleuze writes 'Time is not the interior in us, but just the opposite, the interiority in which we are, in which we move, live and change'.³¹ Just before the walk the elderly woman reveals that she can no longer walk; thus, movement as action by the material body is an impossibility. When action becomes an impossibility, it forces the world within the cinematic realm to take responsibility 'for the movement that the subject can no longer or cannot make'; Deleuze claims 'This is a virtual movement, but it becomes actual at the price of an expansion of the totality of space and stretching time'.³² The documentary extends a totality of its spatio-temporality through the insertion of archive footage; the filmed walk is from the time when the elderly woman could still walk. The use of archive material in this case subverts the poetic modality of the non-fiction film by upsetting, rather than asserting, its filmic reality. The differentiated aesthetics of the image bespeak of this departure; explicitly voyeuristic, the camera records the woman walking behind foliage without her acknowledging being filmed at any time. After the complete duration of the walk –forth and back– we return to a continuation of her dialogue with another elderly neighbour, thus rendering the spatio-temporal context of the represented movement a parenthesis from previous space and time that defines the reality of the documentary. An ability to transcend filmic reality is granted to the woman freeing her from the constraints of the real space and time, at the expense of rendering the film's reality virtual. For this transcendence of space and time is ultimately a renovation of the real world's essence; (wo)man is liberated from space and time in the same way the resurrection liberates humanity from the constraints of worldly spatio-temporality. Resurrection as the transcendental event that gives meaning to Easter, transubstantiates the real world into a virtual one.

The time of the event: a final thesis on movement

Considering the ways by which an event becomes virtual to allow time in the form of pure duration to renovate its meaning, we can conceive the constant re-framing of action as a temporal, instead of spatial, characteristic of the moving image; constant re-framing as a result of the camera's mobility, calls for reevaluation of the image's meaning in the continuous flow of time. Analogous results can be accomplished by the fragmentation of action through the use of the close up or montage; for, fragmenting the action gives rise to a multiplicity that renders the event virtual. The event has to be actualized then, by its re-constitution through the process of an intelligible understanding that grants meaning to the moving image. But, how can we make time felt as a renovating force of worldly meaning, without employing the camera's mobility or resolving to the use of montage? Deleuze argues that, in order for a present phenomenological experience to stand for the whole time –of the duration of an event– we need to substitute its quality of being actual with the event's past and future actualization. Substituting the present

³¹ Gilles Deleuze, *Cinema 2: The Time-Image*, p. 80.

³² Gilles Deleuze, *Cinema 2: The Time-Image*, p. 57.

experience with its temporal multiplicity does not act disruptively on the continuity of time, for in accordance to Bergson's intuitive description, 'perception, however instantaneous, consists then in an incalculable multitude of remembered elements; in truth every perception is already memory. *Practically, we perceive only the past*, the pure present being the invisible progress of the past gnawing into the future'.³³ Integrating the past and the future, as re-collected and imagined multiplicities, within the process of intelligible perception of the moving image, can make the represented event virtual thus enabling time to act as the force that renovates the meaning of the world.

The ending sequence of the documentary *an Anthology of Easter* shows a ship crossing the horizon by presenting the full duration of the movement even before the ship enters the frame on the left and up until it is lost in the right edge of the seascape. This sequence engages with the issue of a separation in the space and time of the represented event, from the spatio-temporality of the actual event. Extraordinarily, the essence of the event's action can be contained entirely in the stillness of the photographic aspect of the moving image. So, the description of the event as an ongoing movement, "*a ship crossing the horizon*", can be realized without the requirement of cinematographic motion. For such kind of realization, time of the phenomenological experience of the moving image becomes distinct from a time of the event; for, while viewing the moving image of the ship's crossing we can recall the start of the event and anticipate the event's ending. This opening up of the present time to its past and future is nothing but the emergence of the event's virtuality. Regarding this virtuality of the single event and its relation to time we need to quote Deleuze in length:

It is quite different if we are established inside one single event; if we plunge into an event that is in preparation, arrives and is over; if for a longitudinal, pragmatic view we substitute a vision which is purely optical, vertical, or rather, one in depth. The event is no longer confused with the space which serves as its place, nor with the actual present which is passing: "the time of the event comes to an end before the event does, so the event will start again at another time ... the whole event is as it were in the time where nothing happens", and it is in empty time that we anticipate recollection, break up what is actual and locate the recollection once it is formed. ... time is revealed inside the event ... it is at the same time that it will take place, has already taken place and is in the process of taking place; so that, before taking place, it has not taken place, and, taking place, will not take place.³⁴

The time and space of the moving image are no longer the time and space of the event, but they currently belong to the phenomenological experience of the image. Thereof, the time of the event is separated from the time of its representation which has now merged with the present experience. The time of the event is emancipated and it can be subjected to the de-constructive processes of the moving image's intelligible perception for the creation of worldly meaning. Thus, the ship can be thought crossing the frame long before its motion becomes

³³ Henri Bergson, *Matter and Memory*, p. 150.

³⁴ Gilles Deleuze, *Cinema 2: The Time-Image*, p. 97.

actual and the action of this event can be undone to be repeated autonomously from both its cinematic representation and its phenomenological experience. The time of the event has truly become virtual.

Conclusion: 'How does image think worldly being?'

The representational tools that were methodologically developed during the practice-based research, initially appeared to be incompatible with the poetic and aesthetic modalities of the non-fiction film. During the first stages of actual filming, the formality of the cinematic devices proved to be extremely demanding and led to the recording of material that could not find its way into the creative documentary. After a short adjustment period a mode of thinking emerged, that shaped the recording of the real world, in the case of each experimental device. Although at times I could not envision the interconnection between extremely diverse types of moving image, or the extraordinary visual representations that resulted from the use of certain devices, the persistent use of these techniques exclusively, without opting to film material in any other way, finally paid off. For, this method led to the production of a non-fiction film that exhibits consistent representational characteristics. During the process of documentary filmmaking, rather than being constrained, I felt that the experimental tools allowed for a freedom while engaging with the issue of the representation of continuity, movement and time. Notably the extreme close up, that was without doubt the most uncontrollable of the techniques used, proved to be the most revealing and rewarding experimental tool. Attempting to work in post-production with material filmed in extreme close up, resembled trying to assemble the pieces of a puzzle with no adjoining edges; but, the representation that was eventually realized after the moving image unveiled its own processes of thought, unconcealed the relation of time with the cinematographic image.

New typologies of cinematic images that emerged during the documentary making due to the utilization of experimental devices, question the cognitive processes that render moving images intelligible. Aesthetic and poetic modalities which have emerged through the practice as research, provide valuable insight in relation to the coming-to-being of the moving image in non-fiction film, and make possible an in-depth examination of representation which can lead to a renewal of the current model of perception. The reproduction of different types of moving image, by the practice work, generates corresponding modes of thinking about the real world, substantiated in the form of the non-fiction cinema's moving image. For, as Nichols suggests 'documentary is not a reproduction of reality, it is a *representation* of the world we already occupy. It stands for a particular view of the world, one we may never have encountered before even if the aspects of the world that is represented are familiar to us. ... We ask more of a representation than we do for a reproduction'.³⁵ By giving examples of virtual images of the real world that become actualized through a process of intelligible understanding, practice as research provides essential proof that representation is not bound to conventional semantic models; it is able to retain the cinematic image's openness. Moreover, a recurrent appearance

³⁵ Bill Nichols, *Introduction to documentary* (Bloomington: Indiana University Press, 2001), pp. 20-21.

of specific elements that disclose the nature of the moving image's relation to its referent, is a strong indication that the conditions which define representational and perceptual models, are included within the image itself. But, in order to make this inbuilt manual explicit, we need to trace the thought processes that relate the moving image with being and world.

Reproduction of ordinary events by the practice-based work, provides clear examples which showcase that events can remain open or devoid of action, while still being represented. By withholding the actual portrayal of an event, the moving image discloses that the addition of an intelligible interpretation is the action of representation itself. Only time endures the analytical representational deconstruction which takes place during the indexical referencing by the cinematic image. This representation emancipates time from a conventional perception of space and movement, and causes a move away from realistic representation that rethinks the concept of indexicality for cinema. The abstraction of an event's homogeneous time to the seriality of cinematic representation, in addition to a deviation from its realistic reproduction, jeopardizes the fragile but vital relation of the moving image with the real world. Consequently technology's partaking in the creation of the moving image and representational characteristics that emerge as a result, acquire fundamental importance for the meaningful correlation of the cinematic image with the real world. The practice as research work succeeds in foregrounding the ontological significance of cinema's medium specificity, in relation to the moving image's worldly meaning. In effect, the representational modality of the cinematic medium is enacted within the practice-based work, by the interconnection of a subsequent process of intelligible perception with the moving image's coming-to-being.

This disclosure of the mechanics of representation and perception, does not advocate for an idealistic conception of the image; instead, as the documentary *an Anthology of Easter* demonstrates, the moving image can bridge a world of matter with a world of ideas. Deleuze's theory of the image, utilizing examples solely from a cinema of fiction, confines representation with an ideal perception by a spectator that is emancipated from a worldly context. Conversely, the non-fiction film takes into account a dual phenomenological experience, the experience of the real world within the filmic realm, and the experience of the moving image by a spectator that is part of a real world. Cinema of reality reclaims the worldly nature of an image, since the link from moving image to the real world is characterized by a continuity of phenomenological experiences. Experience of the virtual or immaterial, informs another experience of the actual and material; all previous experiences, along with ones which follow, are cross-contaminating the meaning of what we understand as real. The documentary thinks worldly being in moving images, and by enabling a bidirectional continuous movement from image to the world and vice versa, it sets the ground for a fundamental correspondence between the two. To ask 'what does the moving image do?' is not tantamount to asking 'what does being and the world do?', for the ontology of the image and the world's are not the one and the same. Thereof, practice-based research demonstrated that the moving image and real world, both share a becoming in motion, in order to address the synthetical question: 'How does image think worldly being?'

The truth-machine: a model for the perception of the moving image

This chapter attempts to resolve the inconsistency between the phenomenological experience of time as continuity and the discontinuity of perception, as it is described in previous theories of the image. Through the utilization of the mathematical concepts of the metric space and the open sphere, a model for the perception of images that expands sensible perception to enable an understanding of continuous concepts, is realized.

To give up certain habits of thinking, and even of perceiving, is far from easy: yet this is but the negative part of the work to be done; and when we have called the *turn* of experience, when we have profited by the faint light which, illuminating the passage from the *immediate* to the *useful*, marks the dawn of human experience, there still remains to be reconstituted, with the infinitely small elements which we thus perceive of the real curve, the curve itself stretching out into the darkness behind them. In this sense the task of the philosopher, as we understand it, closely resembles that of the mathematician who determines a function by starting from the differential. The final effort of philosophical research is a true work of integration.¹

Henri Bergson

Creating a model for the perception of images

Considering the cinematic representability of continuity in the course of this research, both theoretical and practice based, has taken us from the moving image to thought processes that are concerned with the intelligible perception of the real world. Deleuze proposes that our thought about the real world is interlinked with our ability for visual representation; therefore, advancements that introduce new aesthetic and poetic modalities in relation to image making, can inform our understanding of the real world. Characteristically, in his call for a renovation of modern thought in *Difference and Repetition* he suggests that, 'The theory of thought is like painting: it needs that revolution which took art from representation to abstraction. This is the aim of a theory of thought without image'.² Doing away with "image" in the theory of thought does not refer to a departure from thinking in visual terms or thinking about the image; instead it refers to the need of renouncing existing conventional schemata that constrain our thought. Therefore in this chapter, a novel visual model for the image³ will be actualized, to enable an understanding of the perceptual processes that render the representation of the continuum intelligible. This visual model, henceforth referred to simply as Image, is the tripartite schema that includes the referent, its representation and thought processes enabling their intelligible perception. Having in mind Rodowick's admonition that 'An image of thought is not a method of thinking',⁴ the formulated Image will not attempt to stand in for the thought processes or emulate a cognitive modelling of the brain. Image only aspires to trace continuous trajectories taking us from representation, through perception, to the referent. For Deleuze suggests that, 'The image of thought retains only what thought can claim by right. Thought demands "only"

¹ Henri Bergson, *Matter and Memory*, p. 185.

² Gilles Deleuze, *Difference and Repetition*, p. 276.

³ The visual model for the image will thenceforth be referred to simply as "Image".

⁴ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 176.

movement that can be carried to infinity. What thought claims by right, what it selects, is infinite movement or the movement of the infinite. It is this that constitutes the image of thought'.⁵ In an attempt to retain the infinite quality of movement of thought –that also characterizes the thought processes within perception– the findings of previous chapters that are concerned with the representability of continuous movement, will inform the construction of the Image so that the openness of the perception and the continuous link of representation with the referent are preserved.

The meaning of the Image is determined from the genetic formation of representation and perception, and it is the result of an actualization of the thought processes concerned with worldly referents; therefore the Image cannot emerge independently from the worldly beings that represent and perceive, as well as, the pre-existing world that becomes its referent. This is the worldly essence of the Image. It is in this sense Alain Ménil argues that the postulate of our thinking about the cinema is 'nothing less that the world become image, the world revealed by this image and with which it becomes conflated, to which it can be reduced. But this is precisely the first postulate of *Matter and Memory*: the world considered as the entirety of matter coincides with the totality of images'.⁶ But, the Image can induce a true understanding of the world, only when processes by which the world is reduced during its representation and then expanded to encompass its totality once again, through perception, are clearly explained. Thus, for Deleuze, the relation of the image to thought is important to philosophy because the image can actualize concepts that in other systems of representation remain purely virtual. The image, then, satisfies the primary task of philosophical thinking: the creation of concepts. One characteristic example is provided by Rodowick who proposes that, for Deleuze the cinematic images become an actualization of a mental cartography; for, they enable the grounding of concepts and at the same time, they provide the coordinates that describe the connection of thought to movement and time.⁷ The primary objective of this chapter can now be articulated; to provide a model for the image that grounds representation within continuity and maps the trajectories of the thought processes that link sensible perception to the worldly referent. Such description of the Image intends to improve our understanding of both the world of matter, as well as, concepts like movement and time, that due to their inherent continuity are seemingly incompatible with our limitations for corporeal action and the existing thresholds of our perceptual ability.

Image and the duality of matter and mind

The aforementioned inconsistency between the evidently limited ability of our bodies for sensible perception, in contrast to the limitless capacity of our intellect –whether it is called spirit, memory, imagination– to conceive worldly being, has been installed by ancient thought in the heart of the image's formation; it was the preservation of an inconsistency between the

⁵ Gilles Deleuze, *What is Philosophy?*, p. 37.

⁶ Alain Ménil, "The Time(s) of the Cinema", pp. 96-97.

⁷ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 174.

continuity of time and our discontinuous representation and perception of the world. We have documented Bergson's attempt to void this dichotomy, by defining the image in his theory as something more than the idealist's representation and the realist's material thing,⁸ but at this point it is also important to signify the difference between image and representation. Bergson states that '(a) *body, an object destined to move other objects, is, then, a center of action, it cannot give birth to a representation*';⁹ the image of our body becomes an epicentre for the perception of the material world as the aggregate of images that are interconnected through movement. While for Bergson movement refers only to the world of matter and is synonymous with action, Deleuze's concept of movement, as it was developed for his cinematic philosophy and the concept of movement-image, allows for action to be thought as virtual. Movement, as action that remains virtual, acquires significance for the material world even though it may not be actualized. For, the Deleuzian virtual is not simply the unrealized possibility, but is always real inasmuch as it changes our understanding of the world. Rancière expectedly poses the following question: 'What, then, is an image? It is not what we see, nor is it a double of things formed by our minds. Deleuze develops his reflections as a continuation of the philosophical revolution started by Bergson, so what is the principle of that revolution? It is to abolish the opposition between the physical world of movement and the psychological world of the image'.¹⁰ This thesis adopts Rancière's position that the image is neither a manifestation of our interior states –for, this text has previously renounced a similar subjective interiorization of time– nor merely an expression of the world's materiality –for, the practice as research has already documented the transcendence of materiality by worldly beings–.

In an attempt to subvert the subjective qualities of time, Deleuze diminishes entirely its worldly essence; this radical disjoining of time from world, grants an autonomy that harnesses time's nullification once again. Deleuze's concept of the virtual introduces a question whether perception is of worldly things themselves, or the perception of their image. Rancière marks this tension in Deleuze's thought, by noting that 'the perceptive properties of images are only potentialities. Perception is "in things", but in a virtual state, so that it has to be extracted from them';¹¹ thereof, he proceeds to explain that in order to extract such properties and retain their qualitative nature, conditions –like purity of time and immanence of space– must be satisfied, therefore insuring that "things" do not fall in the material realm as in Bergson's theory for the image. Nevertheless, introduction of various purities –of the event, space, time and thought– echoes Bergson's pure image and pure memory, which led to conceptually poorly illuminated dead end alleys by giving rise to the spatial conceptualization of time and imbuing a theory of the image with metaphysics. Deleuze is not alone in being led astray by the attempt to break away from an established system of thought. Turning to Heidegger, in our attempt to restore the worldly nature of things, we come across this description: 'In what the senses of sight, hearing, and touch convey, in the sensations of color, sound, roughness, hardness, things move

⁸ Henri Bergson, *Matter and Memory*, p. 9.

⁹ Henri Bergson, *Matter and Memory*, p. 20.

¹⁰ Jaques Rancière, *Film Fables*, p. 109.

¹¹ Jacques Rancière, *Film Fables*, p. 110.

us bodily, in the literal meaning of the word. The thing is the *aesthēton* ... nothing but the unity of a manifold of what is given in the senses'.¹² Once again, attention needs to be drawn to the close proximity of Heidegger's thought with the Bergsonian mindset, by noting both a capacity of qualities that characterize the material world to move the body, and the consideration of the aggregate of such sensible perception as the totality of the worldly material thing. Advocating for the cogency of phenomenological experience, Heidegger conflates the worldly materiality of the thing or being, with its ability to become physically perceived. Naturally, this kind of experience can only provide us with a limited understanding, since bodily perception is often incomplete or falsified; for, the thing cannot reveal itself to us as a totality, due to the existence of thresholds that limit our capacity for corporeal sense.

Perception of worldly things or beings can therefore be expressed as the problem of relating the *aesthēton* with the virtual; the *aesthēton* is given to beings through the senses and the virtual makes time felt as the force that permeates perception. Considering the broader implications of the idea implicit in Deleuze's immanent philosophy of the cinema, Ménil marks the possibility of reconciling matter and thought, through the image; for such a philosophy 'would be a philosophy in which the making of a world of images, and the formation of images that tend to make up a world, would presuppose an implicit understanding of the relation between images and matter as well as of those between image and thought'.¹³ Therefore, in an attempt to resolve the issue of a cinematographic perception of continuity, Deleuze's cinematic philosophy answers Bergson's call to ground the problem of perception to the world of images and images alone; for, it is by the thought processes that take place during the perception of a thing as image, that materiality can be interspersed within the renovating flow of time. But the problem of separation of the body from the mind subsists such understanding; for, the intellect can intuit the continuous homogeneity of time that representational systems abstract spatially for its perceptibility. Rodowick's consideration of the same issue can offer valuable insights:

The relationship of a body to thought is a complex one that is analogous to that of space to time. The body is intimately linked to the materiality of perception; it anchors perception in space and grounds the horizons and perspectives from which space is apprehended. However, if time is anterior to space, this does not mean that mind is divided from body.¹⁴

Adapting the analogy to the intents of this research, the claim can be made that our perception is adequate for an apprehension of the continuum even through its discontinuous knowing by the corporeal senses. Therefore, the task that is set for this research is to model this expansion of the discontinuous perception to encompass the continuum within the image.

Phenomenological perception of the cinematic image

Rushton based on Rodowick, maintains that Deleuze does not separate the spectator's

¹² Martin Heidegger, "On the Origin of the Work of Art", p. 156.

¹³ Alain Ménil, "The Time(s) of the Cinema", p. 94.

¹⁴ David N. Rodowick, *Gilles Deleuze's Time Machine*, pp. 167-168.

perception from the cinematic (re)presentation, thus failing to satisfy the requirements of the phenomenological approach where consciousness is *of* a thing perceived.¹⁵ Rushton's criticism is another testament for the departure of Deleuze from the worldly nature of the perception. Deleuze conflates the perception and representation by adjoining image and viewer, in order to protect meaning creation from external regimes of knowledge that reduce understanding to convention. This conception of a pure perceiving brain leads to the emergence of the concept of virtuality at the expense of voiding the viewer's worldly character. But, such a purification of perception is not necessary for the creation of the virtual. Having in mind the observations in relation to the multiplicity of movement during the practice based research, let us consider the experience of moving images in the cinema theatre; simultaneous perception of the image by multiple spectators creates the variation of the image's meaning –for, each viewer possesses different point of view, emotional condition, set of mind; that is to say, is a unique perceiving subject–. The emergence of the virtual can be attributed to this kind of collective differential perception since the image's meaning is informed by the equivocality of the multitude of phenomenological experiences; only in this case, it is also deeply rooted within a real world. The incompatibility with phenomenology lies on a misconception; a phenomenological account does not require a purified perceptual process. On the contrary, the phenomenological account of perception is equipped with the ability to apperceive both the thought processes by which an object is perceived, as well as, any previous knowledge about the object; thus, it fulfils the initial requirements of the ontological methodology to consider the object in itself.

The ability of the phenomenological method to apperceive the perceiving subject and the previous regimes of knowledge answers Mullarkey's objection in relation to the image's phenomenological perception. Mullarkey observes that 'the image is for itself and not *for* a consciousness (as both phenomenology and Freud would have it). For, if Husserl claimed that consciousness is *of* the image (and the image is for consciousness), then Deleuze follows Bergson's alternative view in *Matter and Memory* that consciousness already *is* the image'.¹⁶ We are presented here with two seemingly differing approaches: the first stems from Bergson's consideration of the image as encompassing the thought processes that manifest themselves during its perception; the second considers the image perceived in itself, by phenomenological experience, as void of any signification. The thesis corrects this misconception of the image for the needs of a phenomenological account by reminding that, in the phenomenological account perception's capacity to understand the thing's worldly essence derives precisely during the methodological operation that follows its perception. For, phenomenology demands that the sensible perception of a thing's image goes through a subsequent process of apperception that purifies the image to extract the thing's worldly essence. Deleuze's detailed account of genesis for the image and the mechanics of the image's perception in cinema, is an attempt to provide exactly such tools that will enable an understanding of the image in itself, emancipated from a spectator and previous systems of representation. Therefore, Deleuze elucidates the genesis of

¹⁵ Richard Rushton, *The Reality of Film*, pp. 140-141.

¹⁶ John Mullarkey, *Refractions of Reality*, p. 88.

both the movement-image and the time-image and the mechanics of a sensible and intelligible understanding in each case. Here is Rushton's attempt to elucidate Deleuze's account for the workings of our perception: 'Perception thus subtracts from the chaotic manifold of sense-perceptions so as to provide us with perceptions that we can do something with; in other words it provides us with perception that we have the potential to make sense of'.¹⁷ Such understanding of perception as the faculty for refinement and organisation of sensible raw data, this text suggests, identifies Deleuze's account as phenomenological.

The representational reduction of the world to image

The question that follows this understanding of perception is, by which process does perception organise the raw material at its disposal to make sense of them? During the first chapter, perception was deemed by Bergson incapable of capturing the essence of the material object or the idealistic concept, because the image as representation is the result of categorial differentiation. Although such formulation of representation enhances our capacity for eidetic recognition and quantification of the material world, it cannot enable qualitative and complete understanding due to its inability to map the continuum. Therefore, it is crucial to delineate the model's mechanics, by installing the representation within a perceptual account that aspires to trace the continuous movement from the sensible raw data –discontinuities– to the referent of representation. Deleuze's theory suggests that the interface between the intelligible and the sensible is not engaged at all times; it is triggered by a failure of representation that activates their interchangeability. We have identified such breakdown of representation caused by the cinematic image previously –marked by the division between the movement-image and time-image of cinema–; this thesis can now support that the moving image produces a crisis of the representation at all times. For, the cinema always evokes an insurmountable representational incompatibility between the phenomenological experience of the continuum, opposed to the intelligible perception of analytical representation.

Bergson's position that our perception of the real world is of a cinematographic kind essentially transposes this crisis of representation and relates it to our totality of understanding of world and being. For the nature of our perception of the world is utilitarian, which means that perception itself is formed by the thing we intend to perceive. Bergson's description for the act of seeing suffices to prove that this is the case; he writes that 'our activity is carried by a series of leaps, during which our consciousness is turned away as much as possible from the movement going on, to regard only the anticipated image of the movement accomplished'.¹⁸ Guided by such terminal causality, perception bypasses the continuous nature of the thought processes that takes place during the phenomenological experience and envisages the process as a determinate series of immobile steps rather than open mobile parts. For Bergson, this kind of perception cannot extend again into action in the material world, but it is exhausted at the

¹⁷ Richard Rushton, *The Reality of Film*, p. 138.

¹⁸ Henri Bergson, *Creative Evolution*, pp. 299-300.

moment of phenomenological stimulation,¹⁹ thus affiliating itself with cinema viewing where the world reduced to immaterial moving images presents itself for the sole activity of being perceived. Bergson proposes an unorthodox understanding of the mechanism of perception, '*what you have to explain, then, is not how perception arises, but how it is limited, since it should be the image of the whole, and is in fact reduced to the image of that which interests you*'.²⁰ Perception is considered to be an even more limited version of the representation and the perception act is deemed incapable of providing additional information concerning the qualities of the object. But, in order to enable the image's extension into action once again, the discontinuous steps that describe the movement that takes place within perception have to be expanded to become continuous.

Bergson's theory employs the twofold reduction because it is concerned with the understanding of the material world; the first reduction occurs with analytical representation, the other occurs by assigning solely utilitarian function to perception which is not only forced to retain the discontinuity of representation but to resolve to another reduction in accordance to the intentionality of the perceiving subject. This thesis contends that the perceptual process should be equipped with mechanisms that allow for the reversal of the representational reduction and re-instate indeterminacy back to the process of perception. For, it is the freedom that ensues such indeterminacy that allows for creative thinking and innovative understanding of the world. Furthermore, such indeterminacy is not the demand of our own caprice, but it is the consequence of time's homogeneous nature that saturates the perceptual process following our phenomenological experience of the world. The description of such a method of expansion, unexpectedly, is provided by Bergson himself, for he proposes: '*whereas our visual perception was of a continuous whole, the movement by which we endeavour to reconstruct the image is compound... The confused movement which copies the image is, then, already its virtual decomposition; it bears within itself, so to speak its own analysis*'.²¹ Using the concept of the virtual decomposition we can describe how an actuality becomes decomposed, allowing us to implement, within the perceptual process, the method of re-composition that similarly to Bergson's mathematician can extract the continuous motion from analytical discontinuity.

The concept of the open sphere: defining the representational ground

During the first half of the 19th century, breakthrough work on mathematical analysis studied and proved for the first time how an infinite series of elements are able to converge towards a single and definite element. One of the most interesting and usable formations that emerged specifically within real analysis²² is the open sphere. In order to provide a definition of the open sphere we will explain some basic concepts of real analysis. The primary element we need to describe, for the needs of this thesis, is a metric space: simplistically described, the

¹⁹ Henri Bergson, *Matter and Memory*, p. 32.

²⁰ Henri Bergson, *Matter and Memory*, p. 40.

²¹ Henri Bergson, *Matter and Memory*, p. 111.

²² Mathematical analysis dealing with the set of Real numbers.

metric space is a set equipped with a function that measures distance between its elements.²³ This metric function enables for quantification within the space which can also accommodate continuous and infinite operations. It was previously established that representation spatially abstracts continuity to enable quantification through analytical differentiation. Therefore, this thesis proposes the mathematical metric space as an equivalent to representation's spatiality. This spatial formation that will retain the characteristics of the metric space, namely an ability to measure and to accommodate infinite operations, will henceforth be called representational ground. Within the mathematical metric space we can define another useful formation, the open sphere.²⁴ This formation is nothing but an infinite swarm of points within the metric space that are not allowed to exceed a maximum distance from the centre of sphere. This thesis introduces the open sphere to provide the tools for the conceptualization of the virtual within the representational ground.

What is remarkable with this formation, is that the minute sense of "space" occupied by the open sphere can hold an infinite number of elements within, swarming both towards its centre, as well as, in any given subset of the open sphere. What gives to the open sphere its openness is the ability to find an infinite number of its elements close to its centre, no matter how small distance from the centre we choose and that each of its elements is always internal to the open sphere, for it has no finite boundaries. The proof of these characteristics would move away from the objectives of this inquiry, but based on the simple description of these qualities we will attempt to use the open sphere in order to explain the emergence of the virtual within the Image. Another interesting phenomenon is that the open sphere can be formulated within mathematical spaces with multiple dimensions. So, in the three-dimensional Cartesian space the open sphere acquires the form of a normal sphere that lacks its bounding surface. But, in two-dimensional space the definition of the open sphere would in fact describe a circle without its bounding perimeter; accordingly, for the single-dimensional space it would

²³ The exact mathematical definition of the metric space is:

A metric space is an ordered pair (M,d) where M is a set and d is a metric on M .

In order for d to be a metric function it has to satisfy the following conditions:

$d: M \times M \rightarrow \mathbb{R}$ where \mathbb{R} is the symbol for the set of real Numbers

such that:

1. $d(x, y) \geq 0$ (non-negativity)
2. $d(x, y) = 0$ if and only if $x = y$ (identity of indiscernibles)
3. $d(x, y) = d(y, x)$ (symmetry)
4. $d(x, z) \leq d(x, y) + d(y, z)$ where (x,y,z) belong to $M \times M \times M$ (triangle inequality)

cf. Gerasimos Stayrakas, *Notes on Real Analysis* (Athens: University of Athens Press, 2003), pp. 11-14.

²⁴ In a metric space (M,d) an open sphere is the set defined as: $S(p, \epsilon) = \{x \in X: d(p, x) < \epsilon\}$

$S(p,\epsilon)$



Open sphere with p as a centre and a radius of $\epsilon > 0$ in the three dimensional Cartesian space.

cf. Gerasimos Stayrakas, *Notes on Real Analysis*, pp. 14-16.

become an open interval. In a similar manner, the open sphere can be formed within multi-dimensional spaces; all we need to construct it, are the coordinates of the centre of the sphere and a radius that states the distance we are allowed to move away from its centre in the direction of the axes that make up the multi-dimensional space. The most comprehensible example would be one for the four-dimensional space, where three dimensions construct the Cartesian normal space and the fourth "spatial" dimension can be considered to be real time. Defining an open sphere for the four-dimensional space, means that we are defining a three-dimensional open sphere for an open period of time. This rather unusual discussion has precise utilitarian purposes in the case of perception. For, the qualitative characteristics of real objects or ideal notions that we perceive, can be conceptualized as dimensions of the representational ground. The ability of this multi-dimensional space to accommodate qualitative characteristics is insured by its continuous and open nature.

It is truly remarkable how closely Bergson and Deleuze come to defining the exact formation of such a model in their attempt to provide a complete analysis for perception. Their models of an infinite semiosis or an unlimited classification, that express the openness of the real object which the perception considers, define spatial formations that resemble the open sphere but lack its important capacity for quantification within a continuum that remains open. Let us cite two of those descriptions:

to attend, to recognize intellectually, to interpret, may be summed up in a single operation whereby the mind, having chosen its level, having selected within itself, with reference to the crude perceptions, the point that is exactly symmetrical with their more or less immediate cause, allows to flow toward them the memories that will go out to overlie them ²⁵

and,

When the universe of movement-image is related to one of these special images which forms a centre in it, the universe is incurved and organized to surround it. We continue to go from the centre, but the world has taken on a curvature, it has become a periphery, it forms a horizon. ... Distance is in fact a radius which goes from the periphery to the centre ²⁶

More descriptions of continuous sets that are defined only by their centre and emerge through an infinite procedure of approximation exist, but what makes them unsuitable models for the perception is that they are considered to be closed. An even more intriguing description of such a formation is described in Edmund Husserl's phenomenological account of perception; Husserl claims that for a thing to become a reality its appearance is not enough, it also needs to be posited in a zero-point from where it can be counted from a multiplicity of directions.²⁷ We can observe the recurrent appearance of certain principles in these models that describe a process for the perception of a worldly thing. Let us refer to these conditions that govern the

²⁵ Henri Bergson, *Matter and Memory*, p. 117.

²⁶ Gilles Deleuze, *Cinema 1: The Movement-image*, pp. 66-67.

²⁷ Edmund Husserl, *Ideas, Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy: General Introduction to a Pure Phenomenology*, trans. R. Rojcewicz and A. Schuwer, (Dordrecht: Kluwer, 1989), pp. 91-92.

perception according to the previous examples:

- firstly, a real thing must be located within a “space”.
- secondly, perception is an approximation procedure, a movement of thought that converges towards the real object.
- and lastly, the object is defined by a multiplicity of such approximations.

The perceptual process: formulating the Image

The significance of the openness is elementary for philosophical accounts concerned with the problems of perception. In Bergson's *Matter and Memory* openness of the perception of material objects is the result of the operation of memory, which is considered to be infinitely expandable. But even though memory is awarded unlimited capacity Bergson does not allow the perception to ever reach the real object, since, due to its infinite nature, the perceptive inquiry always remains incomplete. The reason for such an inability to complete the process of perception, is the inconsistency between the openness of the object and the discontinuous nature of perception that Bergson himself has asserted. Even though an infinite procedure of approximation to the object is acknowledged, the discontinuous points that Bergson considers are volume-less. Hence, an infinite series of such volume-less points cannot construct a space that is continuous, therefore it cannot also accommodate the motion of the thought from the representation to the object. That is why Bergson demands that ‘we must bring back again, under one moment or another, the continuity which we have thus broken between the perception, the memory and the idea’.²⁸ Bergson himself tried to amend this initial misconception of perception as discontinuity. Mullarkey provides an excellent view on the change that took place in Bergson's later work:

Looking at these later texts, it is possible to see a Leibnizian dimension in Bergson's thought emerge whereby the virtual is grounded by a play of actualities: the virtual for Bergson becomes a *well-founded* perspectival and psychological phenomenon – an emergent product formed through the interplay between a multiplicity of actual entities (including spatial and temporal continuities *and* discontinuities, identities *and* differences, quantities *and* qualities).²⁹

The first step towards re-instating continuity within the perception, is already taken by defining the representational ground as an open and continuous space. The text will proceed to explain that such spatiality allows the continuous tracing of the motion, from representation towards the worldly object, during the perceptual process.

The openness of perception and the ability to trace the continuous movement from representation to the real object, requires that each representational actuality is surrounded by infinite points that construct the continuous trace. Such a swarming of multiplicities that approximate a centre resembles the formation of the open sphere. We erroneously conceive perception as also being concerned with actualities, singular and discontinuous points, due to

²⁸ Henri Bergson, *Matter and Memory*, p. 122.

²⁹ John Mullarkey, *Forget the Virtual*, p. 471.

the analytical nature of representation. This thesis contends, perception is dealing with virtualities and the process of perceptual understanding is an instance of actualization. The virtual is the multiplicity that can produce the real through its actualization, hence it becomes interchangeable with the actual during the perceptual process. Attempting to determine the perceptible virtualities that describe the object, we come across a problem; as Colwell claims 'we cannot isolate and individuate the virtual components of events as discrete elements since to do so is to make them present, to make them actual'.³⁰ Locating directly the virtualities that correspond to sensible actualities, presupposes that the virtual is knowledgeable in the form of representation. Therefore, a need arises to describe the process by which the discontinuous representational points acquire their virtuality; This is the process of their becoming from sensible actualities, to perceptible virtualities. The open sphere can be used as the model for the virtualities that exist within the representational ground.

Each representational point is a sensible actuality. As tangible instances of the real that belong to the senses, they can be affirmed and described in order to become knowledgeable; therefore, sensible actualities are characterized by their representability. During the perceptual process, representation is informed not only by the established regimes of knowledge, but also from the creative operations of the intellect – imagination, memory, affection, or any other act that can be freed from the pre-conception of the real world. What enables this opening up of the representational point through the operations of thought, during the perceptual process, is the homogeneity of continuous time; for the process of perception is immersed within this real time. In order to make this procedure explicit, let us describe it in detail. The representational point is accommodated within the representational ground and is already mapped by previous knowledge of the world. When it is acknowledged by the bodily senses it becomes an actuality; but, at the very same instance the perceptual process starts. Perception treats the sensible actuality by allowing multiple thought processes to be concerned with it; each thought process intersperses the singular representational point within the space that surrounds it.³¹ Thus, a multiplicity of imperceptibly approximate virtual points swarm close to the sensible actuality. Since thought processes during the perception are immersed within real time their motion towards the real object is continuous; hence, the swarming multiplicities construct an infinitely dense ground. This space is characterized by the homogeneous nature of the continuous, and we have already defined it as the representational ground of the Image.

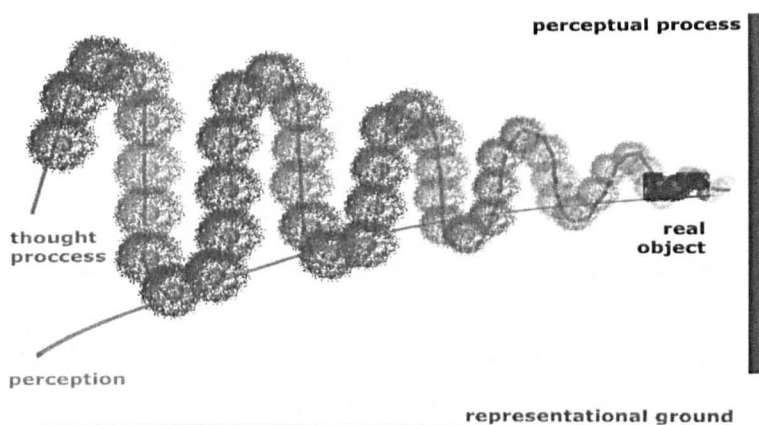
While the sensible actualities trace a more direct route that runs through the representational points and moves towards the real object, the thought processes that are concerned with the same representational points move towards the real object indirectly; even

³⁰ C. Colwell, "Deleuze and Foucault: Series, Event, Genealogy" (Baltimore: The John Hopkins University Press, 1997), <http://muse.jhu.edu/journals/theory_and_event/v001/1.2.colwell.html>, Web: 02 February 2010.

³¹ A visualization of the representational point's becoming a virtuality. Multiple thought processes run through the sensible actuality to intersperse it within the representational ground, thus giving rise to a swarm of multiplicities that surround the actual.



so, since the perceptual process intends an intelligible understanding of the world, movements by the thought processes necessarily converge towards the real object. At this point we can provide the visualization of the complete model of perception, that we have called Image:



Using this description we can account for a theory of perception of materiality, where tracing the movement towards the real object gives primary import to the sensible actualities, thus retaining a more consistent distribution of representational points. The movement of the perceptual process in this instance is more direct and constrained. In contrast, the perception process that is not primarily aimed towards the perception of materiality but aspires to conceive ideas, is instead characterized by its tendency to background sensible perception and benefits from the dispersal of actualities caused by the thought processes.



We do not want in any case to endorse a dichotomy of body and mind within the perceptual process since it would introduce the same problems we have come across in previous theories. What this example demonstrates, is the variety of continuous movements towards the object; for, the model of perception that we are trying to develop considers movement qualitatively. During the perception, the movements of thought processes are traced within the continuous representational ground which is formulated by the perceptible virtualities. Since perceptible virtualities are modelled in accordance to the open sphere, they additionally insure that these movements can be fully described and analysed.

Conclusion: corporeality and continuity within the Image

This chapter introduced an infinite process of approximation and installed it within the model for the intelligible perception of the real world as image. The thought processes within perception, make felt the force of time through their continuous movement towards the real object, while an analysis of the continuous perceptual process is delineated by the body's spatial enactment of movement. To make this continuous perceptual process accessible to the corporeal body, movement is traced using as reference the representational points that our intellect considers initially, that is to say, prior to their becoming virtual. Rodowick claims that 'Body and mind are not divided, but they do differ in their relationship to time. The body is a spatial sign of time that passes. ... Series are the expressions of forces through which the body transforms itself'.³² The expression of continuity through seriality within the Image is not a destructive de-construction of motion, because the differential nature of analysis is for the corporeal understanding of the movement only. The spatiality of the motion, created by the body's trajectory as it traces the discontinuous sensible actualities, is consistently contained by the representational ground. The thought processes, within the same perceptual process, can reconstitute the continuity that the body is unable to enact, in the same way our intellect grasps spatial and temporal constructs that exceed the limitations of the body's corporeality. Bergson suggests that this ordering –for the sake of the material body– of objects that are really in time, in a space that seems immobile 'lends to them the appearance of a chain, of which my present perception is only one link. This link communicates its actuality to the rest of the chain'.³³ Continuity expressed as seriality does not suppress the essence of the continuum, for it can communicate the modification of any single element to the open whole. While the body can only inform the perceptual process through sensible actualities, its contribution affects the entire representational ground. In a similar manner, the thought processes that enable the emergence of perceptible virtualities, also modify the whole through the revaluation of the knowledgeable representational points.

It would seem then, that the proposed model for perception imperils an intelligible understanding of image. For, the infinite process of approximation that enables the continuous movement towards the real object within the perceptual process, will always exceed both the material nature of our body and temporal finitude of our intellect, thus remaining incomplete. Moreover, the continuous movement that makes time felt as a force within the Image, requires the assignment of an interconnection of the present with the past and future; such temporal interlacing might lead to an invalidation of presently fixed and knowledgeable facts about the real world every time the interlinked elements change. But, the fluctuation of the single point –out of innumerable– in a continuous series, is most often absorbed by a neighbouring part of the continuous series, despite such alteration is indeed a change of the whole. The reason that only a small part of the continuum reflects the modification of a singular element, is because energy is consumed in the perceptual movement from one element to another. This energy is

³² David N. Rodowick, *Gilles Deleuze's Time Image*, p. 168.

³³ Henri Bergson, *Matter and Memory*, p. 145.

spent while enduring time, both as corporeal bodies or intellectual entities. Hence, although the Image can support indefinite approximations, in a worldly context beings enact only partly the continuous movement of the limitless perceptual process; for the angst of exhausting their limited energy forces them to conclude an inquiry upon reaching a satisfactory or a utilitarian understanding of an idea or object. In more extreme cases, when the single element can upset the integrity of the whole series, then it becomes an ontologically fundamental element for the existence of a specific continuous set and therefore it is rightly granted the ability of renovating the whole. Bergson suggests that, in our conceptual understanding of matter we only proceed to a notional end of the perceptual process, in order to isolate a system that is necessary for scientific calculation and knowledge production. In our perception of the real world that is not determined by the precept of scientific knowledge 'Matter does not go to the end, and the isolation is never complete';³⁴ this is also the case with the currently proposed model for the perception of the image when we attempt to perceive the material essence of the world. But, the Image, developed by this thesis as a generic model of perception, has been additionally equipped with a representational ground which is open, enables infinite analysis and allows for continuous movement to occur within.

³⁴ Henri Bergson, *Creative Evolution*, p. 10.

The truth-machine: ontology of the moving image and the real world

This final chapter considers the findings of the research to formulate two new propositions:

Considering Rancière's regimes of the image provides a new perspective on the representation of continuity by the cinematographic apparatus. Based upon the indifferent treatment of time during the creation of the moving image, this thesis proposes that an ensuing democratization of the temporal aspect of representation enriches the concept of indexicality of the sign.

Representation of the real world by the moving image of cinema operates a twofold reduction, by abstracting the continuum's essence into analytical discontinuity and by changing worldly materiality into an immaterial image. Considering both Bergson's thoughts on the noumenon, and Heidegger's ontological philosophy that deals with the concept of nothing, the proposition is put forward that within the representational reductions lies an addition instead of a lessening.

As a matter of fact, this substratum has no reality; it is merely a symbol intended to recall unceasingly to our consciousness the artificial character of the process by which the attention places clean-cut states side by side, where actually there is a continuity which unfolds. If our existence were composed of separate states with an impassive ego to unite them, for us there would be no duration. For an ego which does not change does not *endure*, and a psychic state which remains the same so long as it is not replaced by the following state does not *endure* either. Vain, therefore, is the attempt to range such states beside each other on the ego supposed to sustain them: never can these solids strung upon a solid make up that duration which flows. What we actually obtain in this way is an artificial imitation of the internal life, a static equivalent which will lend itself better to the requirements of logic and language, just because we have eliminated from it the element of real time.¹

Henri Bergson

Rancière's regimes of the image: democratization of the temporal

So far a trajectory has been traced from an ancestry of the cinema as technological representational apparatus and the attempt to locate time's representability in the tension between continuity and discontinuity, to a modern era when cinema impeded the scientific clock integrated in the cinematographic apparatus and created an image that re-thinks its connection with time. Jacques Rancière's account for the history of the ontology of modern art introduces a division of the image according to three regimes: ethical, poetic-representational, and aesthetic. His theory for the image of modern art –that also refers to the industrial art of cinema– provides a new way to theorize the representation of time in cinema that informs the ontology of the moving image. In each regime, the image and the resulting ontology of art are formed according to principles that consider expanded categories of western artistic traditions historically, politically and culturally, with the intention of discovering any traces that associate the aesthetical with the political. For example, in the case of the ethical regime, the image's being (origin and *telos*) is evaluated according to its purpose in relation to individuals and their community. Such a consideration of the image does not allow the creation of an ontology that individualizes art –thinks art in itself– but instead it locates art within a context that affords its meaning. The poetic-representational regime is based on a *mimetic* order of the image to enable an identification of art's modes of doing and making; therefore, the resulting ontology of art, considers art in the isolation that normative artistic practice and production give rise to.²

¹ Henri Bergson, *Creative Evolution*, p. 4.

² Jacques Rancière, *The Politics of Aesthetics*, pp. 20-25.

It becomes evident that the supervisory system for the image, as it is defined by each regime, decisively affects the resulting ontology of the art. Concluding this synoptic description of the three regimes of the image, the aesthetic regime opposes previous regimes by thinking art exclusively in itself and making art's mode of being sensible. It is worth quoting Rancière in length for the description of this regime:

The aesthetic regime of the arts is the regime that strictly identifies art in the singular and frees it from any specific rule, from any hierarchy of the arts, subject matter and genres. Yet it does so by destroying the mimetic barrier that distinguished ways of doing and making affiliated with art from other ways of doing and making, a barrier that separated its rules from the order of social occupation. The aesthetic regime asserts the absolute singularity of art and, at the same time, destroys any pragmatic criterion for isolating this singularity. It simultaneously establishes the autonomy of art and the identity of its forms with the forms that life uses to shape itself³

Making a radical break away from the ethical and the poetic-representational regimes, the aesthetic regime, according to Rancière, allows for an increasing degree of independence in artistic doing and making, up to the point when making and doing become conceptualized as art. Thinking about art in itself defines its ontology outside specific modes of historicity of the previous regimes; hence, with the coming of the aesthetic regime a rupture occurs that forces modern art to develop new ways of relating to the past, expressed as a critical stance towards the history of art that leads to a reevaluation of its image.

Rancière's theory of the image and the resulting history of the ontology of modern art presents analogies to Deleuze's philosophical methodology in *Cinema 1 & Cinema 2*, where a historiology⁴ of the cinema is excerpted from the evolution of cinematic image although it is also actively linked to world history. Rancière readily admits this connectedness⁵ and based on his acknowledgement this thesis conceives the regimes of the image as a modern theory for the aesthetics of art which can inform Deleuze's project to trace the progression of cinematic representation from its origins to the contemporary era and describe a history of the industrial art that is interlinked to the genesis of new types of cinematic images. Prior to considering the regimes of the image in relation to the cinema, let us observe some of the implications that arise for the other forms of modern art. Rancière proposes an innovative explanation for the breakdown of representation in modern painting, expressed by the move from figurative portrayal towards abstract and conceptual representation. The indifference of the modern visual art towards its subject, he claims, is nothing more than a response to its contemporary artistic mediums that produce the image automatically; automation of the representational process causes a democratic treatment of the subject and renders visible that which has been

³ Jacques Rancière, *The Politics of Aesthetics*, p. 23.

⁴ Historiology refers to the introduction of an organizational system that reconfigures current historical accounts according to a new central idea; in Rancière's theory, the three regimes of the image lead to reevaluation of art history, and in Deleuze's theory, the predominant types of image, time-image and movement-image, mark the radical division in cinema's history.

⁵ Jacques Rancière, *Film Fables*, pp. 107-109.

previously deemed insignificant for artistic portrayal.⁶ More specifically, indifference towards the subject matter of photography allows for a depiction of the trivial as part of the real world. During the previous regimes the artist's intentionality would deem the subject matter –thence, also the work of art– important in reference to an external hierarchy. With the democratization of representation we no longer make use of this contextual system for the valuation of the artwork, so we resolve to the ways art comes to address itself. In alignment with Rancière's proposition this thesis maintains that, such reflexive operations can only be made possible by a pre-existing ontology of the art which then discloses the introverted qualities that validate the emergence of an aesthetic system for the identification and appreciation of individual artworks according to artistic methods of doing and making; namely, art's mode of being.

This proposition describes a radically dissimilar ontological account for modern visual art, in relation to photography and cinema, to the one Bazin describes in 'The Ontology of the Photographic Image'.⁷ The new-found representational freedom for modern art was not the consequence of a complete satisfaction of our demand for realism by the indexical image of the photographic automaton. Instead, it was a manifestation of the technological lesson in concern to a democratization of representation, ensuing from an indifferent treatment of the subject matter by the automatic production of the image. Therefore, the novelty of automated production and reproduction of the image by the technological apparatuses did not cause the breakdown of representation in modern art; Rancière claims, the inception of an aesthetic revolution started with a democratization of representation.⁸ Adapting Rancière's proposition in relation to modern art, allows for a re-conceptualization of time's representability in cinema by utilizing the concepts of indifference and democratization. The technological production of the image by modern representational mediums, interrelates aesthetic and poetic aspects of representation due to automation of the image's making; thereof, aesthetic traits resulting from the medium's representational modality are often treated as defining characteristics for the ontology of the image. Instead this thesis suggests that, it is from a genetic account of the image that we can extract the characteristics of its representational modality. Consider the coming-to-being of photographic images: photography represents its subject democratically by depicting the insignificant alongside the important⁹ –a democratization of the spatial– but it fails to fulfil the same democratization in its representation of time –a democratization of the temporal–. For, it imputes to the singularity of the instant meaning that derives from the handling of the apparatus, expressed both by the glorification of the privileged moment and the import given to the machine's creative operativeness; thus annulling the essence of the photographic image's automatic production.

⁶ Jacques Rancière, *The Politics of Aesthetics*, p. 32.

⁷ André Bazin, "The Ontology of the Photographic Image", in *What is Cinema?*, trans. Hugh Gray (Berkeley: University of California Press, 1967).

⁸ Jacques Rancière, *The Politics of Aesthetics*, pp. 32-33.

⁹ A characteristic example is described by Peter Geimer in the 'Elegy for a fly': a fly inside the camera was accidentally depicted along with the citadel towers in Cairo and provided true trace of reality. cf. Peter Geimer, "Image as a Trace: Speculations about an Unread Paradigm", trans. Kata Gellen, in *Differences: A Journal of Feminist Cultural Studies, Indexicality: Trace and Sign*, Vol. 18, Num. 1, ed. Mary Ann Doane (Durham: Duke University Press, 2007), pp. 12-15.

For the cinema too, an ontology of the art necessarily precedes the emergence of new modes of representation. Considering the cinematographic apparatus can provide an informed description of the cinema's representational modalities based on the medium's technological specificity. Doane refers to the knowledge effect that can be deduced from the technological apparatus since 'the indexical representation of photography, the use of intermittent images to produce the illusion of movement in cinema and the choice of standard speed in projection, are practices with epistemological underpinnings'.¹⁰ But it is the position of this thesis, that the cinema subverts this standardization of the moving image's genetic aspect and sacrifices its capacity for analysis and measurement, in exchange for the indifferent attitude of cinematic representation towards epistemological time. Cinema assumes an indifferent attitude towards the measurement of time, since the act of photographic imprinting by the cinematographic machine does not employ the mechanic temporality of the shutter's opening and closing for a temporal quantitative analysis. Indifferent treatment of time by the cinematographic apparatus is an ontologically significant characteristic for the moving image and is not subsequent to the cinema's technological realization but it is the fulfilment of a pre-existing need to represent the continuum. The cinema rejects the privileged instants of photography and annuls the capacity for quantification by the use of isochronic poses; utilizing any-instants-whatever it achieves the democratization of the temporal thus sustaining the homogeneity of the continuous time. The democratic representation of the subject in photography is interlinked with an indexical quality of the image, since both characteristics derive from the mechanical nature of the photographic automaton. The cinema sustains this kind of democratization in the presentation of its subject by employing the automatic production of photographic still images for the making of the film reel, therefore it too, retains the indexical connection of the moving image with its referent. This thesis proposes that the democratization of the temporal by the moving image of cinema, enriches the connectedness between an indexical representational sign and its referent.

The moving image of cinema as the indexical sign of time

Elizabeth Cowie already refers to such unique relation of the non-fiction film with time; for, unlike fiction which often masks its relation to time to provide its own time disconnected, unspecified and ungrounded, the documentary 'indexes time as past in every sound and image it presents to us; their pastness is the condition of its very appearance to us as representation and not transmission, indexed because it is a record and not fiction'.¹¹ This thesis concurs that time is indeed indexed in *every* sound and image, and that the pastness of the real world is the condition for its representation. But, time is *always* indexed within the moving image; whether time represented coincides with the time of a real event, or the time of our phenomenological experience, is precisely the way by which time's relation to the moving image becomes known through the thought processes that take place during the perception. The indexical link of the moving image with the world, commonly perceived formerly as an uncomplicated realism that

¹⁰ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 21.

¹¹ Elizabeth Cowie, "Specters of the Real", p. 103.

is based on verisimilitude which is paradigmatic of photography,¹² can no longer be expressed simply as visual correspondence of the image to its referent. Therefore, Laura Mulvey suggests that:

A return to the index and to the real of the photographic medium is not a return to realism's aspiration to certainty. Rather, the trace of the past in the present is a document, or a fact, that is preserved in but also bears witness to the elusive nature of reality and its representations. It is here that the reality of the photograph as index becomes entwined with the problem of time.¹³

The photograph's indexical quality is exposed as merely a spatial correspondence between the real world and the image; it is continuous time that re-introduces the openness to the indexical sign. This thesis contends, that the coming of cinema caused a general crisis of the image as representation, by introducing a tension between the continuum and the instant. Due to its unique representability of continuity and time, the cinematic image expands the concept of the indexical so that it also includes the temporal linking to its referent.

Several theorists assume a similar position. Gunning proceeds to rethink the indexical in relation to the cinematic image in a manner that it is not attached to a realistic mode of representation.¹⁴ Doane also writes that, 'indexicality can and must be dissociated from its sole connection to the concept of realism, the reflection of a coherent, familiar, and recognizable world. Essentially contentless, it is free to convey anything and everything. In the cinema, it is the guarantee that anything and everything is filmable'.¹⁵ Once again, denouncing the demand of an attachment of the index to realism, the democratization of representation by the moving image becomes the element that insures the renovation of the concept of the index. Doane goes a step further by pronouncing an extraordinary capacity for this new type of indexical sign in relation to real time; she writes, 'This promise of indexicality is, in effect, the promise of the rematerialization of time – the restoration of a continuum of space in photography, of time in the cinema'.¹⁶ This thesis has already described the substantiation of such a representational ground that can accommodate the continuum. The perception of the image within this space traces a continuous movement of thought from the representation to the object and fills in the disruptive voids of the cinematographic representation of time, by revoking the possibility of a discontinuity that would necessitate a radical re-thinking of the world's meaning. On the basis of these observations this thesis proceeds to consider the implications of the indexical nature of the moving image.

The new indexicality of the moving image is expressed as a newfound capacity to retain the homogeneity of time that ensues the democratization of representation. Doane follows the advancement of apparatuses that animate the still image to reproduce movement, from the

¹² Richard Rushton, *The Reality of Film*, pp. 42-44.

¹³ Laura Mulvey, *Death 24 x a Second: Stillness and the Moving Image* (London: Reaktion Books, 2006), p. 10.

¹⁴ Tom Gunning, "Moving Away from the Index", p. 47.

¹⁵ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 25.

¹⁶ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 10.

early magic-lanterns to the multiple kine-tropes that utilized chronophotographic images, and proposes that this pursuit was not leading just to movement itself but an indexically based movement; therefore, she suggests, 'The decisive difference of cinema was the transformation of movement into an indexical sign. Making represented movement (the signifier of time) indexical weds time to contingency'.¹⁷ This text disclosed that Muybridge had to conform the images for the Zoopraxiscope to create the appearance of continuous motion, thus establishing that the preservation of an indexically based movement surpassed the conditions of the spatial and visual indexicality of the photographic image. With the reference to Rancière's regimes of the image, this text also attempted to justify the insertion of the contingent as a result of the indifference that characterized the democratization of representation. This thesis has located such indifference towards the representation of time in the attitude of the modern scientific thought that admits no privileged instants; the equal significance that all instants acquire during the observation of scientific experimentation, gives rise to temporal homogeneity which is the essence of time as a continuum. Therefore, the unique relation of cinema to thinking is made evident. Rodowick suggests that 'cinema ranks among the most significant arts because it gives material form to varieties of movement, time, and change that philosophy may, in its turn, formulate as concepts and interpret as values'.¹⁸ Clearly echoing Deleuze's position that a philosopher is nothing but an inventor of concepts, the moving image is called not only to materialize the continuum by giving us its indexical sign, but also to substantiate its own mode of thought by making tangible the inner workings of the perception in order to render the continuum intelligible.

Substantiating the thought processes within the Image

This thesis addressed the issue of substantiating the moving image's mode of thinking, by creating an intelligible structure of the continuous movement of thought processes within the Image. Hughes associates such kind of thinking with the creation of spatiality that does not accept geometrical description; his understanding of a mode of thought that can be appointed to the moving image is the following: 'The world "thought" clearly does not mean what we ordinarily think of as thinking. Thought here is defined by what we might call, following Husserl's description of space of free variation, a "structure of arbitrariness". Here contrary to the categories of representation, there are no rules'.¹⁹ This kind of space cannot therefore become knowledgeable since the representational tools that conventionally describe the world are rendered ineffectual. Instead the structure of the space is formed along with its experience and it is precisely this motion that actualizes the space and substantiates a method of thinking. For Bergson, the understanding of the passing of instants describes a continuous reconstitution of the world; it is in this sense that he understands the cinematograph as a method for the reconstruction of time. The analytical view of time, is a time used by the mathematician who 'is always speaking of a given moment—a static moment, that is—and not of flowing time. In

¹⁷ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 219.

¹⁸ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 140.

¹⁹ Joe Hughes, *Deleuze and the Genesis of Representation*, p. 112.

short, *the world the mathematician deals with, is a world that dies and is reborn at every instant—the world which Descartes was thinking of when he spoke of continued creation*'.²⁰ But Bergson seems to have missed one of the most crucial aspects of cinematic experience, the fact that it is endured within real time and therefore, for the perceiving subject the filmic world is one that subsists the passing of time and is not re-created anew every single instant. Within Bergson's account of the cinema, the reality of the apparatus overcomes the reality of our phenomenological experience of the moving image. As a result Rushton, advocating for the realness and naturalness of the perception of continuity during a film's viewing, sees Deleuze's reprehension of Bergson's own theory, as the realization of the true destiny of Bergson's theses on movement and cinematographic perception of the continuum.²¹

In Deleuze's reading of Bergson's philosophy of the continuity and movement, Doane perceives an advantageous understanding of the representational medium: 'cinema emerges as a philosophical machine for the demonstration of duration in its truth – for the presentation of "time in the pure state"'.²² Deleuze does not only consider the perception of the cinematic image to be an equivalent of our own perception of the real world –in accordance to Bergson's account of cinematographic perception– but, as Rushton readily acknowledges, 'Deleuze's position is even more audacious: he claims that the cinema provides a superior perception; the perceptions that the film camera-projector provides for us are more accomplished than our own, human, capacities for perception'.²³ Deleuze takes Bergson's reduction and advances it, according to Bergson's own planning, to realize the opposite direction; the cinematic thought process becomes extended to coincide with our experience of the world. But, if the moving image can "think" of the continuous time and substantiate this thought as a space with an arbitrary structure, according to the demands of Heidegger's ontological phenomenology, both 'space and time must be able to show themselves in this way – they must be able to become phenomena –'.²⁴ The extraordinary structures of "space" that substantiate the moving image's thought on time can be made visible in the following filmic examples.

Actualization of space in cinema as image's mode of thought

Time retains its ontological primacy as continuous concept only when motion partakes in an actualization of space that is prior, purely virtual and open to an indefinite multitude of possibilities. In any other instance, the formation of a space suitable for the accommodation of representation, can only acknowledge a time quantifiable and differentiated, which results in our impossibility to understand the continuum both as concept and as bodily action. Consider Andrey Tarkovskiy's *Stalker*;²⁵ the film is often ascribed with metaphysical connotation because most of the events that are presented remain unexplained and without logical motivation or

²⁰ Henri Bergson, *Creative Evolution*, p. 22.

²¹ Richard Rushton, *The Reality of Film*, p. 136.

²² Mary Ann Doane, *The Emergence of Cinematic Time*, p. 175.

²³ Richard Rushton, *The Reality of Film*, p. 129.

²⁴ Martin Heidegger, *Time and Being*, p. 55.

²⁵ Andrey Tarkovskiy, *Stalker* (1979).

explanation other than belief. This text will attempt to extract a mode of thought that defines the moving image, by examining the structures of spatiality within the film. The main character, the Stalker, is responsible for guiding two other people identified only as the Writer and the Professor into the Zone. Although the Zone resembles a mundane rural wilderness, the film makes it clear that the naturally chaotic area is extremely dangerous. This undefined threat becomes the excuse for an extraordinary structure of its spatiality; for, the path that the men are allowed to walk in order to advance into the Zone, can be determined solely by the Stalker. Strangely, his decisions seem to be based on an indefinite and illogical system of choosing the right way and a method is never realized or revealed. This text proposes that, the Stalker, unlike the other two men who are given prescribed roles –Writer and Professor– is not burdened with predefined conventions about the world, therefore he alone can accept that the spatiality of the Zone lacks previous structure. The Zone is a space characterized by openness and mobility, because it exists within the constant flow of change and becomes actual only in the present moment. The choices that the Stalker makes are open to the multitude of possibilities that construct this virtual space; for, walking a specific pathway actualizes an instance of the Zone's existence, previously undetermined and unstable. Eventually, it is the movement through the Zone that constructs its spatiality and not the spatiality of the Zone that enables and controls the men's movement.

A contradictory representation of space is given during a previous sequence in the film. Before the three men enter the Zone they are being chased into the maze that is an industrial building. Although the fact that they face danger is made evident, we do not know who and why is pursuing them. In an attempt to avoid capture they drive their military jeep inside the devastated carcass of the empty structure, constantly facing dead-ends, making obligatory turns and following long corridors. Disorientated and unable to find their way out, eventually they miraculously manage to escape. The single event that drives forward the action of the sequence is devoid of meaning, for their escape is determined by the series of correct choices that are externally appointed by the characteristics of the space itself. The solidity of the space characterizes the underlying spatial causality that resolves the simplistic upset of equilibrium in the narrative and the immobility of the space necessitates the frantic action and disorientating movement of the characters. On the contrary within the Zone, the fatal danger and an absolute event –granting the innermost desire of anyone that enters a room at the heart of this space– remain a matter of belief. The movement is slowed down to the point that it is immobilized because the world itself is mobile and in change. But, despite the irrationality and randomness of its spatial structure, the Zone is real. The indefinite sum of possibilities that describes the Zone as a virtual space, does not prevent the actualization of the event –a becoming which is felt as action in the real world–. For, in the filmic reality, the Stalker and others that entered the mysterious room, have to endure the consequences of their deepest wish coming true within the Zone, in their real lives. Much in the same way, the viewers of the film who entered the cinema theatre and endured the time of the Zone, now live along with the consequences of their understanding of this peculiar space and the meaning that it may possess for the real

world and being.

Such conceptualization of the cinematic space as virtuality does not support only the discussion of high brow cinema but can also lead to an innovative discussion of conventional and mainstream films. The light hearted comedy *Groundhog Day*²⁶ provides us with an equally interesting construction of filmic space and cinematic representation of time. Bill Murray is Phil, the cynical weatherman who is sent by the network to cover the folkloric celebration of "Groundhog Day" –a groundhog's appearance is supposedly able to predict the weather– in small community Americana town Punxsutawney, Pennsylvania. Unexpectedly, he finds himself re-living the same day over and over again, and overpowered by existential angst he undergoes through a variety of realizations concerning himself and his attitude towards everyday life; in the process he gains another perspective on time and death, and acquires new understanding of the community and appreciation for his female producer and co-worker. Rushton utilizes the film as an example to engage with Stanley Cavell's cinematic ontology; for, the protagonist engages in a process of checking his experience of the filmic reality, thus becoming an example for the viewer who also "checks" the phenomenological experience of viewing a film to inform his own understanding of worldly reality.²⁷ This thesis provides a different perspective that is concerned solely with the way that the representation of space and time in the film affords the character, and possibly the viewer, with new outlook on being. Although the time experienced by the main character is linear –he remembers each day and is able to build upon his previous experiences– the day that repeats itself creates a virtual "space" that enables the full range of possibilities to be actualized through the actions of the protagonist. Phil fulfils selfish desires by eating excessively, having casual relations, stealing money from the bank, acting immorally; but as he develops as a character he learns how to dance and to play the piano, appreciates French poetry, teaches himself to sculpt. Therefore –even though the virtuality of the space enables irrational occurrences, like Phil dying several times– the progression of the narrative does not avoid the conventional trajectory that takes the main character from an egotistic and arrogant being, towards becoming more ethical and seeing through the eyes of the other. Finally, Phil's stance towards the community is rectified for he reaches an understanding of their way of life and his reformation is consummated with the start of a relation with his female co-protagonist. In the filmic reality, the virtual space enabled the renovation of world and being.

Groundhog Day structures a virtual space within the filmic reality. It presents days that are slow and null, days that are urgent and event-full, events shown as wholes –assured by the effect of seamless montage– and events that remain fragmented –accentuated by the use of discontinuous editing– and gain their full meaning only as multiplicities. Remarkably, despite the complexity that the multiplicity of time and space creates within the filmic reality, our phenomenological experience of the film retains an undisputed connection to the relentless and irreversible linearity of time, corroborated at the end by the film's conventional diegetic

²⁶ Harold Ramis, *Groundhog Day* (1993).

²⁷ Richard Rushton, *The Reality of Film*, pp. 108-112.

closure. True to conventions of classical narrative cinema, the reformation of the character through a didactic experience allows the successful coupling of an heterosexual pair. Therefore, the spatial and temporal structure of the filmic universe, for the viewer, is fully determined by cinematic conventions. Such canonical structure describes a mode of thought that can only make visible the knowledgeable. Doane provides a suitable explanation: 'The fully developed classical cinema, like statistics, acknowledges contingency and indeterminacy, while at the same time offering the law of their regularity'.²⁸ Cinema is an absolutely inconsistent construct, a geometry of coincidence, remaining at the same time capable of causing the accidental and figuring out an understanding that underlies its most essential structure. In quite the same way it managed to democratize the subject of its representation, but also to contaminate it (and contain it) with(in) the regularity of its representational modality. The moving image is mobile, for it is an image in the process of becoming; as such it requires a model of perception that can trace this continuous trajectory of the thought that the image creates with its motion. While at times this movement is constrained by the convention that regimes of knowledge give rise to, in other instances it operates disruptively and makes felt the force of continuous time and its ability to renovate the world. This is the meaning behind Deleuze's suggestion that advancing Bergson's theses on movement, can make 'possible another way of looking at the cinema, a way in which it would no longer be just the perfected apparatus of the oldest illusion, but, on the contrary, the organ for perfecting a new reality'.²⁹

Cinematic image and the real world

Thinking about representation in relation to an immutable idealistic external reality can only lead to creation of an image which is deemed an imperfect and lessened version of the real world. The demand for verisimilitude in the reproduction of the world as image, ranks the cinema as the absolute medium for realistic presentation; for the cinematographic apparatus provides the most convincing evidence for the affirmation of being and the world: their indexical moving image. This account overlooks the possibility that cinema reveals anew the world and its meaning. Having in mind the unique representability of continuity by the cinematographic apparatus, as discussed in previous chapters of the thesis, this investigation proceeds to consider cinematic representation as a thought process that is concerned with worldly being by exposing an ontological link that exists between the real world and the cinema. Rushton acknowledges this ontological subtext in realist accounts for the moving image and, adopting Morgan's position, attempts a fresh reading of Bazin's representational ontology. He proposes that the consideration of the cinema as an instrument for realistic representation 'should not begin from the premise of an ontological split between film and reality, but (instead) begin from the perspective of an ontological identity between film and reality'.³⁰ Underlying Rushton's preservation of Bazin's ontological link between the moving image and reality, are his intentions to promote our thinking about filmic reality to an act that

²⁸ Mary Ann Doane, *The Emergence of Cinematic Time*, p. 31.

²⁹ Gilles Deleuze, *Cinema 1: the movement-image*, p. 8.

³⁰ Richard Rushton, *The Reality of Film*, p. 43.

is concerned with and can inform our being in the world. His view of the filmic as an integral part of the real, is based on the premise that an external reality is also mediated and culturally constructed³¹ and therefore is of the same kind as filmic reality. Despite the validity of this last proposition and an overall alignment with Rushton's intentions to acknowledge thinking about cinema as an act with ontological import for being and the world, this thesis maintains an objection. For, the perspective Rushton provides on Bazin's account retains an identity –the most rigid and resilient type of correspondence– between cinema and the real world and more severely transposes it in the realm of their ontology. But as Bergson maintains:

Action cannot move in the unreal. A mind born to speculate or to dream, I admit, might remain outside reality, might deform or transform the real, perhaps even create it—as we create the figures of men and animals that our imagination cuts out of the passing cloud. But an intellect bent upon the act to be performed and the reaction to follow, feeling its object so as to get its mobile impression at every instant, is an intellect that touches something of the absolute.³²

Paraphrasing Bergson, this text also suggests that “image cannot move in reality”. Thereof, an attempt to strengthen the interrelationship of cinematic and external reality, should not be founded on the conflation of the moving image's ontology with the ontology of the real world. The worldly nature of the moving image as a representation of the real world, is realized not by making equal the world and its image, but through the consideration of the thought process that guides the genesis of the image.

In the attempt to integrate the filmic reality to a worldly reality Rushton suggests that we should not ask what do the films represent but what films do.³³ Here is his complete objection:

Why would anyone feel the need to declare that cinema represents anything. Rather, what I want to argue by way of filmic reality is that films do not re-present anything. Instead they create things; they create realities, they create possibilities, situations and events that have not had previous existence; they give rise to objects and subjects whose reality is filmic.³⁴

Rather than considering this position as deeply anti-representational, as Rushton himself suggests, this text interprets it as an extreme warning not to suppress the creative possibilities of the cinema in the course of constructing a film theory –or, a theory for the image– that solipsistically attempts to extract meaning from the correspondence between the cinematic representation and the real world. Even in the case that filmic reality presents something completely new and extraordinary, it acquires its intelligible meaning as part of an existing reality. For, the representational process is reductive, and it is by making sense of the reduction which has taken place that we can inform an understanding of the world. Therefore a question arises: “If the moving image is part of worldly reality how does it become an extended version

³¹ Richard Rushton, *The Reality of Film*, pp. 44-46.

³² Henri Bergson, *The Creative Evolution*, p. xi.

³³ Richard Rushton, *The Reality of Film*, pp. 3-4.

³⁴ Richard Rushton, *The Reality of Film*, p. 4.

of the real world?". Let us assume for an instance, as Rushton requests, that a film does indeed represent nothing; this very assumption is an assertion of the complete external reality that we can no longer recognize within the cinematic representation. It is exactly in this sense that Bergson insists –and latter Heidegger posits the same when thinking about the nought– that in nothing exists more than annihilation of the object and being. Here is Bergson's description of our attempt to represent nothing:

Let us no longer represent the object A as annihilated or absent. Let us say simply that we think it "non-existent." To annihilate it is to act on it in time and perhaps also in space; it is to accept, consequently, the condition of spatial and temporal existence, to accept the universal connection that binds an object to all others, and prevents it from disappearing without being at the same time replaced.³⁵

The attempt to think of nothing is not a negation or annihilation of the existent world, but it is instead its substitution with another, that contains both the previous world and its negation. To negate an idea or object is to affirm its existence and then add the notion of its exclusion. The concept of nothing is therefore an additive notion. The nothing is never a void or empty being, it is another full that has taken the place of the being that it substitutes.

Representation is exactly such nothingness; for, the substitution of the real world by an image, is an operation that is contacted with underlying rules and never voids the world entirely. Bergson claims that the idea of negation is not symmetrical to that of affirmation, but there is an indeterminacy introduced in the new reality that is characterized by the annihilation of the thing we negate. A similar indeterminacy is introduced between representation and the real world, which leads to an addition of elements in the represented reality. Therefore, the concept of "nothing", as it appears both in the philosophy of Bergson and the ontology of Heidegger, justifies the counter-intuitive argument that the moving image of cinema *adds* to its referent during the reductive representational process that diminishes real world to nothingness. In other words, cinematic representation engenders an order of realness which both bears on and cross-contaminates the worldly reality. The most severe reduction of the world to nothingness, occurs with the representation of real time in cinema; for, the time's essence as a continuum, its homogeneity, is reduced to the discontinuous instances. The initial proposition of thinking of nothing, not as the negation of being but as a concept that contains and surpasses being, is found in Bergson's *Creative Evolution*. Bergson postulates that the discontinuous perception precedes the existence of the continuum –in the same manner that nothing precedes the question of existence in Heidegger's ontological philosophy–; this is just Bergson's way of explaining that, a continuity of motion per se would not be conceived unless sought as the completion of the void that the perception of discontinuity makes discernible.³⁶

Conclusion: the ontological significance of cinema

Representation asserts the conditions of spatial and temporal existence of its referent.

³⁵ Henri Bergson, *Creative Evolution*, p. 284.

³⁶ Henri Bergson, *Creative Evolution*, p. 275.

The perception of the Image which contains both the referent and its representation, is the experience of this substitution, in space and time, of the real object with its representation. Rushton insists on the temporal contemporaneity of a filmic and worldly real, what this text refers to as an immersion –during the phenomenological experience of the moving image– within real time, and explains that this simultaneity 'for Bazin is the reality of film: a shared space and time, a space and time I share with others, and a space and time I share with the film I watch. That sharing is the space and time of a reality that can be called filmic'.³⁷ Referring to a “connectedness of life” between birth and death in relation to the ontological significance of time for Being, Heidegger resolves to the continuity that characterizes the meaning of a real world, even though it is provided by actualities that are disjointed:

[the connectedness] *consists of* a sequence of Experiences “in time”. But if one makes a more penetrating study of this way of characterizing the “connectedness” in question, and especially of the ontological assumptions behind it, the remarkable upshot is that, in this sequence of Experiences, what is “really” “actual” is, in each case, just that Experience which is present-at-hand in the current “now”, while those Experiences which have passed away or are only coming along, either are no longer or are not yet “actual”.³⁸

A primary observation is the striking consistency between Deleuze's description of the concept of actual and real, with Heidegger's description of the actual, real and their specific relation towards an understanding of time. The complexity of the reference demands the full citation of Deleuze too:

What is actual is always a present. But then, precisely, the present changes or passes. ... Thus the image has to be present and past, still present and already past, at once and at the same time. If it was not already past at the same time as present, the present would never pass on. The past does not follow the present that it is no longer, it coexists with the present it was. The present is the actual image and *its* contemporaneous past is the virtual image.³⁹

Moreover, we can confidently infer that “experiences” in time, refers to the phenomenological experiences which Heidegger considers significant for they make known time ontologically. The basis for an understanding of time proposed by both Heidegger and Deleuze can be found in Bergson's proposition that common sense time –ordinarily understood–, as well as, scientific time, produce spatial systems which abstract time into temporality. Such systems are equipped with analytical tools for differentiation and measurement, and they are concerned with a single instant of the system's corresponding position,⁴⁰ rather than the experience of its change in the flow of time.

By recording the real world, cinema already fulfils two primary tasks of the ontological philosophical inquiry. First of all, by re-presenting the world, it facilitates a principal ontological

³⁷ Richard Rushton, *The Reality of Film*, p. 78.

³⁸ Martin Heidegger, *Being and Time*, p. 425.

³⁹ Gilles Deleuze, *Cinema 2: The Time-Image*, pp. 76-77.

⁴⁰ Henri Bergson, *Creative Evolution*, p. 9.

care of Being to become disclosed and come forth to light. Secondly, as a manifestation of astonishment towards the world that it represents—even in the case that the filmic world is an imagined one—it becomes an expression of authentic thinking concerned with the world's meaning. The authenticity of the cinema's thinking is a result of the moving image's openness that annuls systems of knowledge that philosophy has sustained immutable, since Plato and Aristotle. As Steiner rightfully remarks, Heidegger appeals for a return to pre-Socratic thought that needs no philosophizing (*φιλοσοφείν*); philosophers 'were "thinkers", men caught in the radical astonishment [*thaymazein*] (*θαυμάζειν*) of being. They belonged to a primal, therefore "more authentic" dimension or experience of thinking, in which beingness was immediately present to language, to the *logos* (*λόγος*)'.⁴¹ Cinema becomes the fulfilment of Heidegger's greatest aspiration, to return to a version of language that is *logos*, where words do not signify and are not mere word-signs, but instead they embody the trueness of being. For, although it is not merely a language, cinema as a representational medium creates moving images which possess the remarkable characteristic of being an embodiment of the thing they represent. Rodowick admonishes that the moving image of cinema holds the power to become autonomous from its speech about the world, for the cinematic image's indexical referent is not the real world, but time itself; such dissociation brings 'a catastrophe more profound than the disappearance of visible evidence: not forgetting the past, but forgetting the relation between present and past'.⁴² This is a radical manifestation of the moving image's dissociative power which makes time felt as the force that acts on the world.

In relation to the moving image's ability to make time known, Rodowick maintains, 'To say that time has *its* direct image does not necessarily mean that time is a form that can be represented'.⁴³ By formulating the Image as a model for perception, this thesis attempted to show that time is at work as movement in its becoming that propels body and mind towards the representation's referent. Our thinking that was concerned with the representability of the continuum by the moving image of cinema, led to the renovation of the theory of perception. For, representation is no longer a closed system which is based on associational relations, but it is opened up to accommodate continuous movement and time. The representational ground which is constructed open and homogeneous, can truly accept the real world as moving image. Heidegger suggests that 'Ancient metaphysics conceives the nothing in the sense of non-being, that is, unformed matter, matter which cannot take form as an in-formed being that would offer an outward appearance or aspect (*eidōs*). To be in being is to be a self-forming form that exhibits itself as such in an image (as a spectacle)'.⁴⁴ But, the image of world and being reveals itself only in their absence; for, in order to represent the world, the representational medium has to reduce it to nothing. In relation to Heidegger's thoughts on nothing, Steiner claims, 'this hiddenness of Being, must entail the reality of non-Being, that Being is, in the final analysis, an

⁴¹ George Steiner, *Heidegger* (USA: Fontana Press, 1982), p. 32.

⁴² David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 148.

⁴³ David N. Rodowick, *Gilles Deleuze's Time Machine*, p. 185.

⁴⁴ Martin Heidegger, "What is Metaphysics?", in *Martin Heidegger, Basic Writings from Being and Time (1927) to The Task of Thinking (1964)*, ed. David Farrell Krell (London: Routledge & Kegan Paul, 1978), p. 109.

emergence, an epiphany out of Nothingness (*Nichts*)'.⁴⁵ This idea of Being as an epiphany out of nothingness, is the realization that a thought process concerning the essence of being starts when its lack has been manifested. For things show themselves most vividly in their non-being, in the same way that a presence is missed only when it is no longer. The moving image of cinema is the most graphic and vivid representation of the world, but the true essence of its being has been reduced to nothingness. Its materiality has been lost, its wholeness has been fragmented, its spatial qualities reduced, its temporal qualities jeopardized; even though world and being have been reduced to nothingness, their representation forces them to come forth into the light thus becoming their un-hiddenness (*Αλήθεια*). In this aspect, the Image is not the model of the world as Bazin suggested, but the manifestation of its non-being.

⁴⁵ George Steiner, *Heidegger*, p. 68.

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