MATTER IS MOVEMENT: EXPLORING THE ROLE OF MOVEMENT IN
HENRI BERGSON AND BRUNO LATOUR

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Abstract

This thesis explores the meaning of matter and particularly the implications of the methodologies of Henri Bergson and of Bruno Latour in arriving at an understanding of the material milieu. It suggests that matter is movement. Matter is the movement of time which in its duration is memory and creativity; conservation and action, as well as the moving reorientation of matter spatially through the constant collision between different surfaces of meaning. An investigation of matter through this approach allows for an understanding of matter to be achieved, one in which the material realm plays the steering role in the methodology, not a preconceived agenda which the theorist wishes to exemplify. The outcome is a shared agency between humans and matter, which has neither been found in idealism or materialism, which both Bergson and Latour reject. Bergson’s intuition, and Latour’s translation and Actor-Network-Theory, are further examined as ways of interpreting the documentary Manufactured Landscapes.
For Arkadiusz Piszczek
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Henri Bergson’s works are cited as follows:


Chapter One - Introduction

Henri Bergson and Bruno Latour seek to address the importance of scientific-quality investigations in their respective projects which strive to reemphasize the significance of the material realm. While scientific precision is at the forefront of their methodologies, both theorists reject the principles of scientific inquiry, namely the ability to successfully test hypotheses and assumptions. By assessing their respective methodologies Bergson and Latour can be used to explore the elementary question: what is matter? The concern of this thesis is the essence of matter and the material realm, and the contested discourses and methodologies of investigating this essence. It is suggested that movement is a central factor which allows all matter to exist, and that the movement of memory in particular, is what comprises both human and non-human matter, arising in spontaneity and renewability.

By placing emphasis on the role of movement of memory through time and through space within Bergson’s and Latour’s theories, a better understanding of matter can be achieved, especially one in which the material realm plays the steering role in the methodology, not a preconceived agenda which theorists wish to exemplify. In order to explore matter, this thesis will address Henri Berson’s methodology of intuition and Bruno Latour’s theory of translation which is a central component of Actor-Network-Theory, and seek to generate an encompassing approach to matter beyond the context which these two theorists are considering. It will then investigate how movement as an essential ingredient of matter is presented in the documentary film Manufactured
Landscapes (dir. Jennifer Baichwal, 2006). The combination of photographs and film which comprise the documentary in addition to the subject matter, attest to the theme of movement and the significance of matter as the foundation to dematerialized culture.

The outcome of emphasizing movement within Bergson’s and Latour’s theories is a shared agency between humans and matter, which has so far not been found in idealism or materialism, which both Bergson and Latour reject. While Bergson and Latour suggest that metaphysical inquiries should begin with matter, Bergson affords more affectivity to a third party: not matter, not humans, but to the independent agent called time and Latour maintains that the physical encounters between matter over space produce the affect themselves, causing the movement of memory. Bergson and Latour approach their studies of matter on different scales and in different contexts, but both of their methodologies propose that matter is the first element of study, which when looked at thoroughly can lead to the asking of proper metaphysical questions.

Henri Bergson’s intuition uses time as a factor which gives constant renewal to matter, and of which matter itself consists. Time exists only to the extent that it is moving, and within this movement it gains a duration which is memory. Bergson claims that time is the factor which has been missing in inquiries, and when considered, it allows objects and subjects of inquiry to appear as constantly creative, and therefore unpredictable. He writes in the context of the late 19th and early 20th centuries, a time during which perception was seen as the action of the mind, while he argued that matter ought to be given a greater role in the process of perception. Bergson’s intuition is perhaps best known for the concept of the virtual, the sympathetic recognition of other
objects and of other streams of time which accompany the present enduring moment.
While this virtuality is a multiplicity that has been famously examined by Gilles Deleuze in *Bergsonism* (2006), a more useful approach to Bergson is to focus on how this virtuality is realistically achieved, which is through the movement of time or memory. The emphasis in this thesis will be on how the movement of time is necessary for the actualization of what is virtual, thus giving the possibility of virtuality. The virtual is only virtual insofar as it is capable of being actualized.

Throughout his theories Latour, a contemporary philosopher of science and technology, maintains a critique of the discursive deconstruction of material artifacts as well as materialism. The terms subject and object are charged with problematic histories, which is why equal treatment will be given to both of these by referring to their main binding property which is their materiality. What can be gathered from Latour’s approaches to these theoretical discussions is that he places the unpredictability of matter in the way subjects and objects transform through moving in space, and are determined by these very movements. Both theorists seem to propose that movement, or moving around the subject to gather it from many dimensions, is the best methodology to understand its essence. This however is only the secondary benefit. Primarily, Bergson and Latour can teach us that matter itself is constituted through movement. For Latour, the social is not *what* is assembled, but *how* it is assembled. Things are not social in and of themselves and ‘social’ is not an essence of their materiality, but they become social by linking with other actors, such as other non-human or human objects. We therefore do not have more or less social technologies, more or less social matter. The study of the
social means merely to examine how different matters associate with each other and how
various behaviours and essences become emphasized based on different associations
between the matter. The key term used by Latour is translation, although his work is
most commonly referred to as Actor-Network-Theory (ANT). I argue that Latour
provides a cartographic illustration of how matter can be understood.

This thesis will begin by providing a historical introduction to contextualize the
works of Bergson and Latour, respectively as a late nineteenth-century and late twentieth-
century critique of materialism and constructivism. The first chapter will also provide a
brief overview of the significance of philosophical questions that investigate matter. The
second chapter examines the role of movement and how Bergson discusses the specific
way that movement of, and through time works in the methodology of intuition. For
Bergson, matter does not just appear as a function of human perception. This challenge
to traditional phenomenology posits more agency in matter that was usually granted to it.
The central discussion in this chapter will revolve around the shape of the hourglass
(Bergson's inverted cone and plane) as the key interpretation of the function of
movement through time as a central theme to understanding matter. The role of the
hourglass (for there is a second cone on the other side of the plane) is to show that matter
is first, a stimulant, second a vessel of memory. In order to illustrate the hourglass
metaphor, the chapter will begin with a discussion of the virtual and of affect.

The third chapter examines the way that movement is present in Latour's Actor-
Network-Theory (ANT), and especially how movement within space is Latour's
predominant metaphor. First, this chapter will open with an explanation of ANT and why
ANT is often confused with a study of networks, whether we call them social networks or digital networks. The hyphenated terms actor and network imply an opposition of scale and causality, where the actor exists within the network and is influenced by the shifting dimensions of the network. Latour wishes to demystify this by proposing that there is no network, there is an actor which works to build a net. The actor translates (catches and releases in an altered state) whatever passes through its web, meaning that the properties of matter work not only as transmitters but also as transformers. The fourth chapter wishes to unite Bergson and Latour through an example, but not necessarily by conducting a study based on the methodologies of intuition and translation, but by showing how the essences of these two methodologies have been captured within Manufactured Landscapes, a film directed by Jennifer Baichwal, which features the photography of Edward Burtynsky.

Bergson, Latour and Phenomenology

Both Bergson’s and Latour’s methodologies cannot be characterized in the traditional sense as phenomenology which is more strictly associated with immediate perception, while intuition and translation are associated with duration and change. Yet phenomenology itself has not been a single theoretical movement, but a stream of different theories which are concerned with how phenomena occur and how humans are able to account for them. That said, phenomenology is a methodology that seeks to study
how humans understand phenomena and does not seek to formulate or answer any hypothesis, nor argue any particular position about a phenomenon itself. Glendinning describes that phenomenologists refuse to take on standpoints and formulate theses (2007, 15), but by doing precisely that they formulate ideas about processes. Therefore, we do not see a definition of matter for matter’s sake in Bergson’s nor Latour’s writing, but matter is presented as part of a process through which Beings understand different phenomena.

Phenomenologists believe that they are able to have a subjective position on things which are objective, so that the objects which appear are not subjectively constructed, but it is possible to grasp their objectivity through our subjective perception. Within the history of phenomenology, clear differences in approach have appeared as to how that objectivity is to be grasped, and to what extent the subjective infiltrates it. Even though Bergson would have objected to being labeled a phenomenologist because pure perception of things is not ever possible, as will be shown in the next chapter, I wish to characterize him within the context of phenomenology because of his mandate to develop a methodology for studying phenomena, especially the phenomenon of life itself, even if his methodology rested on a different concept of time than that of the other phenomenologists. Bergson may be considered in opposition to transcendental phenomenology such as that of Edmund Husserl, who is considered phenomenology’s founding father, but not of the later phenomenologists who attribute agency to objects beyond that of what is capable of being perceived.
Yet if Latour is able to twist the meaning of words such as constructivism and materialism as we will see in the third chapter, the word phenomenology ought to be twisted free from its reductive connotations and applied more to the existential phenomenology, which I consider Bergson and Latour to be a part of. This type of phenomenology can also be considered post-phenomenology which is rooted in pragmatism of lived experience which always assumes a relativistic account of interior/exterior and subject/object, to the point where they are indistinguishable (Idhe, 2003, 138). This discussion is embedded within debates about phenomenology which require that phenomenology itself be seen beyond the limited philosophy of Husserl’s reduction, in which the world requires a ‘bracketing’ in order to arrive at what the mind is able to perceive. The way that this thesis rests within the phenomenological discussion is by treating phenomenology in accordance to Don Idhe’s definition as something that is “neither subjectivist nor objectivist, but relational. Its core ontology is an analysis of interrelations between humans and environments. (...) It is not introspective, but reflexive” (Idhe 2003, 133). Idhe’s phenomenology aligns with that of Maurice Merleau-Ponty who was significantly influenced by Husserl’s theory, but found that the phenomenological reduction as a concept and methodology was inadequate for the understanding of the essences of what was being perceived. The reduction was found to place the role of the philosopher as a subject external to the environment perceived.

Merleau-Ponty writes that the basis of metaphysics based on the data that is perceived in consciousness became “a hopeless enterprise since the philosophical scrutiny was trying to be what it could not, in principle, see” (Merleau-Ponty 2006, 66
italics original). Instead Merleau-Ponty adopts from Husserl the ability to gather ‘immediate datum’ as a perceiver, but reads Husserl through Henri Bergson, by recognizing that the perceiver is *of the world* that is being perceived and shares with it the duration of time. It is because of this that contemporary phenomenologists such as Don Idhe or Bruno Latour are content with being called post-subjectivists (Idhe 2003, 133).

The shedding of subjectivism is not a denial of agency to humans, but the realization that agency is co-dependent on other agencies. Hence, the very terms are interchangeable and we may speak of perceptive humans as objects amongst other objects, or subjects amongst other subjects, because the negation of their dualistic nature is removed.

Henri Bergson writes about matter within the context of a Physics and Biology that do not take kindly to ambiguity or creativity. His project is centered more so around understanding the functioning of human perception and the role of the body with regards to other matters, than it is our understanding the nature of matter itself. For Bergson, matter is “an aggregate of ‘images.’ And by ‘image’ we mean a certain existence which more than what the idealist calls a *representation*, but less than which the realist calls a *thing*, an existence placed halfway between the thing and the representation” (MM, vii).

This type of matter that Bergson is concerned with is the matter which we as perceiving human beings are able to know. At the heart of the debate between materialists and constructivists are the questions of how much are we able to know, and how much can we control epistemologically? These two questions fundamentally assume that any debate in which they are evoked will contain a subject-object distinction, what can be known and by whom, and what can be controlled and by whom?
During his time, Bergson’s writing is most closely affiliated with evolutionary biology, to which he contributed by refuting the main theoretical ideas at the time. Human evolution was placed in two camps. On the one hand those who supported the evolutionary idea of mechanism believed that everything necessary for evolution was found in the matter that was present at hand. Their view of biology and the body was based on notions of physics; and evolution was based on genetic inheritance where matter was able to reproduce matter that was identical to it, meaning that the body needed no spirit; a theory which continues in present day microbiology and DNA studies. On the other hand, the animists or finalists believed that the body is a series of organs which ‘works’ for the soul, presupposing an ‘ideal’ vision towards which the body strives to evolve, which denies any creativity or newness within the concept of evolution (Wolsky and Wolsky 1992, 160-165).

There are two main branches of thought which have emerged in the last half century and which directly or indirectly address questions about matter and epistemological approaches of matter; the sociology of science and the philosophy of technology. The sociology of science, which is also known as the social constructivist approach to science, accounts for empirical or impartial approaches to gaining knowledge of matter within a larger context of social construction. Theorists who fall in this realm propose that the ‘scientific’ gathering of facts about different types of matter occurs within a context where human factors influence and limit the research and that any ‘scientific truths’ can only give insight into the social world, not the natural world. This type of approach to studying the material realm has been called the Empirical Programme
of Relativism, because it concerns itself with the interpretive flexibility of ‘facts’ as well as the circumstances which contribute to the closure of often controversial research into ‘facts,’ such as the limitations of time, funding, pressures of publication, and personal values amongst others (Pinch and Bijker 1989, 27).

Philosophy of technology can be regarded as both the study of the social or cultural construction of technological artifacts, but also of the technological influences of social processes and history and on human evolution. While many scholars who study technological artifacts consider only those which we would call media or production technologies, others extend the role of technology to any material artifact which extends a human function. It was within this context that Latour was deeply influenced by Michel Serres (Serres and Latour 1995) whom he interviewed in 1995 and who was central to his development of a theory that gives equal voice to human and non-human actors. Serres developed a network model with a continuous transfer of information. His writing often relied on Hermes, the Greek god of transportation and boundaries, and also the messenger of messages between the Gods and humans (Serres 1982, xxx). Like Hermes, Serres himself sought to stop the differentiation between the development of Science, the arts and humanities, which he thought developed in a similar pattern and only by means of an exchange of knowledge between these spheres which are seen as separate in modern society.

The heated debates between Robert Boyle and Thomas Hobbes which occurred in the middle of the seventeenth century were documented by Steven Shapin and Simon Schaffer (1985). Latour was influenced by their book, *Leviathan and the Air-Pump*
which presented Boyle as the experimental physicist and Hobbes as the philosopher. In 1660, Boyle publicly unveiled his findings about the trials he took to build a pneumatic engine. He was one of the first people to promote experimental science which did not attach meanings to the experiment but wanted to show that there could be ‘matters of fact.’ Even though he showed experimentally that a vacuum was devoid of matter, he was asked by other philosopher-physicists questions about further meanings on the result. His aim was to create “a natural philosophical discourse in which such questions were inadmissible. The air-pump could not decide whether or not a ‘metaphysical’ vacuum existed. This was not a failing of the pump; instead it was one of the strengths” (Shapin and Schaffer 1985, 46).

Boyle was interested in witnessing facts and proving their replication. For him, science and physics were a realm separate of social and moral discourses, and his experiments were not welcomed by Hobbes who argued that Boyle’s experiments would lead to disorder. For the natural philosophers, all experiments were to lead to a philosophical order and “order could only be won and made secure by deciding upon proper metaphysical language” (Shapin and Schaffer 1985, 81). Although Hobbes is mostly known for his political philosophy, he was also interested in geometry, geography and astronomy. Hobbes was said to be fascinated by Galileo, whose physics of the motion of planets inspired Hobbes’ metaphysic ideas that nothing can exist without it being interpreted by a moving being (Jesseph 2004). Galileo for instance posited that “if ears, tongues, and noses were taken away, (then) shapes, numbers and motions would certainly remain, but there would no longer be smells, tastes, or sounds. Without a living
animal, I do not believe that these would be anything other than just names” (Galileo quoted in Jesseph 2004, 201). It is fairly easy to see how Hobbes would have been influenced to reduce all physics to metaphysics, based on the idea that objects or objective facts can only be known through human interpretation. This fundamental question can be still seen in the question which resonates in the work of all the thinkers concerned with questions of matter, namely, do technologies have inherent qualities, or are they simply instrumental and neutral, and understood through the meanings that humans assign them?

This question of whether knowledge could be separate from facts can be traced back to the writings of Plato. In the *Republic*, Plato presents his allegory of the cave which in short describes a setting where prisoners in a cave cannot see objects from outside of the cave directly, but only their shadow which are cast on the wall by the fire just outside the cave (Plato 2003, 8). Once someone leaves this cave, she or he understands that it is difficult to seek wisdom, but that it is worth to leave the cave. This allegory is often interpreted as a metaphor for the scientist (the one who leaves the cave) being able to communicate with the philosopher (one who only knows things from his or her own interpretation). It is this pursuit of finding ways of theorizing questions about the role of theory itself in addition to methodologies of understanding the role of beings and the role of non-human matters which bind Bergson and Latour. Although there is little indication that Latour was influenced on Bergson, their methodologies seek to avoid the pitfalls of theory which seek to give decisive conclusions about the nature of humans and matter, and instead propose renewable methodologies.
Documenting Matter

Whichever direction phenomenologists chose, they are often accused of practicing quietism; of acting in a nonchalance way towards the subjects and the context are studying (Glendinning 2007, 24); a charge that has also been directed at Edward Burtynsky and Jennifer Baichwal (Young 2003, Wilkinson 2006, Schwartzberg 2007). In her documentary, Baichwal presents Burtynsky’s photographs and follows the photographer on his trials to find images of landscapes that have been altered through the process of manufacturing. These landscapes appear in various stages throughout the film, ranging from mining quarries, ship breaking beaches or recycling depots to highway overpasses. The commentary is vocally sparse, yet visually staggeringly present and significant. Ever since Husserl called to reject the dialectic of the Enlightenment and replace the call ‘back to Kant’ with the call ‘back to the things themselves’ (Glendinning, 2007, 27), the very nature of phenomenology as theory, has, to me, been political. The question whether humans share their agency with other elements in the world is a political question, and phenomenology, as a methodology is a political answer to the abstractedness of Enlightenment politics and to current postmodern theory.

Landscape documentation is a contested realm of photography and film, much like all others. It has been blamed for creating a sublime notion of Nature, for creating a Nature and non-Nature divide and for ruining Nature by popularizing it. On a social scale, landscape photography in North America first served the purpose of exploration, enticement for immigrants, land surveying, national pride and conservatism (Jussim and
Lindquist-Cock, 1985; Hoelscher, 1998; Spaulding, 1996; Bright, 1992). In their book *Landscape as Photograph*, Estelle Jussim and Elizabeth Lindquist-Cock brought to light the subjective and conceptual nature of landscape photography, through which natural landscape and nature have been socially categorized as god-like and as a refuge from city life. Jussim and Lindquist-Cock write that “for landscape photographers, particularly, to deny their conceptual operations would be to suggest that they simply wander the face of the earth without purpose or ultimate destination” (Jussim and Lindquist-Cock 1985, 134) and suggest that a landscape photographer uses land and its features as a way to portray something other, a feeling or concept which is greater than the subject matter, but which ends up portraying nature as picturesque. Certain landscape photographs do contribute to a picturesque portrayal of landscape, but not all are intended to romantize landscapes as such.

Landscape is as much in constant flux and change, in constant creative process as is human time and intuition. Landscape, according to Jussim and Lindquist-Cock is not the geographic or scientific view of nature, but rather a fluctuating social term given to what is perceived as the 'surrounding.' Landscape therefore “constructed as the phenomenological world does not exist; landscape can only be symbolic” (1985, xiv). It is here that Landscape and the material -scape part terms. Landscape can therefore be referred to as the natural landscape, the urban landscape, the constructed landscape — it is the social signification of a physical reality, yet this construction of the picturesque landscape comes from someone’s own interaction of physical reality.
In this spirit of what appears to be a dualistic struggle to grapple with agents and structures, humans and matter, and subjects and objects, the documentary *Manufactured Landscapes* will be considered as an example of how the methodologies of intuition and translation may be visually displayed. The temporal expansions of photographs into film and the transformations of matter which occur throughout the film provide an excellent account of the movement of memory. In order to provide the foundation for the argument that matter comprises movement, the next chapter begins by exploring Bergson's methodology of intuition. I argue that matter takes on its material form through various levels of movement, namely that of contraction and relaxation of memory, which allows matter to actualize, or become physically present.
By the end of this chapter it will have been illustrated that matter is made up of the movement of memory, and that memory can only exist if it is constantly moving as time. Everything material then, including the human body, relies on movement through time, which necessitates that time becomes something other than a duration of the psyche, but a property of all living and non-living matters. It will also have been demonstrated that memories do not simply exist in the human brain, which is also made up of matter. Unfortunately it is, at least at this point in time, quite difficult, if not impossible, to write about matter or to describe it, without referring to a perceiving subject who does the describing. In *Matter and Memory*, Bergson explores matter alongside human body-matter; human incarnation, precisely because of this difficulty. While Bergson asserts that through the method of intuition, we can understand the essence of material objects, it is nonetheless a human understanding.

This second chapter looks at the role of movement in Bergson and discusses the specific way that movement through time works in the methodology of intuition. For Bergson, matter does not just appear as a function of human perception. This challenge to traditional phenomenology posits more agency in matter than was usually given to it. The central discussion in this chapter will revolve around the shape of Bergson's inverted cone and plane, as the graphical interpretation of the function of movement through time, which is a central theme to understanding matter, at which point I will present the implications of turning the cone and plane into an hourglass. The role of the hourglass
(for there is a second cone on the other side of the plane) is to show that matter is first, a stimulant and second, a moving depository of memory. In order to illustrate how Bergson’s cone requires extension into the metaphor of the hourglass, the chapter will begin with a discussion of the virtual and of affect.

Bergson’s ideas can be organized according to three objectives: the development of the method of intuition, the reinstitution of metaphysical questions in science, as well as scientific precision in metaphysics, and lastly, the reorganization of thought that accepts dualisms, multiplicities, and differences (Deleuze 2006, 117). While all these aspects are indisputably combined, the method of intuition is of primary importance here. The method of intuition addresses the debate between realism and idealism both which see matter as a perception of the mind (MM, 75).

What is the difference between matter and our perception of it? Our perception is analytical, meaning that it picks and chooses fragments of the infinite image presented to us, which it will see (MM, 76). The difference between each of the perceptions that we have of matter is that each occurs at a different moment in time and “memory condenses in each (perception) an enormous multiplicity of vibrations (past memories) which appear to us all at once, although they are successive” (MM, 76). “Matter,” writes Bergson, “cannot exercise powers of any kind other than those which we perceive. It has no mysterious virtue, it can conceal none; (...) it can have no other office than to receive, inhibit or transmit movement” (MM, 78-79). This should sound alarming to an essay which is concerned with the significance of matter, but it does not have to be. As will be shown, Bergson affords the same level of agency to living human matter: “the living
body in general and the nervous system in particular, are only channels for the transmission of movements" (MM, 81). This conspicuously leads to the question: if both non-living and living matter are devoid of agency, then what is moving and what causes movement? The answer is memory which is the duration of time.

Materialists and realists think that matter is what causes perception; it is the root of human existence, the ‘other; by which we define our subjectivity. Idealists and spiritualist think that matter exists only in our subjective perceptions or social fabrication; turn off the mind and we find an ‘empty show’ as Bergson puts it (MM, 80). Putting materialists and idealists up against one another, results in asking the wrong questions. They are not waged in a dualistic battle, but are arguing for the same thing on a different scale. As long as matter serves a human purpose, whether for the materialists’ utility or whether it is a product of the idealists’ constructivism, then matter cannot be properly understood. From Bergson we learn that matter itself is not memory, because memory itself cannot be stored anywhere. Matter should be understood as a necessary element for movement or for action, through which memory can circulate.

The Virtual

Why refer to Henri Bergson and why prompt the question of time? Bergson’s philosophy can provide a way to understand a nagging question. Halfway through Matter and Memory, Bergson eloquently poses the question why a temporal analysis of time is
superior to that of a spatial one: “in what warehouse shall we store the accumulated images (of memory)”? (MM, 192). A warehouse such as a non-living matter or a living-matter such as a body, occupies only the present moment which flees instantly into the past and become the immediate past. How can a matter ever contain a memory?

A Bergsonian interpretation of time accounts for the duration and linkage between past, present and future. Moments in time are not viewed as arbitrary moments that humans have interpreted according to an abstract scale of before, now and after, but rather occur in that sequence naturally. This interpretation of time also states that people cannot possibly know what will occur in the future, because as every moment progresses with each passing second, these new moments are entirely new and entirely creative. The essence of Bergson’s time is that there is a constant process of becoming and of creativity and there is a continuous and un-fractured progress of past, present and future moments. These are not however various degrees on the same scale of time, they are three different times altogether that run parallel to each other.

Bergson’s method of intuition is one whose main goal is to understand creativity and newness. It comes to stand against intellectual reason which is more comfortable with analyzing and understanding human behaviour in terms repetition. Intuition is the act of inserting oneself into the interior of an object to understand what is creative and inexpressible in it, and Bergson calls this act of intuition an act of sympathy. Analysis on the other hand looks at the common traits of objects and studies those traits which are already known (CM, 135). Analysis seeks to find the nature of matter in the human translation of it and this results in negations. This means that by studying material
objects the analytic mind cannot comprehend all the parts of the objects, but gathers the perceptions it sees of the object and thinks that this picture will suffice as the representation of the object. Matter, in its entirety, can never be grasped through analysis, because the whole of the matter cannot be gathered, regardless of the number of different perspectives through which it is analyzed.

Intuition as a method is grounded on nine principles. The external material reality which is perceived by the mind consists of a mobility which is just like our own human duration. Matter then is in the constant state of becoming something new with each passing moment (assuming that this is also the nature of human duration), but, unfortunately the workings of the human mind prefer to stabilize concepts. It does this by translating human perceptions which come from sensation into ideas. As opposed to utilizing sensations for a sympathy and understanding of the materiality of the real, the mind acts as a switchboard and causes a reduction of reality into a question – is it useful or not? The assumption that investigation must start from concepts is an inherent vice in the operations of the mind (CM, 158-163). Luckily, through intuition this vice can be overcome. How do philosophers of matter begin to look at matter as mobile and creative? How then do we practice the method of intuition? The mind must “do violence to itself, continually upsetting its categories, or rather, recasting them” (CM, 160). This violence can be obtained through infinitesimal calculus, the main property of which is to investigate not what numbers are but how numbers come to be. The objective of intuition then is to look at two aspects of matter: differentiation and quality (CM, 162).
Although mathematics is a symbolic science and generally relies on analysis and abstraction, its focus is on tracing the process of becoming, the putting together of multiple variances and virtual perspectives which result in final numbers, but nonetheless can continue to become other numbers. The difference between mathematics and metaphysics according to Bergson is that metaphysics does not need to be applied and can abstain from symbols and concepts. If metaphysics adopts the mathematical procedures of looking at how things form and will "meet with objects less and less translatable into symbols. But it will at least have begun by making contact with the continuity and mobility of the real" (CM, 161). It is here that Bergson’s emphasis on mobility clearly points the way to understanding how memory is stored, which is not in any container, but through its renewability in time.

Bergson begins The Creative Mind by saying that philosophical systems examine reality through lenses in which people could do without living or non-living matter, without going through the daily motions, and where they would never sleep nor dream (CM, 1). His discussion brings metaphysical questions back to the milieu in which subjects undergo experiences, and back to the subjects themselves. That said, Bergson was not only a philosopher of matter and material culture, for throughout his written work, he advocated that matter and people’s perceptions of matter are only two perspectives on the same scale (Bergson MM, Deleuze 2006). We therefore have the virtual or abstract, which, when coupled with matter form something that is actual. An object is not an object until it is coupled with other perspectives, and all the virtual perspectives combined would form the object. A two-dimensional drawing of a building
does not give adequate information about the nature of this building, and while several of these drawing from different perspectives will give more information, the most coherent image would arise from the accumulation of drawings from every single possible coordinate from which the building may be seen. A full image of the building comes into being through the accumulation of multiple perspectives, but all of these perspectives assume that a building exists in the first place, on which basis a drawing can be made. In other words, matter requires multiplicity, and multiplicity requires a continuity in which it comes together to be actualized.

Time is never one, it is always multiple (virtual – from many directions and many different speeds). Bergson describes this virtuality in the following way:

When we are dealing with external bodies, these are, by hypothesis, separated form ours by a space, greater or less, which measures the remoteness in time of their promise or of their menace: this is why our perception of these bodies indicates only possible actions. But the more the distance diminishes between these bodies and our own, the more the possible action tends to transform itself into a real action, the call for action becoming more urgent in the measure and proportion that the distance diminishes. And when this distance is nil, that is to say when the body to be perceived is our own body, it is a real and no longer a virtual action that our perception sketches out (MM, 310).

This passage paints the picture of one of the dimensions of virtuality; the time that fills the space between our material bodies and other matter. It is important to note that it is not the case that Bergson refused to give space any value whatsoever in theory, but he did
wish to fill space with time, and not with divisibility. There are virtual positions occurring simultaneously all the time, but they have more or less potency in being realized into actual actions. There is another dimension to virtuality. The first one was that of the virtual contact that exists between different matters, the second is that of the different arrows of time that are in constant play during the present, but always passing, moment. Since time cannot be divided (it is multiple, yet not fragmented like Zeno’s arrow) we cannot say that a certain ‘time’ caused another. We are constantly thinking that the past came before the present and will transform into the future, yet in reality what we have is a future that occurs simultaneously as the past, because we think about the future with each intuitive moment. It is therefore difficult to perceive of a ‘causality’ of time (which instant causes another) and by trying to perceive causality there exists the possibility of looking at how a form transforms into another form; the bricolage and the evolution of culture and creativity under different forms. With mobility there is freewill because it is difficult to stop time and determine causality and who pre-authored and pre-structured the thoughts that are possible of perceiving.

To further explain becoming and the three levels of time, utilizing an example that deals with technology may be most appropriate. The invention of the telephone could have been seen as a possibility, or as something that could have well been predicted now that we look back at history in retrospect and consider its predecessors such as the Morse code, or the telegraph. Yet this possibility is only the result of our hindsight, and as such reality is “created as something unforeseeable and new, thus it finds that it has from all time been possible, but it is at this precise moment that it begins to have been always
possible” (CM, 101). The telephone was not possible before it was invented; it became possible the second it was invented and every second thereafter. Not only did the past change, but what can now be, and what could have been the future also changes as we move along the three measures of time. Before the telephone was invented it was an immaterial matter, but after it was invented, even when the telephone is physically absent, it appears to be somewhere between not existent and physically tangible. A memory of its physical shape is stored as a possibility, as a future potential action.

Although the term ‘virtual’ may appear to be passé as a term used to identify participation in activities on the Internet and with digitally simulated environments, virtuality as a concept of integrating several timelines is neither novel nor inaccurate. Bergson was against the concept of time as a singular continuity and instead promoted multiple-continuity (MM, 29-58). Deleuze explains that Bergson provides a tool to understand this multiplicity: “thus we have an ontological vision that seems to imply a generalized pluralism (but), if things are said to endure, it is less in themselves or absolutely than in relation to the Whole of the universe in which they participate insofar as their distinctions are artificial” (Deleuze 2006, 77). In order to visualize this, we can imagine three arrows moving in parallel arrangement in the same direction, representing the past, present and future (figure 1). They do not cross, nor do they ever move at different speeds.

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Figure 1
The past, present and future occur simultaneously and at the same time, signifying that the past is not a timeframe that we ‘jump’ to during the act of memory, but that it is constantly occurring. In realizing that the three times move in parallel arrangement, the present no longer exists as a mathematical moment on the movement of the arrow that represents the present, but rather we can acknowledge a swelling of experience which gives the present moment dimension or volume and in which the present is a constant negotiation with the memory of the past and the anticipation of the future. The areas where these arrows meet to form a virtual alignment are at the two distinct moment of stimulation and actualization, between which occurs a long or short period of delay or affect (figure 2).

![Figure 2](image.png)

It is therefore a poorly stated question, that which asks, what happens when the body does not move and feels nothing new physically, while it sits in front of the computer or reads a book? We should rather ask what occurs during movement when it is delayed, or what occurs during waiting which is the lag between the stimulation and
actualization in Figure 2? A stimulus is not enough to achieve actualization or action, for it is within the delay between these two that affect takes place. What then is affect? During the delay period, the co-existence of multiple temporal units forces the acknowledgement of differentiation. It is time, and the acknowledgement of duration in our selves and in other objects that forms the stage in which dualisms can be seen as differences in kind. Unlike an event that is considered from a linear narrative, an event understood through Bergson's virtual time becomes new because it is constantly rearticulated from a different viewpoint which has to consider a constantly growing past, and future which has increasingly new possibilities due to the experiences of intuition.

**The Role of Affect**

Affect is the condition of experience; it is the precursor to experience or action. Bergson writes that affections "interpose themselves between the excitations that I receive from without and the movements that I am about to execute, as though they had some undefined influence on the final issue" (MM, 2). If affect then is the transducer between the cause on the human body and the effect this produces, Bergson's goal is to understand what he calls the conditions of affect, or the way in which affect operates, rather than just the result of this affect. As a method then, intuition is the discovery of the way that physical and cognitive processes operate within this transducer.
Bergson gives two warnings in the study of the relationship of the mind to the body. The first is to recognize that the mental functions of our brain serve in a utilitarian way as part of the body, meaning that the brain’s functions are ‘turned towards action.’ The second reminder is that habits formed within the body through physical experience and through action, return to be analyzed by the mind, where they may create fictitious problems due to the fragmented nature of analysis (MM, xvii). Bergson’s philosophy strives for an unmediated apprehension of matter, wherein Bergson’s matter occurs halfway between the ‘thing’ and its ‘representation’ (MM, viii). To name a ‘thing’ means to acknowledge its existence outside of human perception, and to call something a mere ‘representation,’ means to disregard its materiality outside of human construction. Matter exists differently than it is perceived, but the matter that is seen and felt, is not merely a product of human imagination. Bergson unites the thing and its representation as matter, which he also calls an image (MM, viii). Perception, or the immobile act of seeing is never just a passive state, but an active, performative state, because perception acts as the preparatory stage for physical action, and therefore becomes creative in itself. In order to focus on representations and perceptions, the body needs to limit the amount of matter which it encounters, to isolate the surfaces of meaning which become significant (MM, 30). Perception is the gathering of images, and the projection of them into the object of analysis. It is not that an image belongs solely to an object, but rather that we see a certain angle of this object and believe that this image is the whole property of the object, where as it is only one of the possible perceptions that the object owns. We own the
angle, but the object owns the multiple possible images, and no image could exist without the object (Bergson MM, 39).

If for Bergson, affect is the invitation to act (MM, 2) then we move through the world uninterrupted, our body brushing against other surfaces which are not meaningless nor which have mere utility. All collisions and all brushings of the body against other surfaces necessarily relies on these surfaces to exist a priori as what I prefer to call, the 'surfaces of meaning,' which solicit action from one another. The ability of the body to move is reflected within the surfaces with which the body is surrounded; in other words the material milieu with which our bodies are surrounded dictates the possible actions, and hence the possible experience the body can make and have. This shows a very significant dependence of perceptual possibilities on the physicality of matter. Thought cannot come first and be executed by the body, because it is the matter and the body (as the other matter) that in reciprocity determine first movement and second, perception.

When the body experiences stimulation, the more immediate the contact with the external surface, the more the reaction is associated with an embodied impulse. The less the external environment demands that the body moves or reacts to it, the more we consider the action a sensible action, or a pre-thought action (MM, 22). On this scale, it is not the case that certain experiences occur through the mind and others through the body. Perceptions are not generated and applied into action, but rather there is a delay between what the body encounters and the action it must take. This delay of action is a result of the distance between bodies and matter. This distance of bodies and matter is significant, because it influences our perception of freedom and mastery: "the degree of
independence of which a living being is master, or, as we shall say, the zone of indetermination which surrounds its activity, allows, then, of an a priori estimate of the number and the distance of the things with which it is in relation" (MM, 23). By limiting movement, by isolating the body as it interacts with technology, we are delaying the response time required of the body, making it seem that activity is intellectual, rather than embodied.

The representation of matter is not less than the actual presence of matter, it is more. It takes a mirror in addition to an object to show its representation or reflection (CM, 83). This means that perception is not an internal and manufactured human phenomenon, but requires an external stimulant or matter which will result in this perception, and on this premise, Bergson dismisses the idealists and constructivists. Our perception chooses to omit that which it finds useless; those materials which are not important in that they may not create action or be utilized in any way by us. This theory is about selectivity. The human body experiences more matter and, experiences more matter more instantly, especially when it is physically engaged. In order to focus on representations and perceptions, the body needs to limit the amount of matter which it encounters, to isolate the surfaces of meaning which become significant.

To elicit action from a body means to make it adapt to the circumstance, or in other words, to make it absorb the circumstance. This absorption, caused by the intense and immediate meeting of surfaces of meaning, serves to preserve the body; to allow it to continue into the next instance. This absorption is therefore an affect, that which drives bodies into action and into the future. Affects is a conatus. The body does not merely
"reflect action received from without; it struggles, and thus absorbs some part of this action. (...) Perception measures our possible action upon things, and thereby, inversely, the possible action of things upon us. The greater the body's power of action (symbolized by a higher degree of complexity in the nervous system), the wider the field that perception embraces" (MM, 57). To see more, to experience more, is therefore not a property of isolating the body, but rather of stimulating the body.

For perception to be realized or actualized, the body needs to move. Bergson writes that perceptions are not images that are formed in the brain, but the perception is in the object. A perception is a question that matter asks of the body (MM, 42). An analysis of experience then cannot start with questions about the body, but rather with the various images that the body is surrounded with (MM, 44). Affect is what gives the human body duration, and affect arises out of complicated circumstances formed by matter, which bid the body to adjust itself; to answer. Experience does not occur in the mind, which shifts to the body, which finds itself as a matter amongst other matter, but rather, experience is our matter-body directly amongst other matter, it is the brushing of 'surfaces of meaning' which was mentioned earlier. Consciousness serves as a switchboard which chooses which images to perceive based on the possibilities that the body has in actualizing or moving in relation to those images (2D surfaces of matter). It appears that Bergson does not differentiate between how we 'meet' this matter whether it is though sight, sound or touch, because for him a visual encounter as much as touch result in excitations that will translate in immediate or in a potential movement (MM, 68).
Why does Bergson couple matter with memory? For him memory is the efficient cause or the creative intervention during perception. Recall memory occurs during the delay between what the body that is stimulated by external matter and between the actualization of movement. Perception is not contemplation or speculation; it is performance and interaction with matter. Bergson gives humans agency by depicting a theory of matter and perception in which humans selectively choose the matter they want to associate themselves with. While this type of choice appears to be a limited empowerment, Bergson argues that any philosophical enquiry which does not acknowledge the material milieu of human experience is bound to begin with poor questions which will unlikely ever be resolved. Humans reduce all the possible viewpoints to the one that interest them. What is interesting to humans? For Bergson, the answer can be found in the human body as a motor which serves as a mediator between different forms of matter. This may seem very instrumental, but a body becomes a mediator which translates certain perceptions of matter in actions and perception occurs only when it can potentially be actualized and when "matter solicits activity" (MM, 41). The body is made with a tendency towards wanting to move. Matter is therefore made up of questions. The nature of the human switchboard which is instrumental in this perception works by deducing of the possibilities of answers which may be answered to those questions, and the result is an answer – will my body act or will it not; yes or no.
Hourglass and the Surfaces of Meaning

If for Bergson, the role of thinking and speculation is not a purpose in itself; it is always action driven (MM, xvii) what is gathered during the period of affect, or the period of waiting between the when we use our bodies, is a deeper understanding of ourselves, and which experiences from the past (now that we understand them more fully thanks to the multiple perspectives of memories) should serve as intuition for further actions. The role of speculation is therefore a conservatory function. While conservation is the delay of death, it is also a denial of rebirth and of creativity, and it is because of this conservatory function, that matter requires a balancing out in order to sustain itself; in order to have duration. I believe that Bergson therefore presents two distinct roles of the material human body. First, the body has a tendency towards action and second, the body has a tendency towards conservation, considering that Bergson always equates the brain to a material element of the body which acts as a switchboard. The process of action-conservation is what gives memory the swing to be in eternal movement. Deleuze identifies this process in the central tenet of Bergsonism, which is that the essence of time is differentiation and division (Deleuze 2006, 95).

Deleuze reinterprets Bergson’s description of this move to conservation as a relaxation, while the move to action is a contraction (2006, 88).
Bergson presents the image of the cone (figure 3) (MM, 211) in which he demonstrates how time and memory operate in relation to the present moment; a moment in which a living-matter such as a perceiving human encounters another matter. $S$ is the moment of actualization, or in other words, the present moment. As we move from the point of the cone; the point of actualization, towards the base of the cone, we move further into the past, yet it is not the case that the plane $A-B$ contains more history or memory than the plane $A^1-B^1$ or $A^2-B^2$, because each new moment in time contains all the previous memories, and therefore there are more memories 'contracted' into $A^2-B^2$ than there are in $A-B$, and all the memories are at their most contracted point at the plane of actualization during $S$. To remember then, means to stitch together the different occurrences of an event (which is always an event of an encounter of material surfaces of meaning), or to re-member the instances of all the planes ranging from $S$ to $A-B$ during which an occurrence took place. The same moment occurs at all levels of the contraction, with each more contracted point having the added intuition of knowing the
beneficiary ‘yes’ which were responded to the questions that the encountered matter had posed.

During $S$, two surfaces of meaning brush, yet surprisingly both Bergson, and Deleuze, who gives an account of Bergson’s cone in *Bergsonism* (2006, 60) do not consider the other side of the plane of actualization. I therefore propose that the swinging back and forth between the perceiving living-matter and the perceived image (the surface of the matter being perceived) is done by the movement of memory which is the pure endurance of time. The image that is part of the object is infinitely rich and contains all the information of that object, yet the act of perceiving is feeble. Luckily, this poor perception being described is what Bergson calls pure perception which only exists in theory. Actual perception always occurs with the intervention of memory, so that memories have determining agencies of what gets perceived. While Bergson’s method of intuition seeks to primarily understand the true essence of matter, what Bergson leaves us with in this method, is insight into the function of memory as the movement of time, as opposed to insights into the actual nature of matter, which was not a shortcoming of his own work, but the intent of his work was limited to the scope of his argument which he wanted to present in terms of the biological/material intervention in perception.

Memory gets stored as an act of the body which can be reproduced due to the fact that the body has become accustomed to performing this act. It can also be stored as an instance of a time which can be recalled as a whole, not as an action, but rather as a time and event separate from an embodied movement. These are termed as motor mechanisms and independent recollections (MM, 87). For Bergson, the present moment when an
individual interacts with his or her milieu is always a transition between the past and the present. The present is always at the place where the person’s memory meets the plane of actualization which is constituted by the surrounding environment. Bergson’s continuity does not displace the possibility of multiplicity within a model but rather allows multiplicity to coexist in time, accumulating memory in what is called a contraction (Deleuze 2006, 88). This means that while there is no causality as was mentioned earlier, there is chronology. At the present moment of actualization, the images of the past and of the material milieu environment are gathered into action and during this time, the bodily memory works on the basis of an accumulated memory which it puts to use within its new milieu (MM, 197).

For Bergson, people are not there for the act of revealing the utility of objects, as “to manufacture (...) is to work from the periphery to the centre. Organization, on the contrary works from the center to the periphery” (Bergson 2005, 103). The analytic mind tries to organize the outside (by find utilitarian purposes in matter) as opposed to taking the outside as a process that organizes into the centre (matter that gives humans meaning), which is what can be realized though intuition. In his book Bergson, Leszek Kolakowski (1985) describes the fragmented role that analysis plays. Analysis is characterized by abstract concepts that decompose the world and organize it in relative proportions to human needs. Analysis, much like science, immobilizes what is ‘common’ by measuring it, and making it unrelated to time. The aim of analysis is “to predict events and to influence them to suit our wishes” (Kolakowski 1985, 26). Kolakowski’s interpretation of Bergson is meant to emphasize the term ‘duration.’
Analysis and instrumental treatment of matter and technology fragment human understanding of ourselves, denying the continuity and duration that is foundational to Being. Symbolism becomes constitutive of experience and cultural fragments are used to reconstruct the consciousness, thus losing the ‘concrete unity’ of human existence (Kolakowski 1985, 26).

Bergson presents matter as the accumulation of actions and memories, yet that the actualization point of touch between the body and the plane of actuality (milieu) is the one that bids the memory to the surface, to make sense of the matter that is in the milieu. This means that matter not only stimulates the body in the present moment, but it stimulates human history, for the benefit of the proper use of matter in the future (memory is put to future positive use). Therefore where humans interact with matter it is for their own conservation as actors; for the conservation of Being, an idea that will also become apparent in the description of Manufactured Landscapes which opens with a cinematic technique called the long take, that in the interpretation of film theorist André Bazin signifies a preservation of human beings within the duration of objects that becomes possible due to film. The act of recalling memory and history is about giving due references. The point is to summon references and acknowledge what has been useful. It is then that the ‘beneficial memories’ get retained; those through which actions are translated, not repeated or simply imitated.

In order to understand how people's experiences comprise both physical and non-physical realities, we need to know how these translate into one another. The term
‘translation’ is key. The term ‘causality’ does not suffice. What is needed therefore is a second cone that appears on the other side of the plane of actualization (Figure 4).

Engagement with matter occurs through transitions, and these transitions are what make up the ‘social nature of things.’ Matter needs to be understood as a milieu that is organized and gives humans meaning by creating possibilities for affect, but also has affect itself to the extend that it can influence the actions that are permissible in its realm. Tangible matter itself contains movement and continuous experience, but it is delayed, stored and waiting, the more contracted it is. On the other hand, human imagination, possibilities and creativity are on the other end of the spectrum, these are movements that
are only potentials and have not yet been fully materialized, or are not anymore physically grounded in tangible matter. We therefore have an image of two cones which invariably form an hourglass through which time oscillates in the form of more or less dense memory. In Figure 4, the top portion of the hourglass is the cone which Bergson had originally presented is the duration of living-matter, while the bottom cone represents object-matter, which was not considered by Bergson in and of itself.

Bergson writes of two types of memories; those through which we recall an event, and those during which we recall a habitually stored memory, in order not to remember an event, but to use knowledge-memory for a present purpose. The first memory is one of recall, while the second is one of action (MM, 91). The memory of recall stores up images regardless of their utility in the future, but memory does not end on perception, because every perceived image is stored in the body in a second type of memory called the memory of action. The memory of recall then is translated into “new dispositions towards action (which form) a series of mechanisms, wound up and ready, with reactions to external stimuli ever more numerous and ever more varied, and answers ready prepared to an ever growing number of possible solicitations” (MM, 92). These habitual and deeply stored memories are ready to “suggest the lessons of experience” and “it is from the present that comes the appeal to which memory responds, and it is from the sensori-motor elements of present action that a memory borrows the warmth which gives it life” (MM, 197). This means that at the plane of actualization, when a person perceives matter, the matter stirs (for the perception is really in the object) a person to utilize their memory of experience.
The experience of recollection then is not passive, but potent in this second type of memory. In the second memory of action, those memories which have become accumulated as images of the past, become potential actions to be executed and extended in their utility. When going to a new place, I tend to consult a map and am fairly aware of my entire experience as I uncover a new part of the city. If I were to return to the same place a second, third or any consecutive time after that, the walking would feel more natural, less intellectual and it would seem as if I left the house and suddenly arrived at my destination, not remembering the details of which street corner I crossed the road. In fact, if someone were to ask me, I embarrassingly could not say what the names of the streets were, because the activity becomes so second nature through the muscular memory of my body, that my intellectual awareness is no longer the key player in this experience.

Proprioception occurs when the human body’s muscles get accustomed to movement which is repetitive, so that it feels natural or unconscious when that movement is performed. Memories as calculable positions in time are only snapshots, which human scientific logic has reduced movement into (CM, 6). Brian Massumi has re-defined Bergson’s habitual memory in the term proprioception. He describes proprioception as that which “folds tactility into the body, enveloping the skin’s contact with the external world in a dimension of medium depth: between epidermis and viscera” (2002, 58). This basic example of what is called proprioception serves to illustrate that the role of the intellect is predisposed towards action, and towards making the body ready to behave in
ways that are required of it based on the external environment such as the architectural
dimensions of the street.

As a methodology, intuition seeks to understand matter internally, as opposed to
observing it from the outskirts of its form, by studying it from various angles. This
internal understanding is achieved through intuition; the realization that matter has
duration and movement in it just as humans do. Bergson writes that intuition, as inner
duration, "is the continuous life of a memory which prolongs the past into the present"
(CM, 150). As a method, intuition means to look at the memories accumulated and
continually changed in matter, so that matter is not viewed as an instant in time, but as
the movement of time which contains memory. Mobility is problematic because it
renders an object useless. By looking at matter as immobile, which is the most common
form of thinking according to Bergson, means to look to matter only as an utilizable
resource (CM, 154). The addition of the bottom cone is a necessary requirement to see
that the movement of memory occurs beyond the point of actualization, into the cone of
non-living matter. During this point of actualization we have differentiation, where one
the side of the living-matter (the perceiving human) we have action, and on the side of
the object-matter cone we have conservation. Given that our human bodies are also
material objects, the same splitting and differentiation occurs simultaneously in the
opposite direction; the human body conserves the beneficiary action in its habitual
memory, while the object-matter on the other side of the hourglass experiences action
through its ability to cause change.
Intuition as a method instructs that we make a *turn to experience* (MM, 241). This is a turn out of habit in which the act of perceiving is lost because it is an instant satisfaction of a need. In habit, we lose the awareness of how a perception or image of matter (which belongs to the object) continues through to an action which is needed. This continuity can be restored by following the movement and bringing the movement back out of habit. The message of the method of intuition consists “in short, in distinguishing the point of view of customary or useful knowledge from that of true knowledge” (MM, 243). If all of this can be said to happen on the side of the cone of the perceiving, living matter, what occurs on the side of the cone of the perceived object?

It should not only be the case that matter is utilized as an agent that asks questions; in other words, that the plane of actualization is one that sparks the movement of re-membering and perceiving in order to continue the becoming of Being. The effect of the plane of actualization is that the actions performed by human beings also trigger a movement of memory into the object, extending its history and its essence. The material realm should then also be seen beyond the ‘useful knowledge’ which seems customary, into true knowledge, which is its varying capacity over time. The image of the hourglass is my intention to continue the Bergsonian project of intuition by extending the metaphysical implications of it beyond the context of Biology and Science and into more diverse approaches towards matter; contemporary theories of materialism and technologies, which leads into one of the work of one of the theorists who re-initiated a great discussion about matter over the last several decades, namely Bruno Latour.
Chapter Three - Latour

If we were to take the movement of memory though the hourglass; the movement of history through different matters which act based on this movement, we would have a trace or a historical account of matter. We can imagine that the tag sown into a piece of clothing would become very complex and thick, stretching the composition of a material beyond mere cotton or polyester or the political name of a geographic location where it was made. This tag which would be the written account of the movement of memory through an object would also be constantly incomplete because, as we have learned from Bergson, the movement of memory through matter never stops. It would also mean that the metaphorical tag sown on an object which describes its history and composition would also be incomplete because the object’s memory occurs at various levels of the cone, all of which are unique events through which the object progressed, having accumulated the knowledge of the previous events.

To study social networks, as they are typically known, means to miss the central tenet of Actor-Network-Theory (ANT). ANT is a methodology that instructs in how to trace and describe the movement of time, which in its movement becomes memory. It differs from the method of intuition in that the movement of time in ANT places significantly more emphasis on the geographic value in which time is spatially embodied, and is more concerned with the transformation of each surface, than just the transfer of memory through them. Although social networks such as internet social networks, social movement organizations, administrative networks or other examples of human collectives
profusely rely on linkages between different actors, the actors that are normally considered in typical studies of a social network are not the types of actors that ANT would study. Actor-Network-Theory is not a theory about how actors behave in networks or how entire networks are formed by actors. Instead it is a methodology in which a theorist looks at the way that different actors form connections and the influences each connection has on the next path that an actor may take. This differs greatly from studying “actors in a network” because the network that ANT looks at is not pre-defined, and a social network does not have to be about people or matter, it is about actors which could be anything that has the affective ability to cause change. There are no agents within a material structure; there are agents, both living and non-living material ones, who form the structure. A network is the trail an actor or agent forges as it moves, touching, meeting, bypassing and linking to other actors along the way and is a personal history so to speak. There is never a network that exists by itself with actors present as nodes that support it. The network requires movement of the actors which must connect in order to exist. A network cannot exist without the act of a moving actor that makes the network, and it can rightly be said that there is work required to build the net.

ANT as a method seeks to restore the precision of the science in ‘social science:’ “the solutions suggested by a shrinking definition of the social has in many ways adulterated what was productive and scientific in them” (Latour 2005, 21). ANT does not allow for smooth transfers of social theories from one case study to another, but requires that the social scientist retrace the associations between the actors being studied from scratch each and every single time. This is done in order to avoid the inaccurate
transfer of grand social narratives which may not be replicated in each instant, but which when applied, may cause agents being studied to be slotted into preconceived domains, shrinking the field of acceptable ‘social’ behaviour. The aim of ANT is to restore agency back to the agents being studied, and to leave our social, theoretical speculations aside. Latour warns that “the only thing that can stop the enquiry is the decision by analysts to choose among these moves the ones that they deem more reasonable” (Latour 2005, 57), through which he pronounces the mistake of analytic ‘picture’ taking of these movements, which determines which instances of memory will serve as utilitarian for future actions.

The reason why ANT was chosen in this thesis as a complementary methodology to intuition, is due to its flattening effect on the hierarchy of matter, in which no type of matters are emphasized as having more capability to influence the transformation which occurs between them. In his description of a dialog between a graduate student and a professor, Latour describes the method of ANT by beginning that as a method, “it isn’t applicable to anything” (2005, 141). The application of a method to a subject under scrutiny would mean placing an overarching analytical agenda within which the subject would be allowed to either serve a utilitarian function or to embody a social value, and not even that choice would be given to it to make. Simply because a network has been formed and exists, such as an industry’s production network, an organization’s database network, an environmental social network or a personal friendship network formed on a social networking website, does not mean that ANT is present as a theory or can be applied. As a methodology, ANT is a conscious decision to make an account of the links
between actors without prior interpretation or assumption. The problem of ‘critical or ‘interpretive’ research is that it seeks to acknowledge its subjectivity and acknowledges a possible objective reality which is also assumed to be out of grasp to true human knowledge, in contrast to our subjectivity. For Latour, researchers are allowed to have an objective viewpoint, as long as it is a viewpoint of an actual object. “In what way is this proof of your ‘subjective limits?’ the professor asks of the student when discussing the scenario of having a panoramic view of a landscape perched between a road, road signs, peaks and valleys. He continues, “if you can have many points of view on a statue, it’s because the statue itself is in three-dimensions and allows you, yes, allows you to move around it” (Latour 2005, 145, italics original). The multiplicity which was always surrounding the point of actualization of an object with the perceiving person in Bergson’s method of intuition also appears in ANT. The object contains many possibilities of perceiving, but the movement of time between the perceiver and the object is determined by what previous memory the object bids the perceiver to recall. We should remember from Bergson that the object has the power to put a question to the perceiver.

One of fundamental keys to traversing through a landscape of objects with Bruno Latour is to grasp his insistence on the elimination of the concept of Nature which he advocates in Politics of Nature (2004). The epistemological insistence on an objective reality that exists within the material realm has created the illusion that everything gathered under the concept of Nature, including the physical, astronomical and biological realities of matter, is singular and unchanging in its ability to act. Within this consistent
reality, the political and social sciences have organized human concepts which may
circulate within the material structures of Nature, without being affected by its physics
and chemistry. The physics and chemistry were separated into the Sciences which would
not be politically and socially attached, but would gather facts about the way in which
natural matter operates, so that humans can live in conjunction with Nature (Latour,
2004).

At the root of this division between objective matter and subjective humans, lies
the debate of social constructivism and realism or materialism. Social constructivists
maintain that they are immune to the objective reality because it cannot certainly be
known and so it must be adjustable to the multiple social interpretations that human
subjects are capable of giving it. The realists and materialists believe that the external
material reality is indifferent to humans and necessarily gives us form through its
objectivity (Latour 2004, 54). In both cases the use of the ‘natural’ terminology to depict
what comprises matter and the sciences that study it, is a way to circumvent problematic
everyday social questions from the political realm and to place them out of sight. If
anything to do with ethics, morals and values can be maintained to stay in the social
realm, separate from the material structures in which we either live or which we socially
construct, then the way the material world, technological sphere, medicine, biology and
physics and operate is outside of politics. Nature and ‘the socially constructed reality’ or
a reality of perceptions cannot simply co-exist as long as the division between them is
maintained. For this reason Latour insists that the subject-object divide must be
eliminated from our metaphysical vocabulary.
Giving Matter its Agency Back

Bruno Latour admits he made a big mistake in referring to the ‘constructed’ nature of things (2004, 27). The challenge to presenting something as constructed, as built or assembled where there was no construction before, means, to oppose the ‘reality’ of things. Latour laments that the term ‘constructivism,’ has unfortunately been associated with social constructivism, and deconstruction, whereas for him, social structures rest more so on physical material constructions then they do on the constructivist nature of language. The same type of plead is present in his most recent short article entitled Can We Get Our Materialism Back Please? (2007) The topic is similar to those that appeared before it: Latour wishes to redefine terms, and by doing so confuses the reader to which version of the term he is referring; the old version or his own new definition? In Can We Get Our Materialism Back Please? Latour requests that materialism should be considered without the idealist connotations. Matter, with its ‘thingly’ physicality should not be a way of describing human morals or ethics. This type of materialism treats the material realm as a conductor or intermediary; a thing that merely transfers human concepts. Constructivism and materialism, or alternatively idealism and realism become two sides of the same coin. Latour writes that although it is beneficial that living matter (embodiment) and non-living matter has returned to the foreground as an important feature to be studied, this materialism “now looks so idealistic: it takes the idea of what things in themselves should be – that is primary qualities – and then never stops gawking at the miracle that makes them ‘resemble’ their
geometrical reproduction in drawings" (Latour 2007, 139). The conceptual and the human come first, followed by the material through which these ideals can be materially embodied and relegated to history. Why would Latour then entitle this short introductory essay as a materialism that ‘we’ deserve back? Is materialism something that we once possessed or which defined us?

It is here that the major inconsistency of Latour’s writing appears to be painfully emerging. While at times Latour claims that studying matter should occur as an act in itself to give due account in to the essence of matter itself, at other times, he says that the understanding of this essence is necessary in order to see the ‘social’ realm operates thanks to matter. I wish to briefly describe the two Latours and how his inconsistencies later convene with an ultimate purpose, in order to clarify Latour’s which addresses both the ‘social’ value in matter and a material value of matter, alternating between them as if they were the same value. Indeed they can be understood as the same value, given that a theoretical shifting occurs, in which the material realm is seen as the central intermediary of values allowing for a ‘social’ sphere and in essence being the social sphere. The need for this shifting is similar to the problem that Bergson addresses by arguing against perception as self-existing phenomenon, lacking in material grounding.

In order to clarify why sometimes Latour appears to intermingle the social and material values, I will first begin with Latour’s first project. The problem which the first Latour addresses is that materialism begins to resemble social constructivism or idealism too closely. He wishes to give matter its full physical examination not in order to understand its utility or its role as carrier of human values. This idealist materialism does
injustice to the very word and produces a thin concept of matter as ‘object,’ which in its very term emphasizes the utilitarian function of matter. An alternative materialism will describe ‘things’ instead of ‘objects,’ by giving a rich description that does not confuse the utility and reproduction of objects that match a design with the physical production of objects (Latour 2007, 140). Just as Latour wishes to reappropriate constructivism to his own version, he has the same objective for the term materialism. One of the effects of his wish for a new materialism is that objects would become confusing again, they would be muddied or opaque (2007, 141). His wish is for objects to be seen as unpredictable and therefore creative in unforeseen ways.

The problem with the idealistic materialism’s return to the foreground in theory can be seen in the way matter has in its essence a purpose of supplementing human inadequacies which can most clearly be seen in the branch of theory called post-humanism. Here, humans are no longer the agents who act on matter but are co-constituted and co-evolve with matter. While this view is promising in the re-distribution of affect and causality it studies matter not for what it is, but for their utility towards humans. While matter is already-there and necessary for the formation of human perceptions, matter is not full of human meaning, nor serves to give humans meaning, but has a spontaneity of its own. What happens when we take matter to be the articulation of a social sphere, such as for example a garbage depot for the shameful failure of over-consumption and give the garbage depot this exact translation over and over. The means of how the garbage depot formed and how it will be further recycled, are lost within a metaphor that gives neither blame nor power to any particular agent. Whereas if we trace
the connection between the production, distribution, consumption and re-use of goods, new pockets of agency can emerge.

The second Latour proposes actor-network-theory and provides a way of understanding what is ‘social’ starting by looking at the elements or actors that form the social sphere and how they are combined. ‘The social’ is a set of links that binds individual elements, it does not exist in itself as an autonomous phenomenon, so that it is not correct to speak of the social’s influence on one or another sub-category of the social, such as technology, human bodies, politics etc. Latour writes that “the claim now is not that the house of facts is really made of the softer material of social ties, but that the soft and superficial links provided by laws, culture, media, beliefs, religions, politics, economics are ‘in reality’ made of the harder stuff” (Latour 2003, 29 italics original). Matter therefore has significance because it serves as the underlying factor through which links are formed which are later determined to be social. Matter mediates the social sphere, and if the social sphere is said to influence the private sphere, or in other words, if the context is said to influence a local occurrence, then we should understand how matter operates as a mediator of the social realm and of contexts.

Latour asks: how does a thing become an object (Latour 2007, 142)? What sort of elements and what actors are necessary for materials to be assembled into something that we give meaning and utility to? Matter should not be studied through text or drawing, but rather by looking at the matter itself, because too often, Latour argues, matter is celebrated for matching or materializing drawings (Latour 2007, 141), meaning the way matter takes shape as or is able to execute a human idea. The concern regarding matter
and the things that matter is made of is not that it changes experience or the outcomes of experience, but the conditions of experience, facilitating or impeding what experiences may or may not actualize, as well as in what ways these experiences will be understood. Experience as a term is broad and can contain many types of experiences, but a study of experience always asks questions of the extent of human agency, or the restriction of this agency through the role of matter. Since antiquity, matter has not only served certain utilitarian purposes as technology, but it has always been seen as a physical extension of the meanings and complexity of social relations. Perhaps the clearest example of this is Latour’s description of the mediating role that a door hinge serves in negotiation of several socially constructed concepts.

In his essay Where Are the Missing Masses? Latour describes at length the behaviours that non-living masses prescribe onto humans. The anthropomorphism associated with technology can be separated into anthropos (that which gives humans shape) and morphos (that which has human shapes). His example is the door with a hinge which replaces the hole in the wall and the bellhop or door groom and which prescribes in return a behaviour requiring that the door be opened and closed if one wishes to enter or leave (Latour 1994, 235). The door hinge transforms a wall into a hole with an opening which can be transformed into a space. The door hinge closes the door whether or not we remember, nor does our body any longer have to remember, for the door becomes inscribed as a natural part of being. However, people are not the sole agents who can delegate human desires and constructs onto technologies. Technologies have always extended their own essences back onto people, whether through their
material or characteristic limitations, and the properties that a technology allows, instill certain rules or possibilities back to the user. What occurs when the door jams shut, squeaks, or when the hinge is in need of a little greasing? Latour argues that the behaviour imposed onto humans by technologies is prescriptive; meaning that technology itself has the agency to prescribe obligations to people, or at least to force a change in behaviour. This view again is 'social' centered and does not circumvent the subject-object dichotomy.

Can the two Latours reconvene? The first Latour who wished to strip materialism of its 'carrier properties' would need to see whether he has anything in common with the second Latour? The second Latour, who wished to use material connections as the substance of what forms 'the social' needs to do likewise. If matter is neither a carrier of human meanings, yet it is the substance of makes 'the social' to which humans clearly belong, then the convergence of the two Latours takes place when we realize that the social should be understood as the sharing of agency between matter and people, instead of a human-centered sphere that is aided in its sustenance by material objects. If the social suddenly comprises both human and non-human mediators then the contradictory elements of Latour's theory are debunked.

If matter is not a carrier that means it is not a mere vessel of information but a vessel of transformation. It is a carrier or a vessel that has an effect, but not because this effect was instilled in its design but because it transformed something because it had the agency to do so. Theorists should stop thinking about matter as a structure, because in structuralism the inevitable direction is always an oppressive one. Either the matter
allows for human agency: it allows the post-human to be realized, at the cost of having
matter serve a utilitarian function (the car allows for an escape from the city, the
computer works as mnemonic aid, the heart pacer is an extension of longevity), or it does
not allow human agency because it is unable or is poorly able to mediate positive human
values and dreams as can be observed in many slogans (pedestrian killed by car; if only
we had more computers; she suffered from hypothermia due to a lack of shelter; the
poorly ventilated building was unsuitable for classroom learning; and best of all, people
are too materialistic). We return to the constructivism or materialism debate; matter is an
extension of socially constructed positive dreams and unfortunate horrors, or it exists
prior to us and allows us to experience these dreams and horrors.

If matter is a structure that has the potential for these social dreams and horrors to
be realized, then it should not make a difference what these matters are made of, since
each node on a material network should be ideally replaceable. However, this is seldom
the case as we can see from this longer excerpt from the discussion between a professor
(P) and a graduate student (S):

P: (Actors who have) simply realized a potential, apart from minor deviations, are not
actors at all: they simply carry the force that comes through them. So, my dear Student,
you have been wasting your time describing people, objects, sites that are nothing, in
effect, but passive intermediaries since they do nothing on their own. Your fieldwork
has been simply wasted. You should have gone directly to your cause.
S: But that’s what a science is for! Just that: finding the hidden structure that explains
the behavior of those agents you thought were doing something but if fact are simply
placeholders for something else.
P: So you are a structuralist! You’ve finally come out of the closet. Placeholders, isn’t
that what you call actors? And you want to do Actor Network Theory at the same time!
That’s stretching the limits of eclecticism pretty far!
S: Why can’t I do both? Certainly if ANT has any scientific content it has to be
structuralist.
P: Have you realized that there is the word ‘actor’ in actor-network? Can you tell me what sort of action a placeholder does in a structuralist explanation?

S: That’s easy, it fulfills a function. This is what is so great about structuralism, if I have understood it correctly. Any other agent in the same position would be forced to do the same.

P: So a placeholder, by definition, is entirely substitutable by any other?

S: Yes, that’s what I am saying.

P: But that’s also what is so implausible and what makes it radically incompatible with ANT. In my vocabulary, an actor that makes no difference is not an actor at all. An actor, if words have any meaning, is exactly what is not substitutable. It’s a unique event, totally irreducible to any other, except, that is, if you render one commensurable with another one by some process of standardization, but even that requires a third actor, a third event (Latour 2005, 153, italics original).

Latour’s very unfortunate term actor-network awakens the phenomenological discussion of subject within the structure, whereas this is not the purpose of ANT. The point is that structure is not limiting, and the idea of a subject within a material milieu is not made to be limiting either and that ‘to make act’ or to ‘cause action’ is not to force structure, but rather to allow for movement and to allow for existence. A sociology that begins with a structure did no allow us to “connect an actor to what made it act, without being accused of ‘dominating,’ ‘limiting,’ or ‘enslaving’ it. This is no longer the case. The more attachments it has, the more it exists. And the more mediators there are the better” (Latour 2005, 217). Treating the actors on a flat surface is similar to the way that Bergson treats matter and perception. Only by recognizing that these are different scales of similar properties, can we give equal weight to both matter and perception. The link between matter and perception becomes fruitful and positive, and the more links and transitions between these, the richer the experience of affect becomes.
Translation of Matter

A methodological approach to studying matter or to understanding human interaction with matter should be looked at on a scale of good or bad construction, not as the choice between realism and constructivism. Deconstruction or constructivism and social constructivism need to part ways as terms (Latour 2003, 41), because social constructivism must be seen not as the human lens through which matter is seen, but as the interplay of human and non-human matters. There is nonetheless a construction or a 'putting together' that takes place within every object, and this putting together never terminates. According to Latour, there can be thick and thin matters; thick or thin in meanings, numerous layers and number of actors which comprise them (Latour 2007, 140) as well as number of questions and answers posed. Unlike other social explanations, ANT as a theory of movement, seeks to change research methodologies from ones which stabilize or find a common stable element from their objects, and instead to understand what changes and how. The aim of theory is not to transport theories to new examples, or to find proof of old social orders in new examples. The aim of theory should be to show how translation, or the reciprocity of humans and non-humans occurs or any combination of matter occurs. Why do certain things become associated with others? Latour says that all the actors do something (2005, 128), and because of this they are not intermediaries, which transport, but mediators, which transport and change what they are transporting along the way. The change which occurs during translation is not based on the property of physics where each action causes an
equal and opposite reaction. Translation is the "transformation of a major effort into a minor one" (Latour 1994, 229), and is therefore an easing of burden. Translation is also a connection that transports transformations and is a relation between different actors which does not transport causality but causes two actors, or two matters to coexist (Latour 2005, 108). Matter as an actor exists because it is allowed to coexist with other matters by transforming into something more. Two matters are more together during the moment of translation than they are if they are separated, even though such a separation of one matter from others is unrealistic.

I compare translation to intuition because translation can be seen as Bergson's moment of actualization during which two matters brushed and evoked questions, and by posing those questions to each other they evoked previous memories which by translating into action-conservation could keep time moving. Yet translation does not make time as a third, external agent move, and it is not a propelling or a production of the movement of time as memory. Instead, Latour's translation is the constant reconstitution and production of new configurations of space, in which efforts and burdens are constantly shifting. In intuition there was a new production of time which allows memory to continue by giving time new duration; in translation we also have this creation of memory, but there is also a shifting of the spatial arrangement, a new way of memory to move through space. This production creates new affect or new conditions for experience. Nonhuman matters are "the hidden and despised social masses who make up our morality" (Latour 1994, 227). They are also the "scandal at the heart of an assembly that carries on a discussion requiring a judgment brought in common" (2004, 54). To
imagine what a material artifact does, does not mean to anthropomorphize, but to
"imagine what other humans or other non-humans would have to do were this character
not present. This imaginary substitution exactly sizes up the role, or function of this little
center" (1994, 229). Matter then acts as a condenser of human morality. A thick
description of matter is one which would account for the contradictory moral desires
which needed to be considered in its design and the reward for studying closely the many
nuances of matter is that these contradictions may be revealed. To follow Latour’s
method of translation then means to trace a thick account by looking at each piece of the
artifact as an ‘answer to an objection’ (Latour 1994, 247). The objection can either come
from the human or nonhuman object, but it will invariably mean that some course of
action needed to take place before the object came to be perceived as it is now.

Bergson’s matter poses a question to the human material body, stimulates the
actualization, which is the virtual assembly of memory, and therefore the continuation of
time, all because matter solicited it into action (Bergson MM, 41). Latour’s matter on the
other hand answers an objection; a human objection to act within certain prescribed ways.
Latour argues that a fundamental problem between natural and social sciences is that the
first is associated with one right answer and one interpretation, while the second is full of
different interpretations (Latour 2005, 118). Shifting from social interactions to material
interactions does not mean shifting from multiplicity to a single unity. It is because
social scientists perceive that matter operates within the social sphere, that when the
human interpretation is removed that the material artifact remains without variety. Yet
each actor, whether human or non-human can choose to adhere to the possibilities that

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the milieu has prescribed or to choose a different path. This is the reason why matter often fails, why things break down, as well as why people do not wish to abide by certain morals or pre-determined agendas.

The 'answers to objections' are the way that humans and non-humans interplay in their negotiations and in the way they challenge each other’s agencies. If a human objects to the moral obligation of guarding the possessions in one’s home by use of a door with a key, a different answer is created, by delegating this responsibility to a door on a spring which will shut automatically. What we may find is that this door may itself object to the speed at which it closes and the automatic piston may accelerate the door and slam it shut much too quickly. If this automatic speed is objected to by a person who wants to move from her apartment on the first day of the month, carrying boxes back and forth through the door, she will translate her objection into yet another matter, which will serve to piece together a very complex picture of a door with an automatic piston that is released of its automatic activity through a wooden wedge. Translation never stops, and one day this door may acquire a lock button, to permanently integrate a stopping system right into the door in order to release the wooden wedge of its burden, and the box mover of hers.

The temporal element becomes less important than the physical touch, where the way that agents form networks and renew them each time they come into contact, is more significant than the memory which gets retained. Latour outlines this aspect of ANT in his three prescriptions for understanding matter. First the physical interaction of objects does not form a context in which other objects are viewed, as this would maintain the
subject-object divide. The arrangement of matter is not a structure within which other agents can act, and whereby non-living matter gets transformed into a passive material realm for living, human matters. The arrangement of matter includes the constant interaction between living and non-living matters, which creates an ever renewing space of matter as a forming structure and matter as the action which creates structure. The idea of a local actor acting within a global context is depleted, and so is the idea of space as a construct. There is not a spatial dimension within which matter exists, but matter allows spaces to be produced and constantly reconfigured. This productive and mobile nature of material connections leads to demystify the inaccurate claim that matter exists within a global context or a social explanation. If suddenly an explanation of matter shifts from being about its local physicality and interactionism or in other words, if matter is suddenly delocalized, it does not retreat into a non-place, a global context or global abstract explanation, but rather is re-localized to another place.

The second major methodological instruction from ANT is to ‘redistribute the local’ when evaluating what matter consists of (Latour 2005, 191). The occurrence of a local event, which is a translation between different matters, whether two human actors or a human and non-human actors, in a given space and time is dependent, physically on local events elsewhere, and those local events are displaced in time, meaning that they depend on other previous events. The other local events are also often invisible because they rely on factors that are geographically removed. They are also very different in character and have different leverages with which to act, meaning that they change in different ways. We therefore do not have interactions between different subjects, but
have inter-objective interactions. Latour therefore warns that “when we talk about an
‘overarching framework,’ ‘pillars,’ ‘infrastructure,’ ‘frame,’ we use loosely the technical
terms borrowed from architecture, metallurgy and cinema. Why not take literally what is
meant for an action to frame, to structure, or to localize another” (Latour 2005, 195)? If
physical structures exist for experiences and events to occur in, what or who is the subject
that acts within these concrete material structures?

Latour, like Bergson, adopts the view that humans have a reciprocal relationships
with matter in that we gather from matter the knowledge of what to do as creative beings
2005, 213). For Latour, subjects depend on the interplay of other agents for their
existence, in effect referring to what is called distributed cognition. This second element
of Latour’s methodology touches on the idea that affect comes from the stimulation of an
external material milieu which is not binding to its structure, but offers the possibility of
creativity. Latour is aware that this creates the unfortunate controversy that while there is
no local-global or object-subject divide, we suddenly have actors drawing affect from an
‘outside’ (Latour 2005, 215). This discussion circles back to Bergson’s debate about the
possible and the real, where the possible is not a deduction from the real, but an addition
to it. Therefore, what humans as actors are capable of affecting, is not a mere reduction
of that which a material structure has allowed, but a production from the coming together
of matters, which results in a creative addition. Humans and non-humans, to use Latour’s
language, do not draw on one another to be creative outside of this arrangement in some
subjective and social sphere, but the newness and creativity occurs in the space between
them.
The two abstractive methodological moves so far are summarized by Latour as the transfer of structure unto tiny spaces of loci and the transformation of spaces of action, as the endpoint for some other actions, where “each site becomes the result of the action at a distance of some other agency” (Latour 2005, 218). This act of flattening the surface relies on a third act – that of the movement of mediators which connects the various loci. A mediator which associates itself with various local points contains within itself the message and the contradiction of both those points, and stores in itself their histories. But as it stores them it transforms them, contributing its own affectivity.
Chapter Four - Manufactured Landscapes

*M Manufactured Landscapes*, a Canadian documentary film directed by Jennifer Baichwal (2006), is narrated by and features the work of photographer Edward Burtynsky and encompasses the contextualization of still photographs in a film. In this documentary, Toronto-based Baichwal follows Burtynsky during several photographic sessions, particularly to China and Bangladesh as well as locally in Ontario, and also integrates his large-size images which portray landscapes that are being upturned in an industrial process. Yet the subject of the film that is particularly pertinent is neither Burtynsky’s story as a photographer, nor any individual image nor landscape, but the process of production of all of these individually, and the interplay between all of them together, or in other words, their movements and their durations. Like perceptions that are a part of the movement of memories through matter, the images are central but miniscule in proportion to the efforts with which they were made, and the actors required in this process.

*M Manufactured Landscapes* portrays the movement of different components of products, their processing and compilation, and also shows the movement of materials as they are excavated, turned into parts, compiled, shipped, used up, transported to waste sites, disassembled, recycled and reused. This movement significantly transforms the landscape at every stage of the cycle that the object touches. The object is also transformed, resulting in an exposé of the mark that both the object and the environment leave on each other. I will be staying away from exploring the various other and
significant themes which the film tries to expose, the popular or central theme in my opinion being the dramatic impact that our civilizations leave on the quality of the visual and environmental aspects of landscape in the pursuit of material objects that have been erased of their true memory, and come to posses a new one through commodity marketing and fetishism. Instead, this chapter encompasses a discussion of what aspects of Bergson’s and Latour’s methodologies can be found within this documentary and its themes and is supported by André Bazin’s description of the long take and of the function of cinema in the portrayal of time in matter.

Landscape is a good metaphor to use when trying to describe how a process or a transformation is visually obscured, and what remains to be seen is only that which is visible on the surface during the temporal present moment. A snapshot of a landscape at a particular moment in time would omit memory-based and continuous information about how the landscape arrived to this point. The layers of the soil, their sedimentation, erosion and metamorphosis would not be seen. Most importantly, the actors which shape the land would not be seen as having contributed in the creation of the landscape, and their interactionist nature would be hidden. The snapshot would freeze the landscape and create an assessment of it as a still surface, one that is neutralized and therefore as one that is not considered as significant.

The themes of the documentary are not only shown through the substance of the photographs such as quarries, mines, cargo ships, displaced communities or dam building, but also through the way the documentary was made, illustrating the idea that experiences and entities arise from interactions between different types of material
surfaces. As a medium, film carries the means to assemble images in particular ways which can serve to exemplify a certain relationship that images have to one another, and of the role single images have to the duration of the film as an image that has duration. The expansion that occurs when Burtynsky’s photographs are contextualized in the duration of the film is true to Burtynsky’s message that matter which appears as objects of utility or fetishized commodities are part of a larger complicated process.

Manufactured Landscapes opens with a long take that lasts approximately eight minutes, a duration which feels awkwardly unbroken and persistent. The tracking shot exposes the imagery of a Chinese production factory that is at least the size of two or three football fields, within which hundreds of workstations are lined up, each showing how people work together with machines to produce artifacts for consumption, emphasizing the continuous duration of this cycle within Capitalist culture. The opening sequence of the film and its cinematic correlation to phenomenological inter-objectivity articulates André Bazin’s interpretation of the long take, and the permissibility of the film maker to allow the objects to have their own expression; their own duration. In opposition to the effects of montage, the long take has left the object of the film unadorned. An object that becomes subjected to the technique of montage, is made to be predictable and “rules out the ambiguity of expression” (Bazin, 1994, 36). As part of portraying the moving unity of her subjects/objects, Baichwal is able to capture the duration of the space and the significance of the moment in her long opening sequence, precisely because the uninterrupted nature of the shot contains the continuative nature of intuition which is sympathetic and tries to be at-one with what it seeks to observe. If the
essence of intuition and translation are Bergson’s and Latour’s respective attempt to find the essence of matter through a moving duration, then cinematically, the opening sequence of Manufactured Landscapes adheres to what Bazin calls a “question of respect for the special unity of an event at the moment when to split it up would change it from something real into something imaginary” (Bazin 1994, 50). The long take has the cinematic equivalence to the methodologies which these two theorists propose, as being the most apt to giving matter its own ‘voice.’ The presences of the workers, objects, artifacts and the apparatus of the factory floor rightly remain together within one shot, giving the effect of the indivisibility of these elements in the construction of what is materially real in this film.

What would otherwise have become merely visually real, achieving a natural motion due to the effects of montage, may in reality be physically unattainable. The desire for a story, whether constructivist or idealist is satiated by montage, which Bazin calls the “abstract creator of meaning (that) preserves the state of unreality demanded by the spectacle” (Bazin 1994, 45). Montage makes viewers focus on the story; a narrative which has as its intent to achieve something, whereas a long take draws the viewer’s attention to the subjects of the film (Bazin 1994, 45), such as the opening shot of this documentary, which becomes ontologically in tune with its subject matter because its concern is with showing non-politicized matter and allowing both its own spontaneous expression and ours, as viewers, spontaneous construal. Baichwal prefers to make films about artists’ work, as opposed to the artists themselves (Baichwal 2008, 40), aligning her in intentionality with Burtynsky who wishes not to confuse the aesthetic of the objects
themselves, with a forced agenda that could have accompanied them through interpretation. The long take is itself a document of a story; a document of an event and a process, in opposition to the effect that montage would have on the event, which would result in a story of a story, or a visual interpretation (Bazin 1994, 46). In film, the respect for the object can be gained through exclusion of montage, by the real movement of people and objects who are caught in one shot and are given duration through *relating to each other*, and not by the forced movement through the analytic nature of editing.

Although André Bazin’s interpretation of cinema is that its very strength is in its ability to closely portray the natural duration of objective reality, making him a key proponent of realist cinema, this interpretation of the long take as a cinematic technique does not necessarily adhere to the type of realism that Bergson and Latour criticize. Bergson’s intuition and Latour’s translation and ANT are the methodological equivalents of the ability of film to grasp matter for matter’s sake. The difference between realism and idealism for Bergson was that the realists start their deliberations at the macro scale of the universe, acknowledging that objects have their own duration and do not revolve around a single perceiving body, but none the less, they posit that the only possible insight into the nature of the universe is through the perceiving body, which in turn creates a human dependency on the material real in which matter is judged for its utilitarian value, as that which ‘gives’ perceptions by providing form and space in which to move and, mediates (not intermediates) values. The idealists begin their arguments the other way around, beginning at the centre, and projecting the existence of matter as something originating from the perceiving body. Realism is a system of images in which
each image has an undetermined value, subject to all the vicissitudes of a central image, which is the mind (Bergson MM, 14-15). The long take, as it appears on the screen, is not just the result of the objective reality, but the result of what is gathered and released through film; cinematic realism, which is not graspable with the naked eye.

Vivian Sobchack writes that film is not only an object to be seen, but is also a subject that does the viewing, because it sees the objective world and presents it to the audience (Sobchack 1994, 95). It is not only a reproduction, but it does the reproducing of the images which it has seen; those that have been gathered as part of it. Sobchack writes that the film, prior to its electronic or digital state, “made visible for the very first time not just the objective world, but the very structure and process of subjective, embodied vision” and also demonstrated the “dialectical, and social nature of our own subjective vision” (Sobchack 1994, 96). If film is revelatory; the “cinematic makes time visibly heterogeneous” (Sobchack 1994, 97) as Sobchack writes, then Manufactured Landscapes as a film particularly contains several revelations. Manufactured Landscapes also presents its own ‘production’ story by portraying how its ‘frozen parts’ were made, thereby reproducing its past to the audience, but doing it in the present tense. The film is a gathering of the photographs which are literally the subject matter of the film, and it is also an expansion, because the film treats the photographs as its own perceptions. The film operates the way human bodies do, in that what we perceive is always triggering an expansion of what we see in the context of what we are; the movement of time.

Throughout Manufactured Landscapes, the images appeared as intense surprises with their vibrant colours, and because of the ability of Burtynsky to capture such a
process in such amazing stillness. In vision, the body trusts sight to navigate through the experience of perception, and the body is put into a passive autopilot state, where the perceptive moment of actualization feels immaterial and the movement of time; the need to virtually reach for the moments of memory, is so automatic, that it is not recognized. Long takes are disproportionally infrequent to the amount of films that incorporate montage, having the effect that the viewer's body comes back up from autopilot as it engages with the duration that is presented on the screen. What has become habitually common is not movement and continuity, but truncation and stitching together of images and the inauguration of Manufactured Landscapes with a long take is an invitation to recognize that matter has its own duration, apart from a perceived duration. This documentary continues to articulate the essence of matter's own duration particularly well, not only in the opening shot, but well into the film, because it shows how the stills are contextualized within the timeframe of the story of the documentary as frozen instances.

This contextualization of stillness within movement in the context of the film can be exemplary of the contextualization of human experiences, which are usually associated with a perceptual and therefore de-materialized process, within human bodily experiences. The performative context of human embodiment is necessarily embedded in an interaction between a sensory physical body and its milieu, a concept that weighs heavily within the works of Henri Bergson and Bruno Latour as we have seen in previous chapters. The neutralization or non-acknowledgment of the material body as an actor in the process of perceiving and 'experiencing' is proprioceptive, the result of what Bergson
had described as the habitual memory, which gets stored within matter for future purposes. The singular image is a dense concentration of many processes that occur at the same time. Because of this, I find it significant that Burtynsky’s photographs are explored though a film, and that the process of creating photographs or still images needs to be exposed, just as Burtynsky exposes the process of creating products.

The cinematic experience of being exposed to Baichwal’s film, in opposition to Burtynsky’s photographs on their own, is that the film acts as that which fills the visual space between the gaps of pure perception of the photographic images, and opens the viewer up to the duration of the subject matter. Merleau-Ponty references Bergson when he writes that during perception the speed of the eye leaves gaps in impression which must be filled up with memory (Merleau-Ponty 2006, 22). It is not that viewing photographs requires only pure perception, while film requires pure perception and the use of memory as Bergson described. Both the still images and film are perceived with the automatic benefit of memory which allows an actual perception to form.

**The Image of the Matter**

Although the medium of film may pose a limitation on the ability to take the time to view a large-scale photograph at length, Baichwal is able to present us with several of Burtynsky’s images from his collections. The photographs are immensely beautiful. Each photograph is the possibility of an encounter with the significance of matter;
something like a primordial introduction between two subjects who have been writing letters but have never previously met. The first of three aesthetic pleasures comes from seeing the rawness of the matter itself and it appears that in each image the material world is somehow stripped down of the crust we have been used to seeing, to show its vibrant colour, its luster and its scale. This becomes very apparent in most of the images that contain the themes of action (production) and conservation (recycling), such as the images of quarries, urban mines and ships, where what is exposed are the processes of time on the geology of land which shows the incredible colours of the earth, the process of time on various minerals in the form of rust, and the process of time which lends Burtynsky the incredible light with which to capture it all. I felt no guilt marveling in the beauty of colours, the shapes of the objects, the awkward contradictory geometries which formed due to human intervention. There is a multiplicity inherent to every object, not by the ‘interpretive flexibility’ of their utility (Latour 2005, 116), but because they are not only multiple for us, but inherently multiple in themselves. If one of the points of view which material things themselves possess is a dimension of aesthetic, then to understand matter through intuition of through ANT is to appreciate that aspect of their multiplicity.

Although humans are present in several of the images, the majority of the images shown during Manufactured Landscapes are devoid of human beings, but not necessarily devoid of human morals and ethics, nor the actions through which these are manifested. A second pleasure therefore comes from seeing these images as not only the mediators of the beauty of matter, but as matter’s mockery of human-made concepts of time. By these ‘human concepts of time,’ I refer to the way that the images expose the abstractness of
the different levels of time that society is said to live at, such as the postmodern age, the age of post-humanism or the information age. Burtynsky's images evoke an industrial-age feel, where even if we do create abstract names for time, the material process of time underlies them all. There is a third pleasure, although it is one that is more controversial than the first two. Seeing these images gave me the feeling of being clued in to a 'social conversation' that has been going on without me, yet in a way, it is the matter itself which as it appears in the photographs, asks the question; will you act or will you not?

Feeling pleasure in light of suffering is not outright contradictory. While a human subject feels suffering they are in a compromised position because they become someone's, or something else's object, but at the same time, this allows for sympathy towards other, material objectivities: "the body-subject 'suffers' a diminution of subjectivity and, in this diminution, comes to experience – within subjectivity – an increased awareness of what it is to be a material object" (Sobchack 2004, 288, italics original). Bergson calls the very method of intuition "the sympathy by which one is transported into the interior of an object in order to coincide with what there is unique and consequently inexpressible in it" (Bergson CM, 135 italics original). The diminution of subjectivity exists because of what Sobchack calls a 'recognition of existential vulnerability,' in which the subject feels that its own subjectivity is threatened. At the same time, a feeling of pleasure, which Sobchack refers to as passion (Sobchack 2004, 290), is a sharing through which the subject becomes decentered and unselfish, in a self-interest kind of way; "being actively devoted to (rather than passively suffering) the embracing and enfolding of the world's – and one's own – objectivity, the body-subject
experiences not a diminution of subjectivity but its sensual and sensible expansion – and an enhanced awareness of what it is to be material” (Sobchack 2004, 290, italics original). It is therefore not only through the multifaceted character of the objects in the photographs and in the film, but also in the multifaceted nature of the viewers emotions that intuition can be grasped.

A Marxist or environmental editorial during the film would be redundant to what the images are saying. This film about matter does not need an additional social commentary, when matter is already the stock-keepers of what constitutes social memory. The ‘social’ in matter is not stagnant, but it shifts through it and Baichwal gives an ANT account by showing and describing. Since matter is not a mere intermediary but a mediator which transfers and transforms, it is no surprise that we are not looking at humans in the picture, we are looking at humans through matter. It is also not surprising that Baichwal has been scorned for portraying such a devastating account of matter and Nature without showing people in the documentary, and for Burtynsky of showing materialism without people (Young 2003, Wilkinson 2006, Schwartzberg 2007). What these critics fail to realize is that their own values are right there in the objects, albeit transformed throughout the film, through several actors on the network of signification.

There is a scene in the documentary which shows how people in Zeguo in Zhejiang Province in China are going through a pile of computer screens, stripping them of valuable metals, giving a whole new meaning to e-waste and computer memory. The recycled computers rest several thousand kilometers away from the actual place where they are used, but they are still useful and significant elsewhere. Their parts will be
disassembled into micro-parts and rebound into new components by human and machine
labour to both affect and be affected by humans elsewhere. Similarly, on the shipwreck
beach in Chittagong, Bangladesh, cargo ships have drifted, been abandoned and stand in
the sand flats of the constant low-tide. Here movement appears to have come to a halt.
Materiality is grounded and put on hold and while the ship stands, it is being taken apart
by people, disassembled, its parts to be put to use, again, elsewhere. The ships
immobility does not imply that it has stopped being part of a cycle and that it has stopped
making a network. Capitalist culture, or the perceived mental element of consumption,
often promotes the quick turnover rate of products; the effect is a perceptual
dissatisfaction. However, little publicity can be seen with regards to the material origins
and resting grounds of the products.

The most poignant aspect of Manufactured Landscapes which stayed with me
was the metaphor of the cargo vessel as vector. The transporter of goods itself needs its
own transporter, that of water. The images of vessels built in shipyards show the
monstrosity of steel and the size of a vessel’s hull out of water and their capacity to be
movers of the physical goods which will actualize with the symbolic components
throughout what appears to be a world which is spotted with universally recognizable
symbolism. Yet the symbols of consumerism are not produced outside of a physical
context either. The values of consumerism are formed because of the physical distance
which objects travel and because of the physical arrangement of owner-factory-matter-
worker through which they travel. Signifiers, ideas, slogans – all these have been moved
and deposited in another surface of meaning, through another physical channel that will
by chance form the ‘surface’ with which someone will collide with these ideas or meanings. The ships portrayed in the documentary are the material vectors though which the goods in our culture are distributed, and because of this a perceptual encounter with them is a point of actualization during which the object relaxes the time contained in it, and we contract all the memories associated with encounters of the object, allowing both a transfer of our humanism into the object, and a new bodily memory and personal memory to be transferred into us.

In a recent interview, Burtynsky describes why his interest in what he describes as ‘residual landscapes’ can also be viewed as ‘secondary landscapes.’ These are the often invisible and forgotten places outside of the city which nonetheless contribute to the city’s volume. Burtynsky finds that for every contribution to the cityscape, there is “an equivalent negative space somewhere out there in a landscape” (quoted in Campbell 2008, 42), a statement that contextualizes his images of landmines and quarries.

Whichever name is chosen, viewing these industrial landscapes as the negative spaces, secondary landscapes or residual landscapes, is an interesting concept that can be understood in terms of both Bergson’s and Latour’s methodologies. In terms of the movement of memories, this negative landscape is distinctly different from Marc Augé’s (1995) non-spaces, which are said to be devoid of purpose, but only a space of transfer. Every place is a place of transfer, but more so, a place of trans-formation. Negative landscapes are ironically excavated and devoid of matter, yet as a landscape they have more human memory stored within them than an unprocessed landscape. Their matter has been physically moved to a location where they are in closer contact with humans on
an everyday level, and human values, such as the valuation of humans in a superior way to matter which is recognized as a utilitarian substance, matter dependency or consumption, move into the space of the matter. The inversion of the matter and the values is not a one-way inversion of human values, because the physical, material substance of the excavated matter allows, in part the formation of these values.

This requires the passage of time. Not only does the matter which is experienced in the positive space of a city, with buildings, structures, and both staple and luxury goods take time to accumulate social meaning, the excavation sites (as negative spaces) also require time for their transformation. While Burtynsky refers to his images of highway overpasses as non-places, they are the transformative agents which move the meanings behind the matter, which makes me pose the question why Burtynksy would associate his work with Augé. These types of places are what sustain that which is perceived; they literally form the matter behind the perception. Burtynsky says that his images try to mediate between the polarized natural and urban landscapes (quoted in Campbell 2008, 42), but that their significance lies not in that these are two poles of a discursively constructed dualism, but that they are two images of the same thing.

The film on the other hand acts as a mediator that exposes us to the human interaction that has been contracted as memory within the materials of the ships, the quarries, the depots, the landfills and highways. This memory is not stagnant but circulates as the materials change their location, form, duration throughout their many manifestations. If we recall that at the point of actualization we have an expansion of memory that moves through the layers of object-matter, and a contraction of memory that
moves through the layers of the my body-matter by rallying up the memories which form my past, both the objects in the film, me as a viewer, and the film itself are fully active agents in that they contribute to the circulation of the memory, the process, history and implications of these objects. Certainly a question may arise asking how the viewer contributes to the objects at the moment in the theatre when the actualization occurs. There exists the possibility of being mobilized in the future when these objects are encountered again, whether in the form of a computer on the desk in my living room, or in the form of an ad that refers to the computer on television, or in the form of a scarps and metals dump outside of a Toronto suburb, and of not walking by them indifferently, but acting with the benefit of intuition. The actuality that happens before while I am still in the theatre watching the film is that each image encountered on the screen becomes a point in time which contributes to my personal circulation of memory through my body, to be used in the future.

The affective and physical body exists just as much outside of itself as it does inside itself in perception of mood, affect, emotion or pain. The body always brushes against other surfaces and through these meetings internalizes its own movements, it learns its own dimensions through this act of proprioception. To think abstractly and to ‘experience’ one must have ‘form’ which is determined by the other ‘forms’ which surround it. The possible therefore comes from the real (Bergson CM, 82), not the other way around. Bergson reflects that reality is “created as something unforeseeable and new, thus it finds that it has from all time been possible, but it is at this precise moment that it begins to have been always possible” (Bergson CM, 82). Similarly, non-human
matter, or objects also go through transformations and active participation with their landscape before they are seen as unitary, and even then they do not stop transforming. As I describe the documentary and relate its subject matter to that of the human body, my main concern is about the recognition of movement and process, which is always contextualized and which allows for the formation of what we perceive as matter. Still images are compared to the privileging of perception of human experience, both of which collapse the processual and continuous aspect of knowing. Experiences which seem to be processes of the mind should not only be considered as stemming from a disembodied experience, much in the same way as a product does not just appear, but is formed though the interaction of many processes. Manufactured Landscapes shows that matter, is always part of a process which relies on a constant renewal of its physical and cultural aspects which together form our humanism. This occurs constantly as the surface of the body meets with the surface of the milieu through which it travels.

This means that both the body and the landscape touch and imprint on one another in a physical way, implying a continuity of body and the significance of process and time for the body. Without this physical imprint occurring there would be no way to attribute the cultural significance to products in the way that our culture does. In other words, there would be no way to have a simulated culture, whether we refer to augmented reality or digitally constructed visual culture without a physical culture, even if that physical culture is itself the result of a construction human meanings and values which have been entrenched in the design of the material. I refer to the ‘product-in-process’ as a body, because it is neither ever a raw material nor a product. A product ‘ready for
consumption' is just a raw material for the creation of another ‘product’ or already a product on its way to be obsolete, to decompose into other raw materials.

If we were to consider that that the human body is an active and performative agent in the production of all experiences, what is the relation between the photographic still image and the disappearance of the human body as a participant in virtual culture? What the still image does is remove the interplay of photographer, the process of taking images, and the process that the object that is being photographed is undergoing. It freezes the active participatory elements which are continually happening, and allows for what appears to be a purely cognitive activity of looking at images to take place. On the other hand, the insertion of the stills into the movement-image is symbolic for the need to portray both the still image as a capture of a single position in time, and the perceptual elements of visual culture as part of the affective body.

Bergson has proposed two types of time; the first is quantitative time that is measured and abstracted, a time associated with calendars and the time it takes to cross space (speed). This time is always analyzed. The second is qualitative time which is felt and defies organization and analysis and instead makes up duration – that which mixes past, present and future (Bergson TFW, 104). The subject matter of this documentary made me aware of the process of the film and of the tempo of its time. To be aware, in some sense means to interrupt, and the interruption of vision is the interruption of habitual memory. Metaphorically, to interrupt proprioception is to acknowledge its work, or to give credit to a body that allows the cognitive element to work, which allows cultural experiences and communication processes to exist.
In the context of the film, what Burtynsky is trying to invoke is movement, landscape and process that are neutralized and embodied within the final products that are consumed. The human body similarly neutralizes certain movements and the spaces and surfaces which allow for that movement (the walls, the air or other tangibles and non-tangible surfaces which contribute to existence) though proprioception, just as certain theories become neutralized and give form and structure to the way research is conducted. Consumptive products, as they appear to us, have neutralized the excavation, transformation and necessity of the landscape in which they form. This may seem contradictory. On the one hand I am arguing to show the product as a continuing process, as opposed to a product as a wholesome entity. On the other hand, it may seem that I am arguing for a body, a unity to be recognized. This is where the definition of the human body is crucial, especially one where the body is not a unity, but as a form which is constantly in process. It is a physical process between the body and things external to the body.

While the body can be seen as fragmented in the way that it constructs meaning, it is still physically wholesome and its time is still continuous, if we consider the way that different senses interact through this body and the way that different times from the past and future contribute to the understanding of the present perceiving moment. Many writers have addressed the problems associated with technology theory which perpetuates a Cartesian dualism and deals only with issues of perception-based experiences associated with technology (Merchant, 1990; Grosz, 1994; Balsamo 1999). At the same time numerous writers praise the post-human phenomenon, in which people are seen as
indistinguishable from their technologies. They believe that the integrated human-technology combination is a blessing for the individual who has increased possibilities for developing their own identity, embracing Capitalism by escaping its inhibiting effects and transcending the barriers of time and space (Mitchell, 2003; Haraway, 1991; Turkle, 1995). However, both views have a utilitarian element associated with the matter which comprises technology. Simply because non-human matter is revitalized as important in human subjectivity, human matter should not be downplayed as incapable of being an agent itself.

The significant point of the film can be understood in the uncertainty of the intended human conversation that occurs through the material medium, as matter serves not only as in intermediary between human’s moral conversations, but contributes its own point of view, or reveals some aspect of its multiplicity which was unforeseen. To employ one of Latour’s suggestions about depicting the material world in appropriate ways, means to abstain from deciding whether an interaction is micro or macro, since the scale of a connection is the achievement of the actors themselves (Latour 2005, 184). It is therefore not contradictory if there appears to be beauty or renewability and a chance for new production associated with the sight of a garbage depot or a rusting, abandoned cargo ship. These instances of contradiction, stop being contradictions if studies of matter do not always begin their inquiries within a larger global or social context. It is not that the decomposing cargo ship is seen within the social context or the conceptual space of a Capitalist injustice that is environmentally ignorant and selfish, but that this ship creates that space at some instances, while it transports the physical goods which
contribute to the Capitalist economy, and it also challenges that space, and builds a new one in another instant, in which the re-use of the ships materials can be useful, or in the case of the photographs, where its aesthetic can be beautiful.

The root of the apparent contradiction in *Manufactured Landscapes*; between its beautiful aesthetic that is felt as the eye meets the image, and between the destruction that is acknowledged after the image is contemplated, is really a distinction between micro and macro, one which Latour feels should be collapsed when studying matter. Both Burtynsky and Baichwal negotiate the micro-macro scale by dissolving it through their medium of investigation. As a photographer, Burtynsky approaches a local landscape that has served as an intermediary. Each excavation, deposition or recycling site is a unique and local occurrence, yet it is a link in a global chain with either its negative exposed ground space, or its additive space of heaps of metal scraps. The lack and the excess remove any doubt that this is only a local problem, as either the lack was moved elsewhere, or the excess arrived from another space, which in turn is now lacking something. The camera also brings the assortment of these macro issues and micro-macro landscapes to the individual, by negotiating the question of what comprises each viewers own individual micro and macro memory, to the extent that these are also blurred. If the sight of one of Burtynsky's images is felt emotionally, it is because it stirs on the border of our habitual memory which is played out daily within the artifacts we see in the image, and also, because we find ourselves as contributors to the social memory of those photographs. The individual aspect of participating in the symbolic and physical consumption of matter contributes not only to the land heaps but also to the
images. Do habitual memories made through habitual actions affect the way that matter looks, as much as matter affects the memories we form? Burtynsky clearly answers this question, by presenting images which feel familiar, even though they are almost surreal.

Ironically, the opening scene shows one of the stages of the lifecycle of the product which is usually associated by commodity consumers with being somewhere towards to beginning of the cycle, its stage is the factory floor. Throughout the documentary, it becomes apparent that the beginning of the cycle of an object is difficult to spot because each new industrious site uses as raw materials, different materials that were produced somewhere else, and the production of this object requires the gathering of various processes that occur at different moments in time.

Latour proposes that each time there is movement of matter, and movement of time through matter, there is translation. When the photographs appear within the film, the photographic medium transforms a material landscape, into a discursive landscape, open to social renegotiation, making the process of watching the documentary as one long instance of actualization or translation in which change and creation occur. The photographs do not only serve as tools of representation of the industrial landscapes; they transform their subject, just as each movement and translation in the industrial process transforms its own. The photographs’ transformation becomes evident primarily in their own power to bring what was hidden to the public. For Burtynsky, his role has been partially to reveal these hidden landscapes which support the process taken for granted in an urban landscape. He is also aware that the surreal size and subject matter also cause another translation to occur; the viewers begin to doubt how much is an image of real
matter, and how much is a digital construction for photographic effect (Campbell 2008, 42).

It is clear that neither Burtynksy as a photographer, nor Baichwal as a director wish to trace the whole movement of a single artifact through its various lifestages, choosing an arbitrary beginning and end. In that sense they do not perform an ANT trace, yet they do focus on important images where they include the particular elements that have been made invisible or have become neutralized. When Burtynsky approaches a CEO of a mining corporation, he asks whether the company wants to be a part of the story, and is usually granted access, because his intention is not a preconceived environmentalist agenda, but the apparently neutral stance of a fine-art photographer (quoted in Campbell 2008, 46). It is because he approaches his subjects as matter-to-matter, camera-to-landscape that his personal point of view is seen as nonintrusive.

In the essay *Ontology of the Photographic Image* in *What is Cinema?* Bazin contrasts true realism and pseudorealism in art, the first which he calls the need to give “expression to the world, concretely and essentially” (Bazin 1994, 12) something which can be achieved with a long take. This realism tries to understand matter without interpreting it in advance of giving it duration. The focus on matter and in this example in the form of the technical apparatus of the camera and how it can be the key to dissolution of the old realism or pseudorealism which seeks to treat matter as utility; “only the impassive lens, stripping its object of all those ways of seeing it, those piled-up preconceptions, that spiritual dust and grime with which my eyes have covered it, is able to present it in all its virginal purity to my attention and consequently to my love” (Bazin
1994, 15). On the one hand Bazin writes that through film the “image of things is likewise the image of their duration, change mummified as it were,” and on another that “photography can even surpass art in creative power” (Bazin 1994, 15). I interpret this as meaning that the camera ads or is creative to the project of giving matter its authentic expression by disappearing; essentially by hiding its own abilities of montage, which is the effect of a long take, making the opening shot of the documentary particularly important.

Two different methodologies were discussed in this thesis, with a third methodology emerging in the form of the example of the cinematic testament to the duration of matter, and to the flow of time through matter. Questions about how these methodologies lift off from the surface of the page and become lived forms of theory in practice are most likely to be asked of the first two; intuition and translation, rather than of film. Hopefully my emphasis on the reciprocal nature of all matter, living or non-living, and the presence of the creative movement of memory (time’s duration) in all forms of matter, leads to suggest that that these methodologies are also attainable beyond the cinema. By realizing the materiality of the perceptive realm and the renewability of matter and its spatial configuration along with a creativity that is inherent in it, a sympathetic, respectful, bodily attention can be paid to the matter other than that of which we consist, allowing it to be express itself in a way that allows it to emphasize its own memory and tendency.

Several overarching themes emerge when movement is associated with matter. If movement is considered a part of all matter than the methodologies of movement have in
their purpose the aim to reevaluate theories which presuppose human agency over material agency. The term agency was proposed as one coming out of the tradition of relativistic or relational phenomenology, not so much concerned with the emergence of the autonomous life of inanimate objects, but rather with a more basic approach to agency, which could be called an opportunistic dependency, or the realization that phenomena require cooperation of different matters. It is thus only with this version of 'agency' in mind, that Bergson and Latour could have developed their methodologies, and have sought to reconstruct theories such as materialism, idealism, constructivism and realism.

On the one hand this discussion encompasses methodologies, agency and theories, and on the other it also attests to the nature of movement itself and its meaning not only for studying non-living matter, but also of understanding human cognition or spirit, within living matter. This is achieved by highlighting the material foundation though which these other human attributes can operate. Bergson argued that cognition is a transfer of information though the body and its sole purpose is to choose the best future action for the body. One of the themes therefore, was the emphasis of continuity over interruption; the continuity of embodied action which is continuous, over thought, which is fragmented; the continuity of film over the frozen instance of the photograph; or the continuity of the renewing processes of raw materials over finished goods which have a capital-value laden, pre-imposed purpose. Although movement is an uninterrupted continuum, it encompasses at some point an instance during which there occurs a brushing of different surfaces of meaning. Movement was presented as a concept that is
central for the methodologies of intuition and translation, which are themselves subjects for theoretical comparison in the first place, because they both emphasize the unique moment of actualization, to use Bergson's term, where matters coalesce and diverge. A change occurs during the moment of actualization, yet this moment is dependent on the movement of the materials and the time which flows through them as could be seen in the figure of the inverted cone.

In Manufactured Landscapes we further saw several ways that film operated to transgress the inadequacy of the interruptive nature of thought to adequately understand matter. Film can be suggestive of intuition and translation because it is able to represent time as a moving instance through its ability to show the transfer and transformation of material objects and because it can maintain the material vision of matter without resorting to the complex phenomenon of memory which insists that it needs to be a part of each instance of sight. Because film is not materially thick, (although it has a thick ANT trace), it can 'see' in ways that are uninterrupted, and recapitulate that vision to its viewers. Film analysis permits investigations into objective and subjective abilities to see, and also about the very terms 'object' and 'subject,' again, reinforcing the theme of agency. The significant topic of Edward Burtynsky's photography; the necessity of matter in sustaining Capitalist levels of production and consumption, its effect on the visual landscape and the causes and effects that humans have in this process, is not removed from the previously mentioned themes. The visual display of the landscapes, materials and humans in his photographs, asks questions of the nature of the material assembly of our societies and its disassembly in terms of how matter is theoretically
assessed. By disassembly I mean to imply that movement has not played a significant role in understanding the transfer of goods, concepts, cultures etc. Instead of genealogies and influences, the paradigmatic nature of theories in the social sciences results in the fragmentation and piecing apart of influences rather than their reintegration. It is within these subthemes that the overarching characteristic of the material world can be described as movement. Movement not only facilitates the rearrangement of the material world, quite literally through the movement of goods and resources, but it also drives time, so that the matter cannot be reduced to a temporal instant, and therefore to the whims of social constructivism, but is perpetuated and exists creatively, regardless of discourse.
Bibliography


